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ENVIRONMENTAL ASSESSMENT

Proposed National Oceanic and Atmospheric Administration
Office of Marine and Aviation Operations

Aircraft Operations Center Relocation

Prepared for:

Resource Management Group
2201 Civic Circle, Suite 515
Amarillo, TX 79109

Prepared by:

AECOM Technical Services Inc.

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EXECUTIVE SUMMARY

The National Oceanic and Atmospheric Administration (NOAA) Office of Marine and Aviation Operations (OMAO) is responsible for managing and operating NOAA's fleet of ships and aircraft. NOAA's fleet of nine manned aircraft has been operated, managed, and maintained since 1993 at OMAO's Aircraft Operations Center (AOC) located at 7917 Hangar Loop Drive, Hangar 5, on MacDill Air Force Base (AFB) in Tampa, Florida. The AOC is comprised of up to 110 NOAA staff and operates from the circa 1940s-built Hangar 5, and associated ramp, office, shop and storage facilities.

Due to a Department of Defense (DoD) realignment of aircraft assets nationally, MacDill AFB has been directed by its command to make space available for additional KC-135R air refueling aircraft and 400 support personnel. The OMAO AOC is directed to vacate the Hangar 5 location no later than July 1, 2017. In response, the OMAO has determined that regional entities that can offer long-term occupancy of a similarly sized AOC facility at an airport equipped with a minimum of an 8000-ft long runway, up to 99,000 square feet (SF) of hangar space (with adequate height), and administrative and storage space at an airport within 50 miles of MacDill AFB would most effectively and efficiently meet its relocation criteria. Two action alternatives are being evaluated by NOAA per Section 102 of the National Environmental Policy Act of 1969 (NEPA) under 42 U.S. Code (USC) §4332, and Council on Environmental Quality Regulations for Implementing Procedural Provisions of NEPA at 40 Code of Federal Regulations (CFR) 1500-1508.

NOAA has prepared this environmental assessment (EA) analyzing the potential environmental consequences of implementing any one of two action alternatives, as well as effects of the No-Action Alternative. In accordance with NOAA Administrative Order 216-6, *Environmental Review Procedures for Implementing the NEPA*, as amended May 1999, NOAA has analyzed and considered the potential environmental consequences of its proposed action at the two viable action alternatives, and the No-Action Alternative, before commitment to a specific course of action. A No-Action Alternative is presumed to be a condition in which the AOC operations are not relocated and no DoD action affecting the existing AOC occurs. Should NOAA conclude that the EA supports a Finding of No Significant Impact (FONSI), an Environmental Impact Statement (EIS) would not be required. This EA identifies anticipated environmental consequences and, if applicable, presents mitigation measures that could be expected to reduce environmental effects.

Facilities have been offered at Lakeland-Linder Regional Airport (Action Alternative 1), or LAL, located within the southwest boundary of the city of Lakeland, Polk County, Florida. The facilities offered would require replacement of a portion of an end unit from a large, existing hangar structure located at 3450 Flightline Drive which is currently occupied by Rob Dinic Interiors, a firm that customizes and refurbishes aircraft and helicopter interiors. Replacement of approximately the southern two-thirds of the 36-year-old hangar unit would occur by demolishing that portion of the concrete block structure, replacing its cement foundation with a thicker 10-inch deep cement foundation and attaching a pre-engineered metal hangar structure. A vehicle parking area that would accommodate the required 110 spaces is adjacent to the hangar, plus adequate apron area and aircraft tie-down locations as specified in the OMAO request for bids is proposed.

Facilities have also been offered at St. Petersburg-Clearwater International Airport (Action Alternative 2), or PIE, a public/military airport within an unincorporated area of Pinellas County serving the St. Petersburg-Clearwater-Tampa Bay Metro Area, and adjacent to Tampa Bay. The facilities offered are owned and operated by Sheltair Aviation. They propose replacing the shell of the 452- by 215-foot, former Clearwater Aviation hangar located in

the eastern portion of PIE. Replacement of the exterior shell of the circa 1964-built hangar would occur by removing the metal siding and roofing while keeping the foundation and the metal frame, which consists of vertical metal supporting braces and cross beams. The structural renovations and replacements would include attaching a new 24-foot-tall storage high bay with an added footprint of roughly 45-foot by 175-foot area and applying new, replacement metal siding and roofing to the entire hangar frame. The height of the renovated hangar would be 52 feet above ground level.

No significant effects to the resources analyzed in the environmental assessment would result. A summary of anticipated impacts and recommended mitigation measures are presented in **Table ES-1**.

Table ES-1: Summary of Anticipated Environmental Impacts and Suggested Mitigation

Resources	Anticipated Impact	Suggested Mitigation
Land Use Recreational Resources Cultural Resources Wetlands Floodplains Coastal Zone Management Agricultural Resources Utilities and Service Systems Visual and Aesthetic Resources Climate Change and Greenhouse Gas Emissions Cumulative	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Geological Resources Noise Transportation Environmental Justice and Socioeconomics	**Action Alternative 1:** Negligible. **Action Alternative 2:** Negligible.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Air Quality	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are required. Standard BMPs to reduce construction related emissions can be applied. **Action Alternative 2:** No mitigation measures are required. Standard BMPs to reduce construction related emissions can be applied.

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Table ES-1: Summary of Anticipated Environmental Impacts and Suggested Mitigation

Resources	Anticipated Impact	Suggested Mitigation
Water Resources	**Action Alternative 1:** Negligible.	**Action Alternative 1:** Mitigation for the water quantity and quality impacts would consist of designing a proposed project drainage system that meets State water quality standards as set forth in Chapter 17-3, FAC, by apply its recommended BMPs and/or those published in the Florida Airports Stormwater Best Management Practices Manual.
	Action Alternative 2: Negligible.	**Action Alternative 2:** Mitigation for the water quantity and quality impacts would consist of designing a proposed project drainage system that meets State water quality standards as set forth in Chapter 17-3, FAC, and its recommended BMPs.
Flora and Fauna	**Action Alternative 1:** Minor effect.	**Action Alternative 1:** NOAA shall ensure that the commitments listed below will be followed by the site owner and the construction-related contractors implementing the proposed action at this site: 1. The USFWS' Standard Protection Measures for the eastern indigo snake shall be adhered to during construction; 2. Prior to construction, appropriate habitats at the site shall be surveyed for gopher tortoise. If any burrows are located within the site, the site owner shall inform NOAA and coordinate with the FWC to secure any permits needed to relocate gopher tortoises prior to construction.
	Action Alternative 2: Minor effect.	**Action Alternative 2:** NOAA shall ensure that the commitments listed below will be followed by the site owner and the construction-related contractors implementing the proposed action at this site: The USFWS' Standard Protection Measures for the eastern indigo snake shall be adhered to during construction..
Hazardous Materials	**Action Alternative 1:** Minor effect.	**Action Alternative 1:** NOAA shall ensure the lease agreement includes conditions requiring that the owner prepare the existing building in a manner consistent with all applicable federal, state and local laws pertaining to hazardous materials handling, storage, transportation and disposal, including (but not limited to) relevant laws pertaining to asbestos and lead-based paint.
	Action Alternative 2: Minor effect.	**Action Alternative 2:** NOAA shall ensure the lease agreement includes conditions requiring that: The owner prepare the existing building in a manner consistent with all applicable federal, state and local laws pertaining to hazardous materials handling, storage, transportation and disposal, including (but not limited to) relevant laws pertaining to asbestos and lead-based paint. The owner is responsible for remediating existing soil and groundwater contamination at the site to required federal, state, and/or local standards.

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LIST OF ACRONYMS

AEDT	Aviation Environmental Design Tool
AEM	Area Equivalent Method
AFB	Air Force Base
AOC	Aircraft Operations Center
APE	Area of Potential Effects
ASTM	American Society of Testing Materials
BLM	Bureau of Land Management
BMPs	Best Management Practices
CAA	Clean Air Act
CBSA	Core Based Statistical Areas
CFR	Code of Federal Regulations
CMP	Coastal Management Program
CO	Carbon Monoxide
CWA	Clean Water Act
CZMP	Coastal Zone Management Act
dBA	Decibels
DNL	Day-night Average Sound Level
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ERP	Environmental Resource Permit
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FAC	Florida Administrative Code
FCMP	Florida Coastal Management Program
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FIRMs	Flood Insurance Rate Maps
FLUCFCS	Florida Land Use, Cover and Forms Classification System
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FWC	Florida Fish and Wildlife Conservation Commission
GA	General Aviation
IATA	International Air Transport Association
ILS	Instrument Landing System
IPCC	Intergovernmental Panel on Climate Change
LAL	Lakeland-Linder Regional Airport
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MRO	Maintenance, Repair, and Overhaul
MS4s	Municipal Separate Storm Sewer Systems
MSA	Metropolitan Statistical Areas
MSGP	Multi-Sector Generic Permit
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NO_2	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
OMAO	Office of Marine and Aviation Operations
OSHA	Occupational Safety and Health Administration
Pb	Lead
PM	Particulate Matter
PUD	Planned Unit Development District
RCP	Reinforced Concrete Pipe
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
SHPO	State Historic Preservation Officer
SIP	State Implementation Plans
SO_2	Sulfur Dioxide
SWFWMD	Southwest Florida Water Management District
SWPPP	Stormwater Pollution Prevention Plan
T/U	Transportation/Utility
TFMSC	Traffic Flow Management System Counts
TPA	Tampa International Airport
U.S.	United States
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

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1.0 PURPOSE AND NEED

1.1 INTRODUCTION

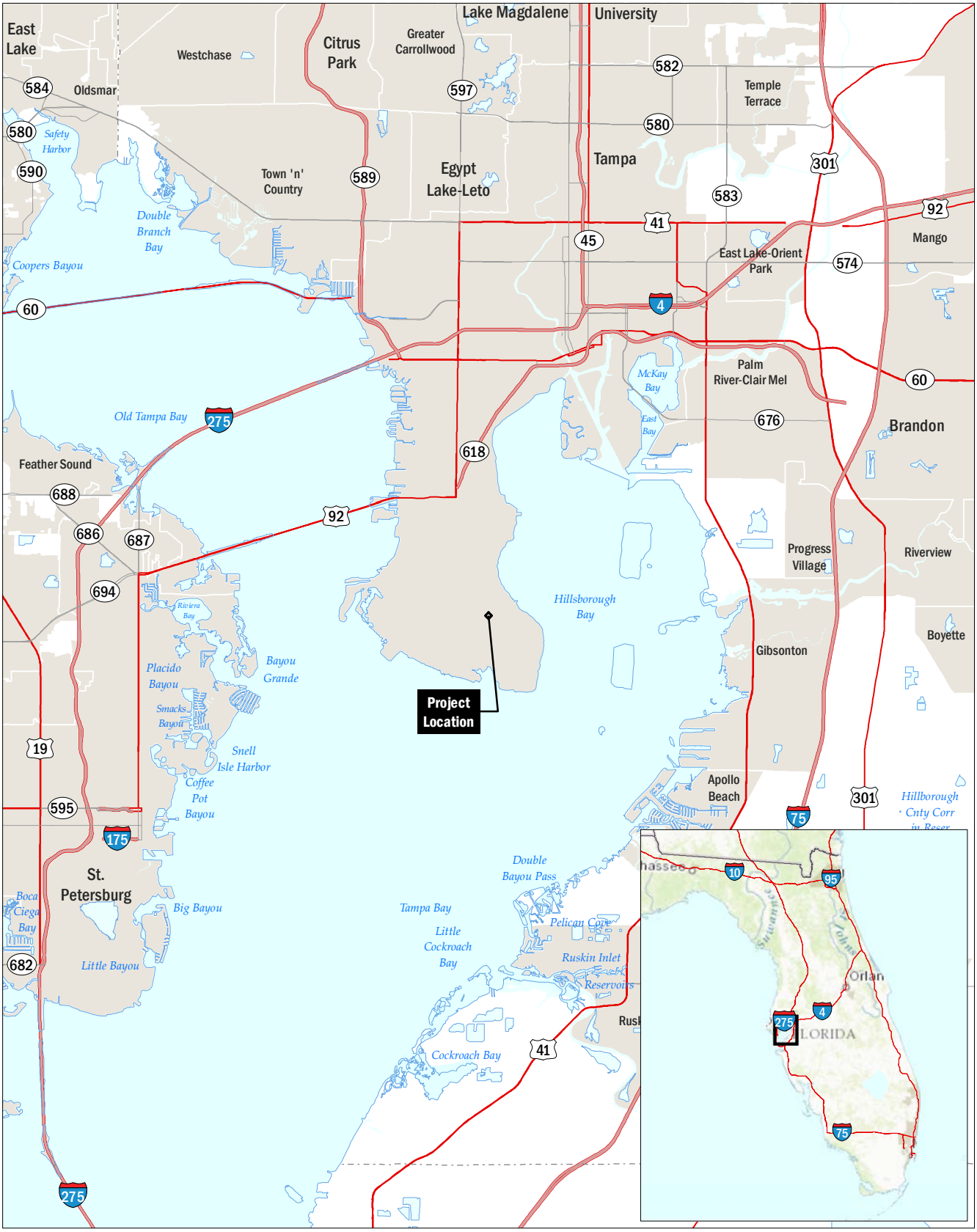
1.1.1 Overview

The National Oceanic and Atmospheric Administration (NOAA) Office of Marine and Aviation Operations (OMAO) is responsible for managing and operating NOAA's fleet of ships and aircraft. Comprised of civilians and officers of the NOAA Commissioned Officer Corps, OMAO also manages the NOAA Diving Program, NOAA Small Boat Program and NOAA Aviation Safety Program (NOAA, 2016a). NOAA's fleet of nine manned aircraft has been operated, managed and maintained since 1993 at OMAO's Aircraft Operations Center (AOC) located at 7917 Hangar Loop Drive, Hangar 5, on MacDill Air Force Base (AFB) in Tampa, Florida (see **Figures 1-1 and 1-2**). The AOC accommodates capable, mission-ready aircraft and professional crews that support the scientific community via safe, efficient and economical use of uniquely equipped NOAA aircraft. OMAO has more than four decades of experience developing, coordinating and successfully and safely conducting airborne environmental data gathering missions.

The AOC operates from the circa 1940s-built Hangar 5 and is comprised of up to 110 NOAA staff. The staff includes highly qualified technical teams who equip the aircraft with specialized sensor and monitoring equipment that enable the fleet to conduct missions that provide critical atmospheric and air-chemistry data-gathering capabilities. For example, its highly specialized Lockheed WP-3D "Hurricane Hunter" aircraft are equipped with an unprecedented variety of scientific instrumentation, radar systems, and recording systems for both in situ and remote sensing measurements of the atmosphere, the Earth, and its environment. Whether studying global climate change or acid rain, assessing marine mammal populations, surveying coastal erosion, investigating oil spills, flight checking aeronautical charts, or improving hurricane prediction models, the AOC flight crews continue to operate in some of the world's most demanding flight regimes (NOAA, 2016b).

Examples of specialized AOC missions include:

- Conduct tropical cyclone research and storm reconnaissance to greatly improve our physical understanding of hurricanes and enhance the accuracy of tropical cyclone forecasts.
- Provide real-time aerial monitoring for marine mammal population studies, shoreline change assessments, oil spill investigations, and water resource/snowpack surveys for spring flood forecasts.
- Make accurate, real-time measurements of snowpack characteristics and soil moisture across the country to support decisions in river, flood, and water supply forecasting, agriculture and forest management, recreation and winter tourism, and other priorities within the commerce, industry, and transportation sectors of the Nation's economy.
- Conduct coastal mapping in support of NOAA's National Geodetic Survey efforts to provide an accurate, up-to-date and seamless database of the national shoreline and a geographic reference for managing coastal resources and support marine navigation.



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NOAA Aircraft Operations Center Relocation

FIGURE 1-1

Existing OMAO Aircraft Operations Center at MacDill Air Force Base – Location

N

0 500
Feet

Imagery: ESRI, 2016

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NOAA Aircraft Operations Center Relocation

FIGURE 1-2

Existing OMAO Aircraft Operations Center at MacDill Air Force Base – Existing AOC Facility

- Collect data for the Arctic Heat project to understand the complex interaction between the atmosphere, ice, and ocean and its influence on the seasonal cycle of ice melting and freezing in the Arctic as well as the biological activity related to it while also improving weather and sea-ice hazard forecasts.

- Implement a myriad of mapping missions, such as the TopoBathy LIDAR mission to collect data in the coastal zone for up-to-date- and accurate marine navigation charts, Federal Emergency Management Agency (FEMA) and flood plain and inundation maps, and other Integrated Ocean and Coastal Mapping applications, which helps to ensure safe and efficient marine transportation and benefits coastal communities with accurate resource management and aid emergency response efforts.

In addition to research and monitoring activities critical to NOAA's mission, OMAO ships and aircraft provide immediate response capabilities for unpredictable events. Following Hurricanes Katrina and Rita NOAA ships conducted emergency surveys for navigation hazards that helped Gulf ports reopen quickly. Aerial images of disaster-torn areas taken by NOAA aircraft enabled residents and emergency workers to verify the condition of houses, bridges and roads.

1.1.2 Background

Due to a Department of Defense (DoD) realignment of aircraft assets nationally, MacDill AFB has been directed by its command to make space available for additional KC-135R air refueling aircraft and 400 support personnel from the New Hampshire Air National Guard at Pease Airport. This addition of aircraft and personnel will result in non-DOD-essential occupants to be relocated from MacDill AFB aviation operation areas such as at Hangar 5, which is occupied by the OMAO AOC. MacDill AFB notified AOC that they need to vacate the Hangar 5 location no later than July1, 2017.

The OMAO has determined that regional entities that can offer long-term occupancy of a similarly sized AOC facility at an airport equipped with a minimum of an 8000-ft long runway, up to 99,000 square feet (SF) of hangar space (with adequate height), and administrative and storage space at an airport within 50 miles of MacDill AFB would most effectively and efficiently meet its relocation criteria. NOAA's Real Property Management Division has solicited proposals to public and private entities that could accommodate the OMAO AOC facility and staff operating criteria (NOAA, 2016c). They have received two detailed offers for OMAO consideration. These two viable action alternatives are being evaluated by NOAA.

Per Section 102 of the National Environmental Policy Act of 1969 (NEPA) under 42 U.S. Code [USC] §4332, and Council on Environmental Quality Regulations for Implementing Procedural Provisions of NEPA at 40 Code of Federal Regulations (CFR) 1500-1508, NOAA has prepared this Environmental Assessment (EA) analyzing the potential environmental consequences of implementing any one of two action alternatives, as well as effects of the No-Action Alternative. In accordance with NOAA Administrative Order 216-6, *Environmental Review Procedures for Implementing the NEPA*, as amended May 1999, NOAA has analyzed and considered the potential environmental consequences of its proposed action at the two viable action alternatives, and the No-Action Alternative, before commitment to a specific course of action. A No-Action Alternative is presumed to be a condition in which the AOC operations are not relocated and no DoD action affecting the existing AOC occurs.

Should NOAA conclude that the EA supports a Finding of No Significant Impact (FONSI), an Environmental Impact Statement (EIS) would not be required. This EA identifies anticipated environmental consequences and, if applicable, presents mitigation measures that could be expected to reduce environmental effects.

1.2 PROPOSED ACTION

NOAA is proposing to relocate its AOC aircraft and operations center to an airport that provides between 95,000 to 99,000 square feet (SF) of contiguous space consistent with American National Standards Institute/Building Owners and Managers Association Office Area definitions. The Government requires space within the State of Florida and within 50 road (statute) miles of the Main Gate to MacDill AFB, as bounded by:

- North: State Route 52 (Meridian Avenue)
- East: State Route 17 to State Route 98/35 (Zolfo Springs to Dade City)
- South: State Route 64 (Holmes Beach to Zolfo Springs)
- West: Gulf of Mexico

The space provided would accommodate the aircraft hangar, offices, shop/laboratory equipment, conferencing facilities, and other spaces as generally described below.

A minimum hangar area of 56,000 SF (of the up-to 99,000 SF) would provide fully enclosed housing for all 9 of NOAA's aircraft, which is comprised of:

- Two (2) Lockheed WP-3D Orion (P-3) aircraft
- One (1) G-IV SP
- Four (4) DHC-6 Twin Otters
- One (1) King Air 350 ER
- One (1) Gulf Stream AC-695 Turbo Commander

This hangar area must accommodate NOAA's largest aircraft, the Orion P-3s, which has a tail height of no more than 38 feet on a level surface and a length no more than 122 feet. The housing configuration requires that one Orion P-3 aircraft be able to remain enclosed (parked) within the hangar while allowing all other aircraft to enter and exit the hangar (without moving the parked P-3). The hangar and apron areas must also meet all aircraft parking and weight load-bearing requirements as specified on NOAA bid solicitation documentation (NOAA, 2016c).

As mentioned above, the proposed AOC action will require relocation to an airport having a functioning runway of at least 8000 feet in length, in addition to a fire station in compliance with FAA regulations. NOAA performs flight operations 24 hours per day, seven days per week, and 365 days per year. All flight operations are conducted in coordination with a manned control tower in compliance with FAA regulations. If the host airport's control tower is not manned continuously, NOAA must have the ability to perform flight operations with 24-hour notice to the airport operator to ensure the control tower is appropriately staffed for a scheduled departure/arrival. Finally, the airport must have provisioning to defuel aircraft on its premises.

The exterior ramp space for parking NOAA aircraft is to be in close proximity of the hangar entrance and allow each aircraft to start and taxi normally without interfering with the other aircraft or Ground Support Equipment. Ramp space must adequately hold 3 large aircraft at the same time, specifically: two P-3s and one G-IV SP fully loaded. The ramp must have a minimum of 3 tie-down spots that can overlay each other and are configured for: 1) DHC-6 300 Series Twin Otter, 2) King Air 350ER, and 3) AC-695 Turbo Commander. This same area must be able to tie down a Lockheed WP-3D (overlaid).

The general office area requirement consists of approximately 15,300 usable square feet which includes primary office space (70 cubicles and 20 private offices), reception areas, circulation space, associated storage space, and auxiliary facilities such as conference rooms, fitness room, file rooms, fitness room, and/or break room.

A minimum of three conference rooms are required, with at least one able to accommodate 20 people and at least one additional conference room to accommodate 10 people. One or more small conference rooms (8 occupants or less) is required. Other spaces that are included in the proposed 99,000-SF facility include:

- Multi-Purpose Conference Room
- Employee Break Room
- Employee fitness Room
- Server Room
- Locker Rooms and Showers
- Aircraft Ground Support Equipment Shop
- Flight Medicine Exam Room
- Aviation Life Support Shop
- Science and Engineering Office Administrative Space (with adjacency to hangar space)
- Electronics Shop / Lab
- Radar Lab
- Calibration Lab
- Fabrication Shop
- Miscellaneous Supply, Records and Storage Spaces

Vehicular parking is required to accommodate no less than 110 outside parking spaces for the exclusive use of the Government in a secure and lit environment. A Lease will not be awarded for any offered Property located within a 100-year floodplain unless the Government has determined that there is no practicable alternative.

NOAA requires substantial completion of the requested space no later than May 1, 2017, based on an estimated lease award date of December 1, 2016. The Government may accept progressive occupancy of the leased space beginning March 1, 2017.

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1.3 PURPOSE AND NEED

1.3.1 Purpose

The OMAO manages and operates NOAA's fleet of aircraft. The purpose of the proposed AOC relocation is to enable OMAO to continue its vital support of NOAA's mission in an efficient and cost-effective manner. OMAO's aircraft fleet provides capable, mission-ready aircraft and professional crews to support the scientific community in data gathering for research and environmental monitoring. In addition to research and monitoring activities critical to NOAA's mission, OMAO ships and aircraft provide immediate response capabilities for unpredictable events. AOC is committed to the safe, efficient and economical use of NOAA aircraft and has more than four decades of experience developing, coordinating and successfully and safely conducting airborne environmental data gathering missions.

1.3.2 Need

The NOAA AOC has been housed at MacDill AFB since 1993. The need for the proposed action is due to a DoD realignment of aircraft assets, for which MacDill AFB is required by its command to make appropriate space available for housing additional staff and equipment associated with the expanded refueling aircraft support mission at MacDill AFB. This will result in other non-DoD-essential occupants such as the OMAO's AOC to be relocated off of MacDill AFB.

The 1995 Base Closure Committee placed Grand Forks AFB on the list of bases to be realigned and Pease AFB on the list of bases to be closed. Realignment of Grand Forks AFB and the closure of Pease AFB will culminate in a redistribution of eight of the 319th Air Refueling Wing's KC-135R aircraft and 400 personnel to the 6th Air Mobility Wing, MacDill AFB, Florida. The additional aircraft and staff at MacDill AFB optimizes unit size and capability, and preserves sufficient capacity for future bed-down of next generation tanker aircraft at other locations.

In response, the OMAO has determined that locations which can provide long-term, dedicated occupancy of a similarly sized AOC facility at an airport equipped with an 8000-ft long runway with up to 99,000 SF of hangar, administrative, and storage space within 50 miles of MacDill AFB would most effectively and efficiently meet its mission needs. The 50-mile limit allows NOAA to readily retain its highly specialized workforce and substantially reduce the cost of staff relocation.

NOAA intends to continue to build a civilian and NOAA Corps officer work force that is uniquely qualified to gather critical environmental intelligence and be adaptive and responsive to a changing world and work to expand our partnerships with other federal agencies.

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2.0 ALTERNATIVES

2.1 ALTERNATIVE 1: LAKELAND-LINDER REGIONAL AIRPORT

2.1.1 Project Location/Setting

Facilities have been offered at Lakeland-Linder Regional Airport (Action Alternative 1) located in the 1/4NW, Section 9, Township 29 North, Range 23 East on the Nichols, Florida U.S. Geological Survey (USGS) quadrangle map. The International Air Transport Association's (IATA) Location Identifier for Lakeland-Linder Regional Airport is LAL, and this IATA identifier is used throughout this document to refer to the airport. LAL is within the southwest boundary of the city of Lakeland, Polk County, Florida (City of Lakeland, 2015a).

The airport is on 1,700 acres with 1 million square feet of facilities at an elevation of 142 feet above mean sea level (MSL). From the 1970s until 1999, the airfield operated as a joint civil-military facility when it hosted Army Aviation Support Facility. Prior to the airport being used by the military, it was a strictly commercial airline service property.

The airport is located in Polk County, Florida (see **Figures 2.1-1 and 2.1-2**). According to the FAA Airport Master Record, LAL has 219 based aircraft, including 36 jet aircraft. The airport's primary runway, Runway 9/27 is 8,499 feet long and is equipped with an Instrument Landing System (ILS); the secondary runway, Runway 5/23 is 5005 feet by 150 feet (Global Air, 2016a). LAL is home to the Central Florida Aerospace Academy, which provides an aviation-based high school curriculum; and Polk State College's Aerospace Center, which offers a four-year aviation degree. The airport is also home to large, nationally renowned fly-in events, including the SUN 'n FUN International Fly-In & Expo.

2.1.2 Project Components

The facilities offered would require replacement of a portion of an end unit from a large, existing hangar structure located in the southern portion of LAL (see **Figures 2.1-3 through 2.1-7**). The unit is at 3450 Flightline Drive and is currently occupied by Rob Dinic Interiors, a firm that customizes and refurbishes aircraft and helicopter interiors.

Replacement of approximately the southern two-thirds of the 36-year-old hangar unit would occur by demolishing that portion of the concrete block structure, replacing its cement foundation with a thicker 10-inch deep cement foundation and attaching a pre-engineered metal hangar structure (City of Lakeland, 2016a). Glazing would replace the concrete block within the structural frame to allow for natural light to enter interior spaces. The clearance height of the hangar would be 50'-0" with an aircraft entry door height of 46 feet, 0 inches. The northern one-third of the unit would retain its existing shell and be reconfigured internally to meet NOAA's office, shop and storage needs. A vehicle parking area that would accommodate the required 110 spaces is adjacent to the hangar, plus adequate apron area and aircraft tie-down locations as specified in the OMAO request for bids is proposed.

Vehicle access is via roadways adjacent to the south side of the airport boundary, primarily Old Medulla Road and West Pipkin Road leading to Airside Center Drive and Flightline Drive.

2.1.3 Construction Activities and Schedule

Each bidder is responsible for studies and permits required prior to or during construction. Construction may be authorized as early as December 1, 2016. These may include federal review by the Federal Aviation Administration (FAA) regarding the potential for marking and lighting of obstructions within navigable airspace, State stormwater pollution prevention plans, or municipal permits from the City of Lakeland for design review, among other agencies.

Crane, jack hammer, front loader, bobcat loader, and haul trucks would be mobilized to remove portions of the existing hangar and its slab foundation and remove remnant or unnecessary underground utility infrastructure. Site work would include the framing and installation of a slab foundation to 10-inches thickness, extension of underground mechanical, electrical and plumbing conduit, erection of a modular metal building shell, installation of glazing and siding, and completion of site work for ramps, tie-downs, striping and parking.

Hangar door installation and utility/fire protection measures would be installed and connected, followed by completion of interior framing, drywall, flooring and painting. Substantial completion is estimated by April 21, 2017.

2.1.4 Operations and Maintenance

Upon substantial completion of all or portions of the construction activities, NOAA would move equipment, aircraft, and personnel into ready spaces. Operations would include administrative, workshop, storage, and engineering-related tasks in support of crew and aircraft readiness for various environmental monitoring and sensing missions.

Periodic delivery of supplies, parts, and large airframe and power plant components would occur during operations and to support maintenance and retrofitting of aircraft.

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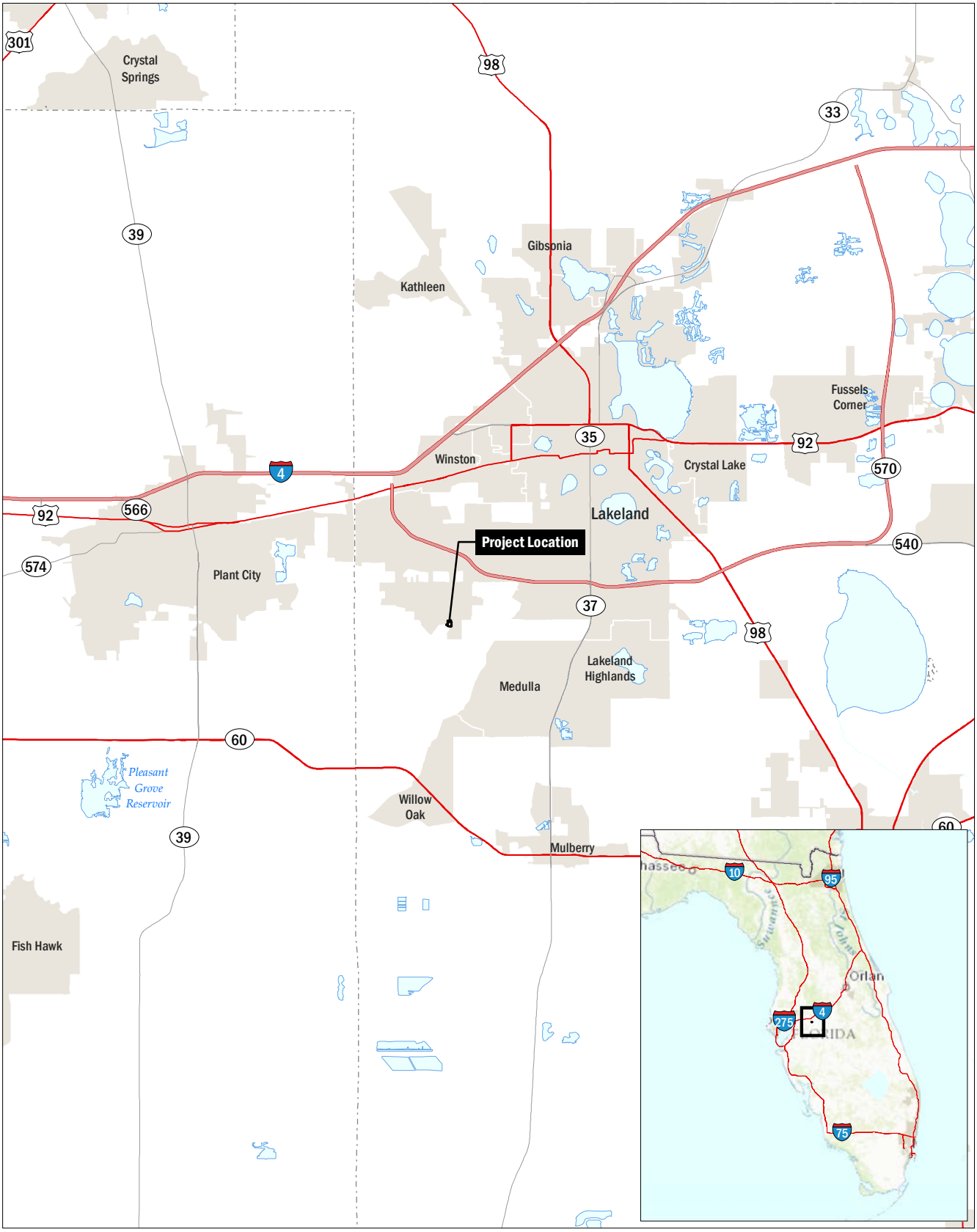


N

0 5

Miles

Imagery: ESRI, 2016

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 2.1-1

Lakeland-Linder Regional Airport Project Location

N 0 500 Feet

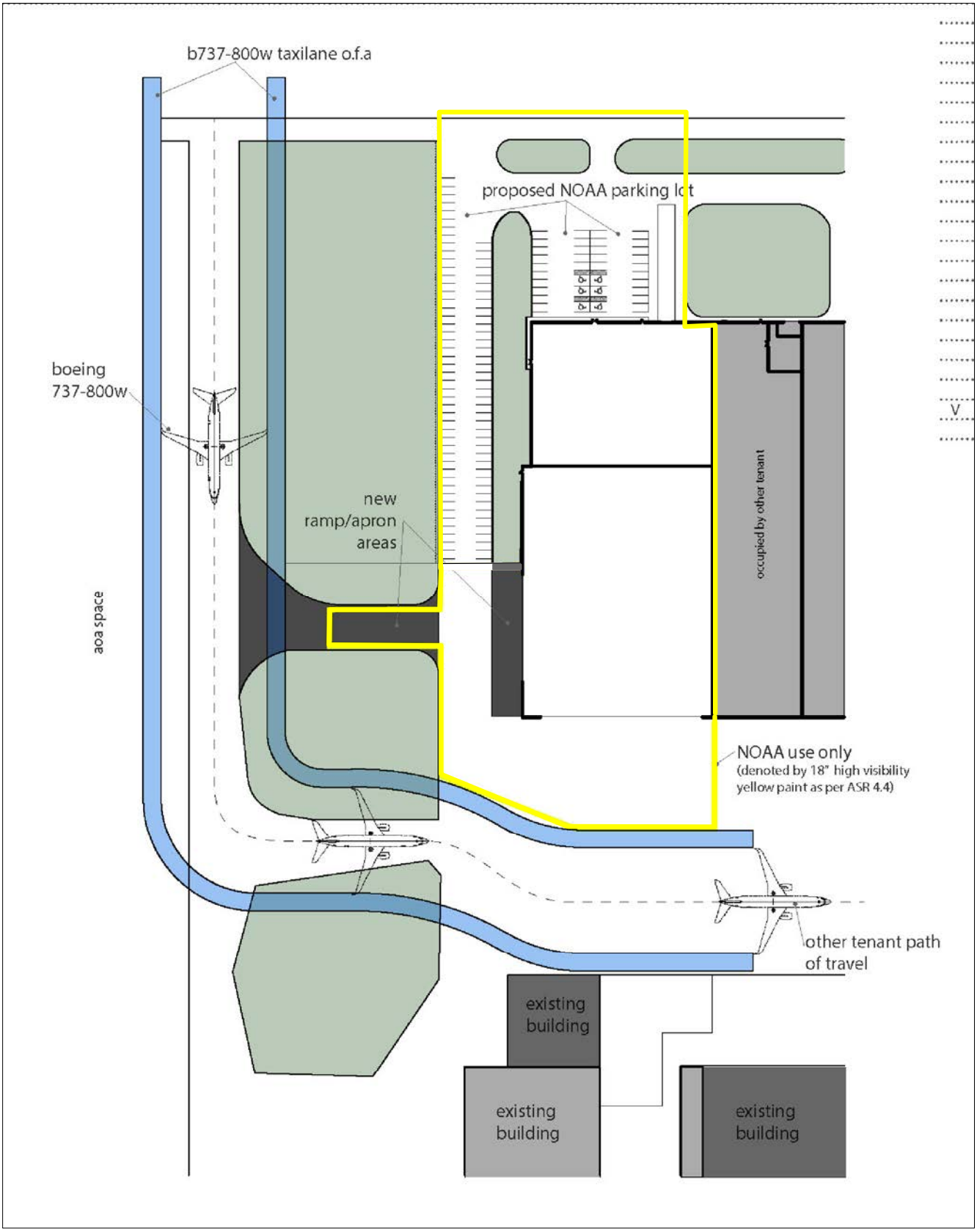
Imagery: ESRI, 2016

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 2.1-2

Lakeland-Linder Regional Airport Project Area

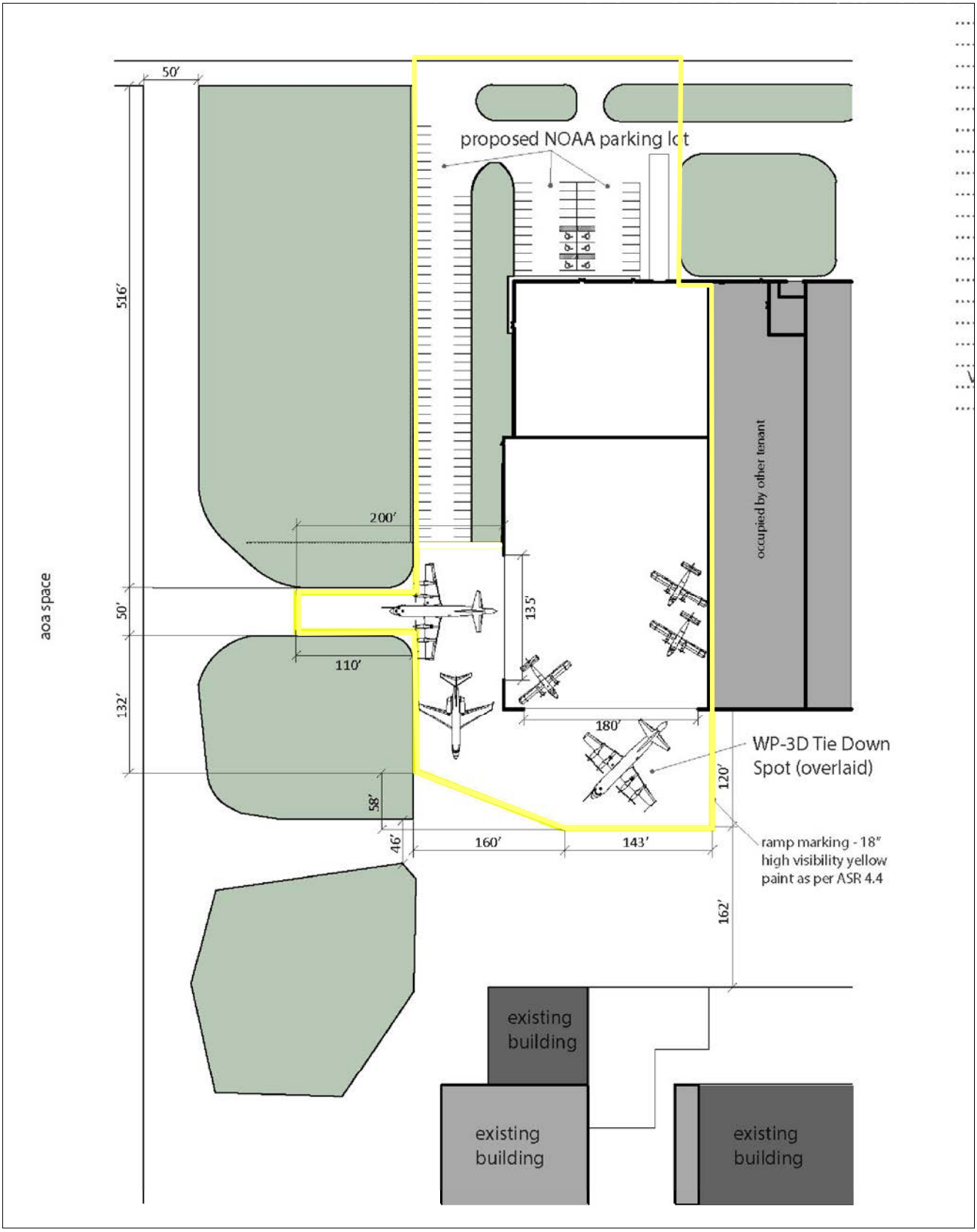


AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 2.1-3

Lakeland-Linder Regional Airport
Project Area



AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 2.1-4

Lakeland-Linder Regional Airport
Project Area

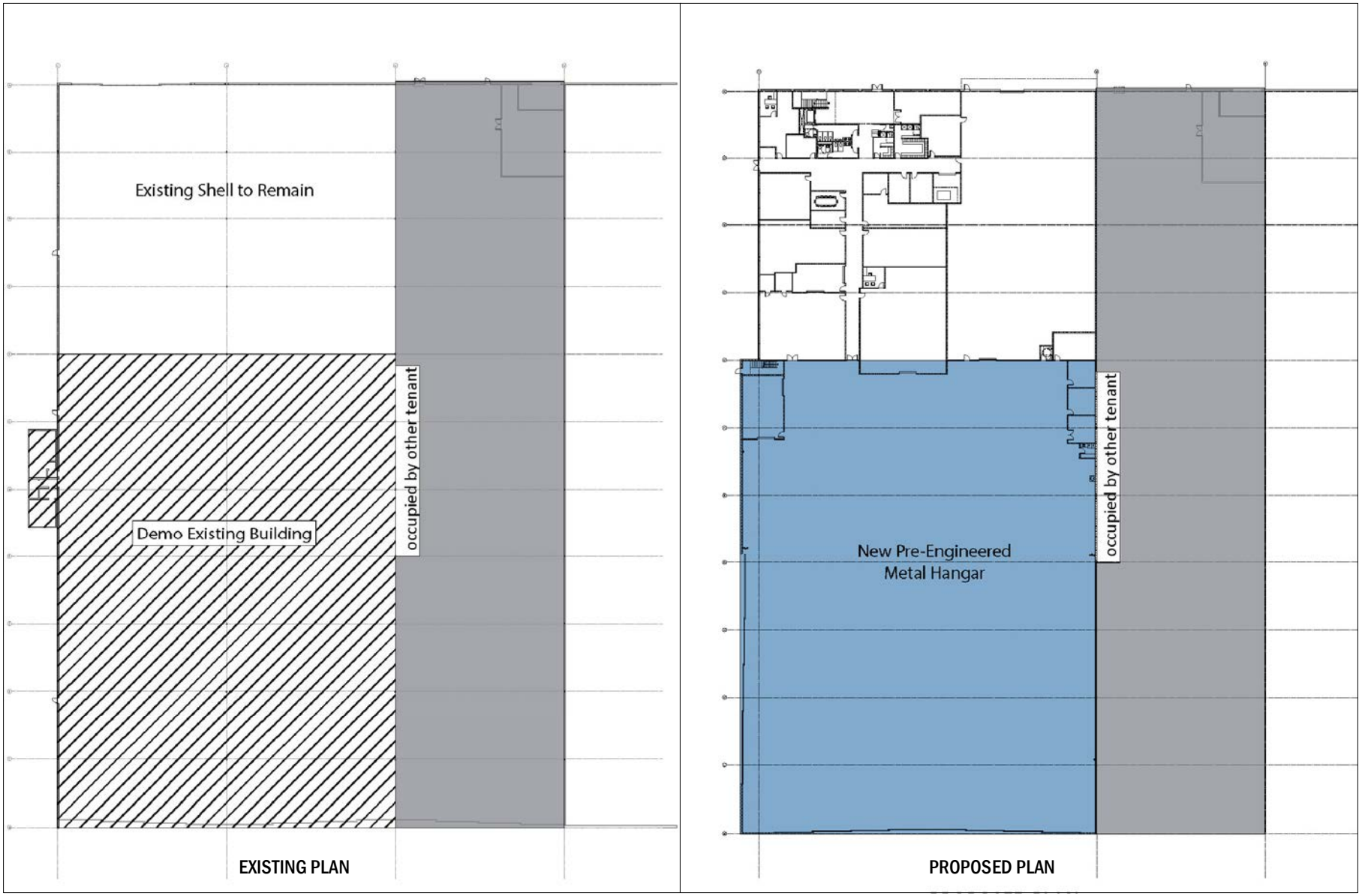
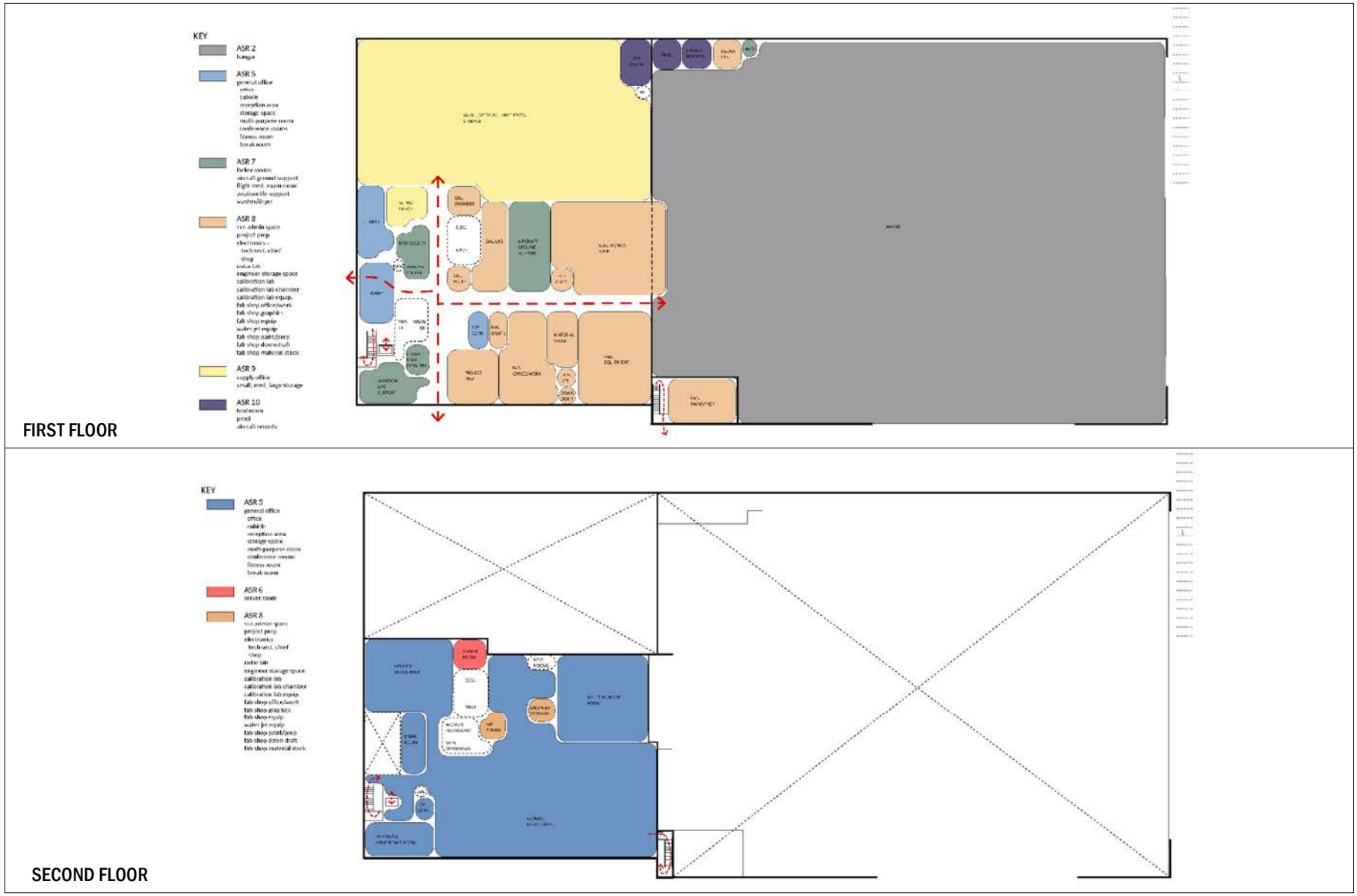


FIGURE 2.1-5

Lakeland-Linder Regional Airport
Overall Floor Plan



AECOM

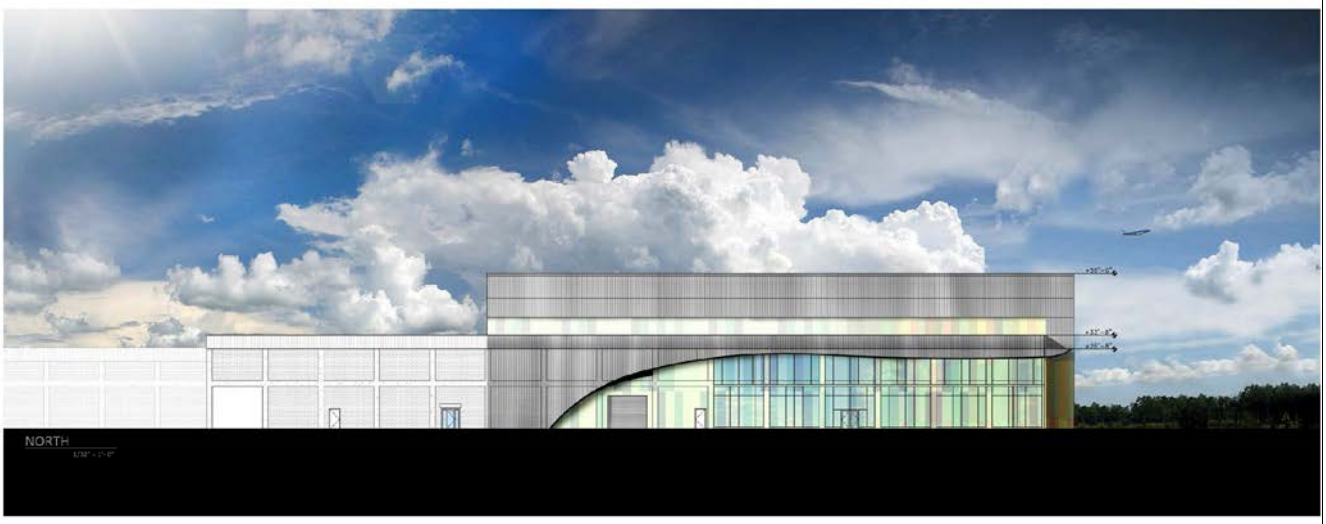
NOAA Aircraft Operations Center Relocation

FIGURE 2.1-6

Lakeland-Linder Regional Airport
Floor Plan Diagram

WEST ELEVATION

NORTH ELEVATION



SOUTH ELEVATION

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 2.1-7

Lakeland-Linder Regional Airport
Elevation Views

2.2 ALTERNATIVE 2: ST. PETERSBURG-CLEARWATER INTERNATIONAL AIRPORT

2.2.1 Project Location/Setting

Facilities have been offered at St. Petersburg-Clearwater International Airport (Action Alternative 2), located in the 1/4NE, Section 3, Township 30 North, Range 16 East on the Safety Harbor, Florida, USGS quadrangle map. The IATA Location Identifier for St. Petersburg-Clearwater International Airport is PIE, and this IATA identifier is used throughout this document to refer to this airport. PIE is a public/military airport serving the St. Petersburg-Clearwater-Tampa Bay Metro Area that surrounds Tampa Bay. PIE is within an unincorporated area of Pinellas County, nine miles north of downtown St. Petersburg, Florida, and seven miles southeast of Clearwater (see **Figures 2.2-1 and 2.2-2**).

The airport covers 1,900 acres at an elevation of 11 feet MSL. It has two asphalt runways: Runway 18/36 is 9,730 by 150 feet and ILS-equipped, and Runway 4/22 is 5,903 by 150 feet (Global Air, 2016b). The National Plan of Integrated Airport Systems for 2011–2015 categorized it as a primary commercial service airport since it has over 10,000 passenger boardings (enplanements) per year.

In 2014, PIE experienced double-digit growth and handled more than one million passengers for the first time in its history. Most scheduled airline traffic in the Tampa Bay Area uses Tampa International Airport (TPA), ten miles (16 km) to the east, but PIE remains a destination for low-cost carriers such as the Las Vegas-based carrier Allegiant Air. Because it is less busy than Tampa, PIE is frequently used by pilots of private planes and executive jets flying to the Tampa Bay region.

The airport is also the home of Coast Guard Air Station Clearwater, the largest and busiest Coast Guard Air Station in the United States (U.S.), operating HC-130 Hercules and MH-60T Jayhawk aircraft. The U.S. Army Reserve also maintains an Army Aviation Support Facility at PIE immediately west of the approach end of Runway 17R for Companies A and F, 5th Battalion, 159th Aviation Regiment and Medical Evacuation Unit, operating UH-60 Blackhawk helicopters. U.S. Customs and Border Protection, the FAA-operated control tower, the FAA's Central Florida Region Automated Flight Service Station, and the St. Petersburg VORTAC for airways navigation are also important federal government services at the airport.

The airport has a 24-hour Airport Rescue and Fire-Fighting (ARFF) department (Index C), along with operations, facilities, engineering, security, and administrative personnel. Along with scheduled passenger and charter airlines and military flight operations, United Parcel Service / UPS Airlines, other air cargo, general/corporate aviation are also major activities, with UPS conducting extensive Boeing 757 operations. The entire tract of the airport is designated as a Foreign Trade Zone and a large Airport Industrial Park developed in the 1980s is a major center of commerce.

2.2.2 Project Components

The facilities offered would require replacement of the shell of the former Clearwater Aviation, Inc., hangar located in the eastern portion of PIE (see **Figures 2.2-3 through 2.2-5**). The 452- by 215-foot hangar is owned and operated by Sheltair Aviation and is located approximately 1,200 feet south of its on-airport offices at 15875

Fairchild Drive, Clearwater, Florida. The hangar is currently occupied with three aircraft, but otherwise unencumbered with a tenant or a dedicated, on-going commercial operation.

Replacement of the exterior shell of the circa 1964-built hangar would occur by removing the metal siding and roofing while keeping the foundation and the metal frame, consisting of vertical metal supporting braces and cross beams (Paul Jackson Architects, 2016). The structural renovations and replacements would include attaching a new 24-foot-tall storage high bay with an added footprint of roughly 45-foot by 175-foot area and applying new, replacement metal siding and roofing to the entire hangar frame. The height of the renovated hangar would be 52 feet, 0 inches above ground level (AGL), which is beneath the 55-foot limit imposed under CFR Part 77 Civil Airport Imaginary Surfaces. Because the proposed action would result in new construction within a public use airport, regardless of height or location, the site owner must submit Form 7460-1 to the regional FAA office at least 45 days prior to the start of the proposed construction or alteration. A vehicle parking area that would accommodate the required 110 spaces is across a tarmac 200 feet south of the subject hangar, plus adequate apron area and aircraft tie-down locations are present as specified in the OMAO request for bids is proposed.

Vehicle access is via roadways adjacent to the west side of the airport boundary, primarily 49th Street North and Roosevelt Boulevard leading to Fairchild Drive and Spadco Drive.

2.2.3 Construction Activities and Schedule

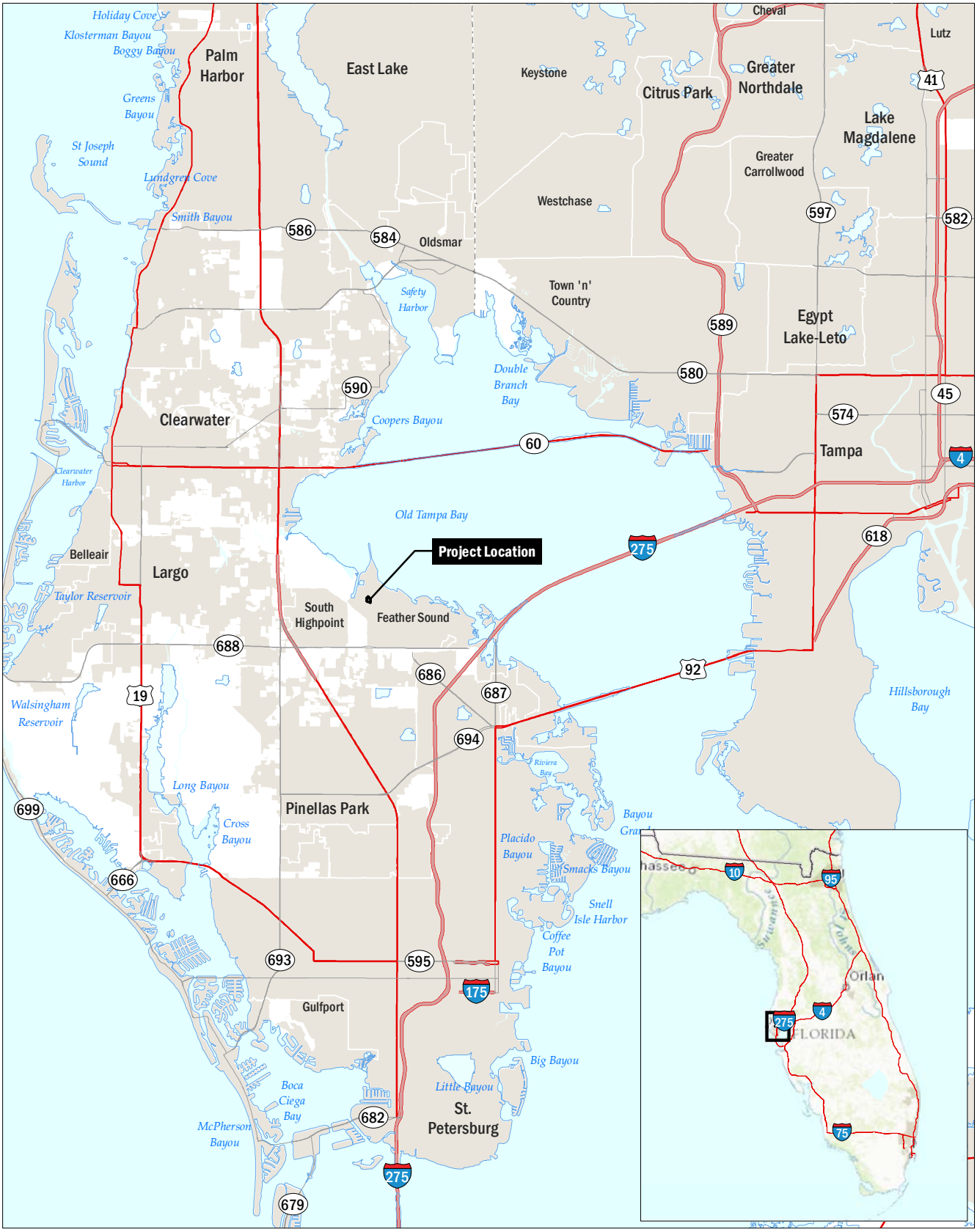
Each bidder is responsible for studies and permits required prior to or during construction, which may include FAA review of Form 7460-1 regarding the potential for marking and lighting of obstructions within navigable airspace, Florida state stormwater pollution prevention plans, or municipal permits from Pinellas County for design review, among other agencies.

Crane, jack hammer, front loader, bobcat loader and haul trucks would be mobilized to remove the hangar siding and roofing, as well as office interior and remnant and unnecessary utility infrastructure. Site work would include extension of underground mechanical, electrical and plumbing conduit, placement of metal building shell siding and roofing, installation of man-doors, glazing and siding, construction of the attached high bay segment and completion of site work for ramps, tie-downs, striping and parking. Hangar door installation and utility/fire protection measures would be installed and connected, followed by completion of interior framing, drywall, flooring and painting. Substantial completion is estimated by April 2017.

2.2.4 Operations and Maintenance

Upon substantial completion of all or portions of the construction activities, NOAA would move equipment, aircraft and personnel into ready spaces. Operations would include administrative, workshop, storage and engineering-related tasks in support of crew and aircraft readiness for various environmental monitoring and sensing missions.

Periodic delivery of supplies, parts, and large airframe and power plant components would occur during operations and to support maintenance and retrofitting of aircraft.



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Miles

Imagery: ESRI, 2016

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 2.2-1

St. Petersburg-Clearwater International Airport Project Location

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0 500
Feet

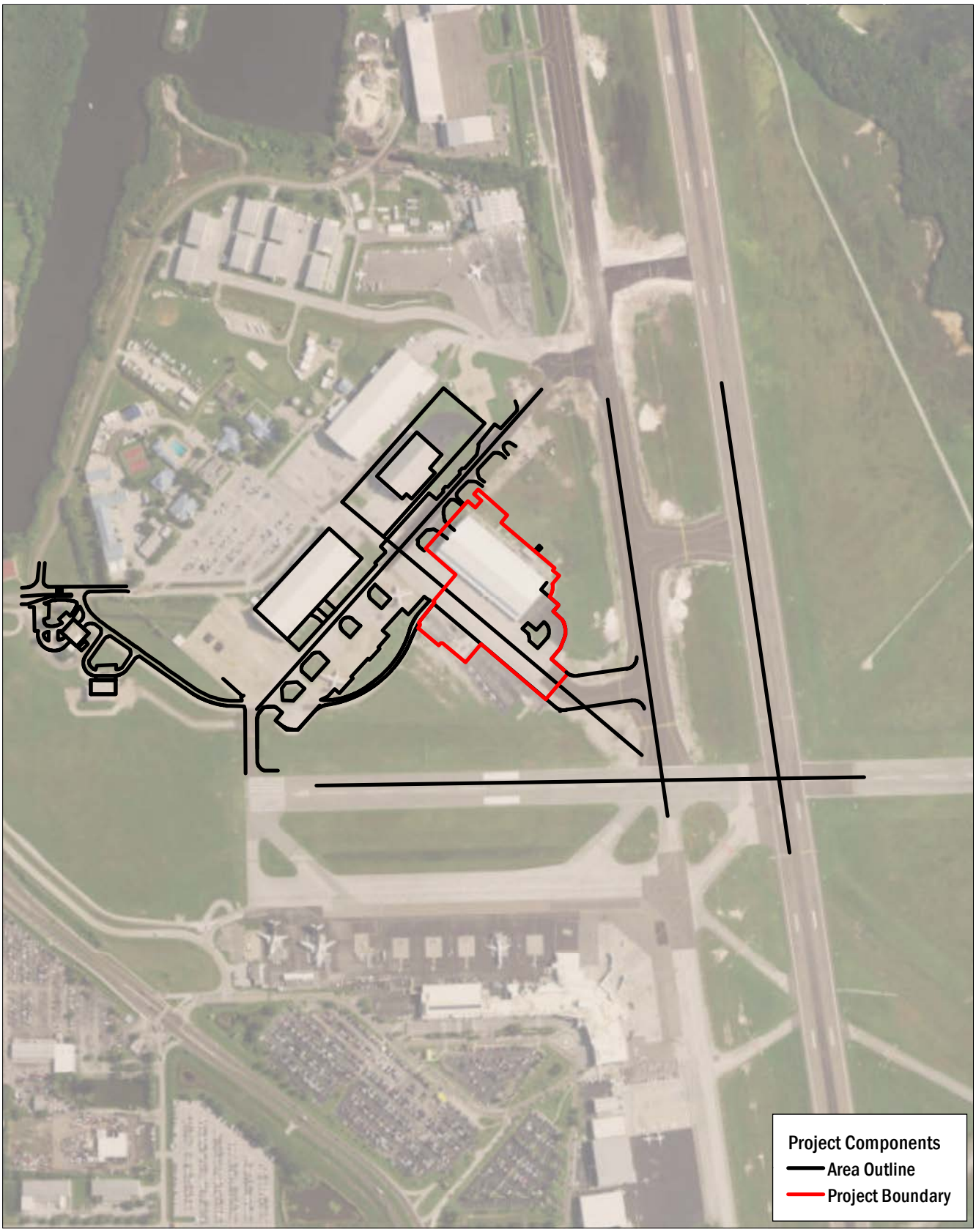
Imagery: ESRI, 2016

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 2.2-2

St. Petersburg-Clearwater International Airport Project Area



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Feet

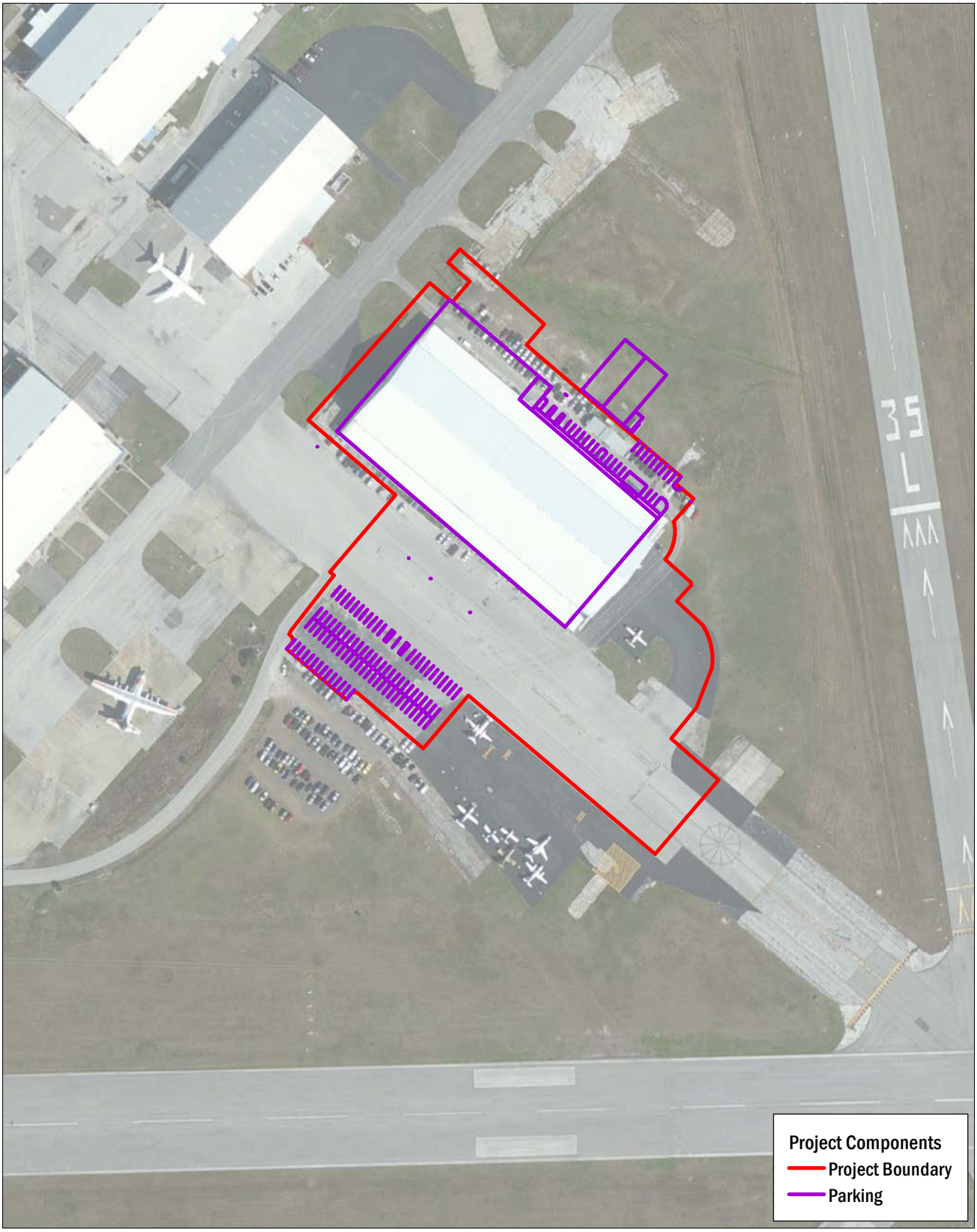
Imagery: ESRI, 2016

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 2.2-3

St. Petersburg-Clearwater International Airport Project Area



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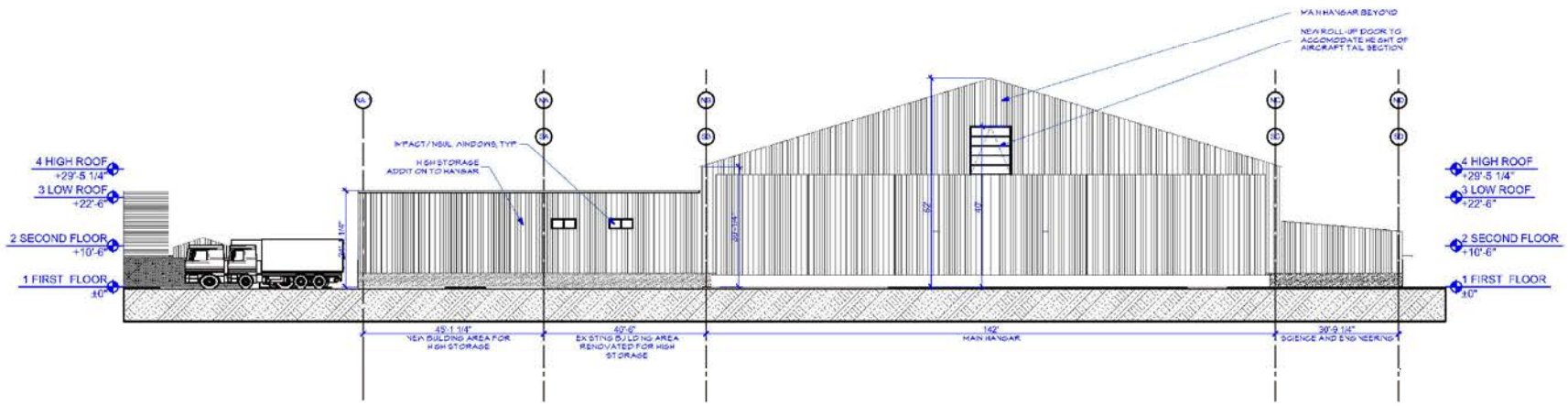
Imagery: ESRI, 2016

AECOM

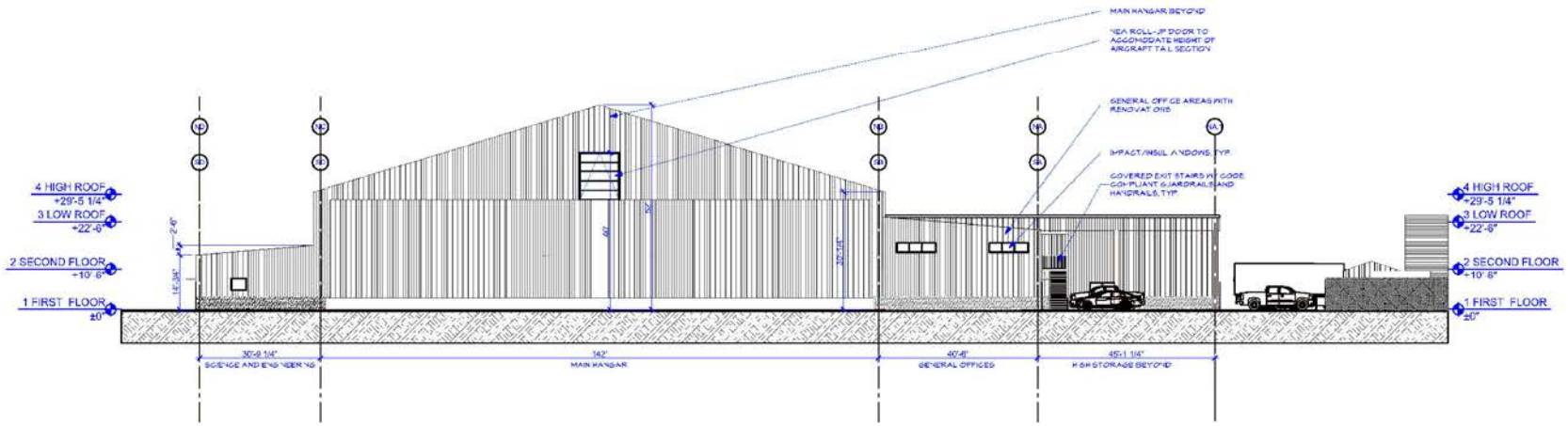
NOAA Aircraft Operations Center Relocation

FIGURE 2.2-4

St. Petersburg-Clearwater International Airport Project Area



NORTH ELEVATION



SOUTH ELEVATION

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 2.2-5

St. Petersburg-Clearwater International Airport
Elevation Views

2.3 NO-ACTION ALTERNATIVE

The No-Action Alternative is a condition in which the AOC operations are not relocated from their current location at MacDill AFB, because no DoD action affecting the space used for existing AOC activities at MacDill AFB would occur. The location and intensity of operations and existing facilities associated with AOC at MacDill AFB would remain unchanged.

2.4 ALTERNATIVES CONSIDERED AND NOT ANALYZED

Prospective interest to formally propose adequate facilities at Tampa International Airport in response to the NOAA OMAO solicitation for bids was withdrawn by the Hillsborough County Aviation Authority. It was withdrawn primarily due to the schedule requirements for OMAO AOC occupancy.

No other offers that would meet the requisite airport runway, facilities, and service requirements necessary within fifty ‘driving’ miles of MacDill AFB were received and considered.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the existing conditions for key resource topics, the anticipated environmental consequences from implementation of the Proposed Action (at each alternative) and the No-Action Alternative, and any mitigation measures that would avoid, reduce, or minimize the effects of the Proposed Action.

DRAFT

3.1 LAND USE

3.1.1 Regulatory Setting

Florida State Regulation 163.3177, *Comprehensive Land Plan,* sets forth the requirements for a comprehensive plan to be prepared by a local jurisdiction, such as a city or county. A comprehensive plan serves as a blueprint or document that provides principles, guidelines, standards and strategies for economic, social, physical, environmental and fiscal development of that area. As part of the plan, designations and zonings for future general distribution, location, and extent of the uses of land for residential uses, commercial uses, industry, agriculture, recreation, conservation, education, public facilities, and other categories of the public and private uses of land are proposed (Online Sunshine, 2016).

Florida State Regulation 163.3202, *Land development regulation,* requires all municipalities to adopt or amend and enforce land development regulations that are consistent with their comprehensive plan. Local land development regulations contain specific details and provisions, including: 1) regulating subdivision of land; 2) regulating use of land and water for land use categories; 3) regulating areas subject to seasonal flooding and provide stormwater management; 4) providing protection of potable water wellfields; 5) providing protection of environmentally sensitive area and; 6) requiring public facilities and services to meet or exceed standards established in the capital improvements element (Florida Senate, 2016).

The Public Buildings Amendments of 1988 (40 USC 601), Public Law 100-678, requires a federal agency to comply with a nationally recognized model building code and other applicable nationally recognized codes, such as electrical, life safety, and plumbing codes. Federal agencies shall consider state or local zoning and similar laws and consult with appropriate officials and make plans available upon request. State and local government may make recommendations and the federal agency should give due consideration to those recommendations and local conditions. However, no action, fine or penalty may be brought against the federal government for failure to meet the requirements of this Public Law, or for failure to carry out any State or local government recommendation.

Executive Order (EO) 12372, *Intergovernmental Review of Federal Program,* directs federal agencies to provide opportunities for consultation to elected officials of state and local governments and to provide state and local officials the opportunity to comment on actions that could affect their jurisdictions. The EO was issued with the intent to foster intergovernmental partnership and to increase the reliance of state and local processes coordination and review of proposed Federal financial assistance and direct federal development. Florida currently participates in the intergovernmental review process (Office of Management and Budget, no date).

3.1.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

Action Alternative 1 at LAL has existing county, city, and airport level plans that describe the allowable land use and associated restrictions. LAL is within the jurisdiction of the City of Lakeland, within Polk County. The City has a Comprehensive Plan that establishes its goals, objects and policies related to growth management and redevelopment. In addition, the City's Land Development Codes provide regulations and standards related to land use. The City is divided into zoning districts for the purpose of regulating the use of property. Article 2, *Use*

Standards prescribes standards for zoning, land-use and development. The purpose of these standards is to prevent or mitigate negative impacts of incompatible uses (City of Lakeland, 2016b).

According to the Lakeland Zoning Map, the airport is in the Planned Unit Development District (PUD) Industrial. PUDs are unique zoning districts having use and/or development regulations that are tailored to the particular site. Additionally, to ensure that land uses, activities and structures are compatible with the operations of LAL, development shall conform to the standards set forth in the Polk County Airport Zoning Regulations, established by the Polk County Joint Airport Board pursuant to Chapter 333, Florida Statutes. The regulations establish certain limits and requirements pertaining to structure height, noise-sensitive land uses, land uses within overflight zones, educational facilities, and land uses or activities that may induce a bird strike hazard or visual or electronic interference with aircraft (City of Lakeland, 2016b). In addition, LAL has a Regional Airport Master Plan Update (AmHerst Consulting, 2011).

Land uses to the west in unincorporated Hillsborough County consist of agricultural properties with less dense development that in Polk County. To the east, south and north are primarily single-family residences in Polk County, with some retail/commercial businesses. There are a few locations where the city has zoned an area for limited development.

Action Alternative 2: St. Petersburg-Clearwater International Airport

Action Alternative 2 at PIE has existing county, city, and airport level plans that describe the allowable land use and associated restrictions. PIE is located in unincorporated Pinellas County, approximately 8 miles north of the St. Petersburg-Clearwater, Florida, metropolitan area. The County has a Comprehensive Plan that establishes the City's goals, objects and policies related to growth management, conservation of natural and economic resources and redevelopment to meet the needs of the population and the local economy (Pinellas County, 2013).

The land use code established by Pinellas County for the Action Alternative 2 site is Transportation/Utility (T/U) (Pinellas County, 2015). The T/U land use category depicts those areas of the County that are now used for transport and public/private utility services, and to recognize such areas consistent with the need, character and scale of the transport/utility use relative to surrounding uses, transportation facilities, and natural resource features. Primary and secondary uses in the T/U land use category are identified as airport and storage, respectively. In addition, PIE has a Master Plan Update dated January 2004 (PBSJ, 2004).

Land uses surrounding PIE to the west across major thoroughfares include single-family residences, general retail/commercial businesses, and limited agricultural estates. To the south and southeast are general retail/commercial businesses, and to the east are residential developments and the Feather Sound Country Club. PIE is bounded to the north and northeast by Old Tampa Bay, part of the larger Tampa Bay.

3.1.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

The proposed Action Alternative 1 at LAL would be consistent with the City of Lakeland's Comprehensive Plan and zoning requirements, since the current use of the site as an airport would remain unchanged. Additionally, the project would be consistent with Lakeland-Linder Regional Airport Master Plan, as the existing hangar facilities

offered to the government would involve an alteration that would replace portions of the structure with a modular hangar facility. There would be no change in land use and no adverse effect to existing land uses under this alternative.

The proposed action at this alternative would result in no effect to land use.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The proposed Action Alternative 2 at PIE would be consistent with the county of Pinellas's Comprehensive Plan and zoning requirements, since the current use of the site as an airport would remain the same. Additionally, the project would be consistent with the St. Petersburg-Clearwater International Airport Master Plan Update, as the existing hangar facilities offered for government use would not pose a change in the type or intensity of use.

The proposed action at this alternative would result in no effect to land use.

No-Action Alternative

The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill Airport. No impacts to land-use would occur under this alternative.

3.1.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to land use.

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3.2 GEOLOGICAL RESOURCES

3.2.1 Regulatory Setting

Project-related impacts associated with geological resources may include hazards such as landslides, erosion, fault rupture, seismic shaking, liquefaction, sinkholes and subsidence, and effects to mineral resources or protected geological features. Geologically hazardous areas pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard. Some geological hazards can be reduced or mitigated by engineering, design or modified construction practices, but other geological hazards are best avoided.

To examine the effects of the proposed action on geological resources (and the effects of these resources on the proposed action), this analysis considers the Surface Mining and Reclamation Act (Public Resources Code, Division 2, Chapter 9, Section 2710 et seq.), the Historic Sites Act of 1935, and geologic conditions or subsurface mineral rights that may affect or be affected by the proposed action.

The Surface Mining and Reclamation Act was enacted to address the need for a continuing supply of mineral resources and to prevent or minimize the adverse impacts of surface mining to public health, property, and the environment. The Historic Sites Act of 1935 establishes a national registry of natural landmarks and protects "outstanding examples of major geological features."

3.2.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

Action Alternative 1 is located in the central highlands physiographic province of Florida. The site is generally flat, and is approximately 130 feet above MSL (USGS, 2012). The regional and local topographic relief in the vicinity of the site slopes towards the south-southwest.

Surface and near surface sediments in Polk County consist of quartz sand, clay, phosphorite, limestone, and dolomite, ranging in age from Late Eocene to Holocene (40 million years ago to present) (FGS, 1986). The area surrounding the Action Alternative 1 site is underlain by the Bone Valley formation of the Hawthorn Group, a phosphate-containing sandstone of Tertiary age (66 million to 3 million years old) and undifferentiated surficial sands of Quaternary age (3 million to 12 thousand years old) (FGS, 1992).

Soil survey data from the Natural Resources Conservation Service (NRCS) shows Action Alternative 1 is predominantly underlain by Pomona fine sand and Holopaw fine sand (NRCS, 2016a). Pomona fine sand is a poorly-drained soil with low infiltration rates. The seasonal high water table is within 12 inches of the surface for one to four months during most years. Holopaw fine sand is a very poorly drained clayey soil with very slow infiltration rates. This soil is ponded for more than six months during most years (Chastain Skillman, 2016). Other areas of the site are characterized as "urban land", which consists of areas more than 70 percent covered by structures or other impervious surfaces, so that the natural soils are not readily observable (NRCS, 2016a).

The central portion of Polk County, including Action Alternative 1 and surrounding areas, is classified as "Area III" by the Department of Natural Resources Bureau of Geology with respect to susceptibility to sinkhole and

subsidence hazards. Area III zones typically have cover between 30 to 200 feet in thickness, which consists mainly of cohesive clayey sediments of low permeability. Land within Area III is most susceptible to sinkhole development. Sinkholes may be of varying size, and typically develop abruptly. Cover-collapse sinkholes are the most common type of sinkhole within Area III (Sinclair & Stewart, 1985). A map of all reported sinkholes in Polk County shows two sinkholes (both of less than 10 feet width) within two miles of LAL (Florida Center for Instructional Technology, 2008a).

The state of Florida is one of the areas of the contiguous U.S. at least risk of seismic activity. The USGS (2014) has estimated that horizontal ground shaking has a one in 50 (two-percent) probability of exceeding 4 percent of g (where g is the acceleration of an object falling due to gravity) in a 50-year period, which is considered a very low hazard according to FEMA. The probability of an earthquake of 5.0 magnitude or greater occurring within 30 miles of Polk County, Florida over the next 50 years is 0.4 percent, and there have been no recorded earthquakes in this area since 1931 (Homefacts, 2016a).

A search of the National Register of Historic Places (NRHP) found no "outstanding examples of major geological features" near Action Alternative 1 (NRHP, 2016a).

Florida ranks fifth in the nation industrial mineral production with a value of $1.92 billion, including phosphate, limestone, sand and gravel, clay, and heavy minerals (FGS, 2016a). Polk County contains mineral-producing areas for industrial sand (FDEP, 2015), including the Wellman-Lord Trust Mine just south of Pipkin Road, approximately 0.25 miles south of the Action Alternative 1 site. No existing mineral resource recovery operations occur on the Action Alternative 1 site, and such operations are also unlikely to be developed in the future, due to the presence and operation of LAL.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The Action Alternative 2 site and surrounding areas are generally flat, and are approximately 5 to 10 feet above MSL (EPAC, 2016a).

Pinellas County lies on the southwestern flank of the Ocala platform, and is underlain by a series of limestone formations, all of which dip toward the south (Pinellas County, 2008). Surficial areas in the vicinity of the Action Alternative 2 site comprise undifferentiated Quaternary shell beds (FGS, 1993).

The NRCS Soil Survey report characterizes the Action Alternative 2 site as "urban land," a classification which consists of areas more than 70 percent covered by structures or other impervious surfaces, so that the natural soils are not readily observable (NRCS, 2016b). "Urban Land" areas often contain a shallow layer of artificial fill (EPAC, 2016a). The Pinellas County Comprehensive Plan classifies the area as "Group C" soils, which have a slow infiltration rate and consist chiefly of soils that have a layer that impedes the downward movement of water and have a slow rate of water transmission (Pinellas County, 2008).

The majority of Pinellas County, including Action Alternative 2 and surrounding areas, is classified as "Area III" by the Department of Natural Resources Bureau of Geology with respect to susceptibility to sinkhole and subsidence hazards. Area III zones typically have cover between 30 to 200 feet in thickness, which consists mainly of cohesive clayey sediments of low permeability. Land within Area III is most susceptible to sinkhole development. Sinkholes may be of varying size, and typically develop abruptly. Cover-collapse sinkholes are the

most common type of sinkhole within Area III (Sinclair & Stewart, 1985). Sinkholes are primarily found in the northern third of the County, inland of Tarpon Springs. Sinkholes in other parts of the County, including near Action Alternative 2, are much less common (Pinella County, 2008). A map of all reported sinkholes in Pinellas County shows only one sinkhole (of less than 10 feet width) within four miles of Action Alternative 2 (Florida Center for Instructional Technology, 2008b).

The state of Florida is one of the areas of the contiguous U.S. at least risk of seismic activity. The USGS (2014) has estimated that horizontal ground shaking has a one in 50 (two-percent) probability of exceeding 4 percent of g (where g is the acceleration of an object falling due to gravity) in a 50-year period, which is considered a very low hazard according to FEMA. The probability of an earthquake of 5.0 magnitude or greater occurring within 30 miles of Pinellas County, Florida over the next 50 years is 0.28 percent, and there have been no recorded earthquakes in this area since 1931 (Homefacts, 2016b).

A search of the NRHP found no "outstanding examples of major geological features" near the Action Alternative 2 site (NRHP, 2016b).

No existing mineral resource recovery operations occur on or near the Action Alternative 2 site (FGS, 2016a), and such operations are also unlikely to be developed in the future, due to the presence and operation of PIE.

No-Action Alternative

Under the No-Action Alternative, NOAA would not relocate its AOC program to either Action Alternative. The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill AFB. The affected environment would not change under this alternative.

3.2.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

The proposed Action Alternative 1 would have no adverse impacts to geological resources. Existing facilities on the leased area at the airport would be utilized. Improvements would be made, but largely within the footprint of the existing facilities, except for additional 5 feet of width to portions of the west side of the hangar to be replaced. Replacement of approximately the southern two-thirds of the 36-year-old hangar unit would occur by demolishing that portion of the concrete block structure, replacing its cement foundation with a thicker 10-inch deep cement foundation and attaching a pre-engineered metal hangar structure. Resurfacing of apron and parking lot areas would also occur, and construction of some new parking areas would also occur.

The proposed expansion of the existing facility, including the new foundations, would be designed to current Florida Building Code standards, which would minimize any potential impacts relating to potentially unstable subsurface conditions, including karst-related hazards such as sinkholes. It is anticipated that a site-specific geotechnical investigation would be undertaken prior to detailed design of the proposed foundations, including investigation of the potential for sinkhole development, and that any recommendations of that investigation would be incorporated into the foundation design. No activities would be undertaken as part of the proposed action that would result in human-induced sinkhole development.

Due to the minor nature of the proposed construction activities, and with implementation of standard and customary best management practices (BMPs) during construction, erosion of site soils during construction activities would be extremely limited and contained within the construction site.

Impacts to geological resources resulting from proposed Action Alternative 1 would be negligible.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The proposed Action Alternative 2 would have no adverse impacts to geological resources. Existing facilities on the leased area at the airport would be utilized. Improvements would be made, including replacement of the existing shell of the building. The existing foundation of the building would remain.

The proposed replacement of the existing building shell would be designed to current Florida Building Code standards, which would minimize any potential impacts relating to potentially unstable subsurface conditions, including karst-related hazards such as sinkholes. No activities would be undertaken as part of the proposed action that would result in human-induced sinkhole development.

Due to the minor nature of the proposed construction activities, and with implementation of BMPs for construction, erosion of site soils during construction activities would be extremely limited and contained within the construction site.

Impacts to geological resources resulting from proposed Action Alternative 2 would be negligible.

No-Action Alternative

The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill Airport. No impacts to geological resources would occur under this alternative.

3.2.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to geological resources.

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3.3 AIR QUALITY

3.3.1 Regulatory Setting

Pursuant to the federal Clean Air Act (CAA) and its amendments, the U.S. Environmental Protection Agency (USEPA) identifies air pollutants that cause or contribute to the endangerment of human health and or environmental welfare, and establishes air quality "criteria" that guide the establishment of air quality standards to regulate these pollutants (42 U.S.C. §7408 - §7409). To date, USEPA has established such criteria for six air pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), fine and respirable particulate matter ($PM_{2.5}$ and PM_{10}), and sulfur dioxide (SO_2), and has subsequently promulgated National Ambient Air Quality Standards (NAAQS) meant to safeguard public health (i.e., primary NAAQS) and environmental welfare (i.e., secondary NAAQS).

For the purposes of appraising compliance with the NAAQS, and conjunction with the Florida Department of Environmental Protection (FDEP), USEPA collects and evaluates ambient (i.e., "outdoor") monitoring data on a geographic basis, delineated by Core Based Statistical Areas (CBSA) or Metropolitan Statistical Areas (MSA) established by the U.S. Office of Management and Budget and U.S. Census Bureau. From each ambient monitor within a CBSA/MSA, USEPA derives criteria pollutant *design values*, which are statistics that describe the air quality status of a given location relative to the level of the NAAQS. Areas where monitored ambient air concentrations (i.e., design values) are within an applicable NAAQS are considered in *attainment* of that NAAQS. If sufficient data are not available to make a determination, the area is instead deemed *attainment/unclassifiable.* Areas where monitored ambient air concentrations exceed the NAAQS are designated by USEPA as *nonattainment* areas. Lastly, areas that have historically violated the NAAQS, but have since instituted controls and programs that have successfully remedied these violations are known as *maintenance* areas. Current NAAQS and applicable attainment designations are summarized in **Table 3.3-1** for the Proposed Action at each of the Action Alternatives.

States with *nonattainment* areas within their jurisdiction are charged with developing air quality control plans, called State Implementation Plans (SIP), that include strategies and measures to bring the area back into compliance with the NAAQS by an USEPA-prescribed regulatory deadline, or maintain compliance once attainment is achieved.

The General Conformity regulations required under Section 176(c) of the CAA (42 U.S.C §7506) and codified at 40 CFR Part 93 mandate that a federal agency undertaking, approving, funding or otherwise supporting any action in USEPA-designated nonattainment or maintenance areas prove that undertaking the action does not exacerbate existing violations of the NAAQS, cause new violations, or interfere with an approved SIP to improve or maintain air quality.

Table 3.3-1 National Ambient Air Quality Standards and Design Values

Pollutant	Averaging Time	Level	Form	2013-2015 Design Value		
				Hillsborough (MacDill)	Polk (LAL)	Pinellas (PIE)
Carbon Monoxide (CO) [76 FR 54294, Aug 31, 2011]	8-hour	9 ppm	Not to be exceeded more than once per year	0.7	--	0.6
	1-hour	35 ppm		1.9	--	1.7
Lead (Pb) [73 FR 66964, Nov 12, 2008]	Rolling 3 month average	0.15 µg/m^3	Not to be exceeded	0.49	--	--
Nitrogen Dioxide (NO_2) [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	--	--	30.0
	Annual	53 ppb	Annual mean	12.0	--	4.0
Ozone (O_3) [80 FR 65292, Oct 26, 2015]	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years	0.69	0.63	0.63
Particle Pollution [78 FR 3085, Jan 15, 2013]	$PM_{2.5}$ Annual (primary)	12 µg/m^3	Annual mean, averaged over 3 years	7.8	6.5	6.5
	$PM_{2.5}$ Annual (secondary)	15 µg/m^3	Annual mean, averaged over 3 years			
	$PM_{2.5}$ 24-hour	35 µg/m^3	98th percentile, averaged over 3 years	19.0	14.0	16.0
	PM_{10} 24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years	No exceedances reported		
Sulfur Dioxide (SO_2) [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973]	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years	66	26	9
	3-hour	0.5 ppm	Not to be exceeded more than once per year	No exceedances reported		

Sources: Federal Register as above, and USEPA Air Quality Design Values, https://www.epa.gov/air-trends/air-quality-design-values#report, Accessed 26 August 2016.

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3.3.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

LAL is in Polk County. The area within which Action Alternative 1 for the Proposed Action is located is presently designated as attainment/unclassifiable with respect to all NAAQS; therefore the General Conformity regulations do not apply to the Proposed Action at Action Alternative 1.

Action Alternative 2: St. Petersburg-Clearwater International Airport

PIE is in Pinellas County. The area within which Action Alternative 2 for the Proposed Action is located is presently designated as attainment/unclassifiable with respect to all NAAQS; therefore the General Conformity regulations do not apply to the Proposed Action at Action Alternative 2.

No-Action Alternative

MacDill AFB is in Hillsborough County. As shown in **Table 3.3-1**, the Pb design value for Hillsborough County is 0.49 micrograms per cubic meter (µg/m3) and accordingly a portion of Hillsborough County is included in the Tampa-St. Petersburg-Clearwater, FL nonattainment area for the 2008 Pb NAAQS. However, the boundaries of this nonattainment area do not contain MacDill AFB, which is the site of the No-Action Alternative. Additionally, although the design values listed on **Table 3.3-1** indicate no violation of SO_2 NAAQS, a portion of Hillsborough County is currently designated nonattainment of the 2010 SO_2 NAAQS by USEPA. Again, the area containing MacDill AFB is adjacent to this area; it is not included in the nonattainment area boundary.

3.3.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

In terms of operational emissions, air quality effects of the proposed Action Alternative 1 pertain to the emissions associated with the operation of AOC aircraft and support equipment that would be based at LAL. Construction-related emissions are temporary in nature and occur due to (1) construction equipment and vehicle operations, and (2) demolition, earthworks, ground disturbance and paving activities during the construction period.

Table 3.3-2 summarizes the CY 2020 operational emissions inventory of AOC aircraft and support equipment that will be based at LAL, compared to LAL emissions under the No-Action Alternative. As shown, emissions increases due to the Proposed Action total 1.4 tons of CO, 1.3 tons of NO_x, 0.0 tons of Pb, 0.1 tons of $PM_{2.5}$, 0.1 tons of PM_{10}, 0.2 tons of SO_2, and 0.2 tons of VOC.[1] However, because the AOC fleet would no longer be operating at MacDill AFB, emissions at MacDill AFB would be reduced commensurately, resulting in no net increase of emissions in the air shed of the Proposed Action at Action Alternative 1.

[1] NO_x and VOC are considered precursors to O_3 formation and are included as proxies for the purposes of air quality impact assessment.

Table 3.3-2 Operational Emissions Inventory: Action Alternative 1

Category	CY 2020 Emissions (tons)						
	CO	NO_x	Pb	$PM_{2.5}$	PM_{10}	SO_2	VOC
No-Action Alternative	863.3	18.9	0.4	0.8	0.8	2.2	11.3
Action Alternative 1	864.7	20.1	0.4	0.9	0.9	2.4	11.4
Difference	**1.4**	**1.3**	**0.0**	**0.1**	**0.1**	**0.2**	**0.2**

Sources: FAA, 2016a. Aviation Environmental Design Tool (AEDT) Version 2b SP3. Values reflect rounding.

As shown on **Table 3.3-3**, construction period emissions associated with Action Alternative 1 total 8.3 tons of CO, 4.2 tons of NO_x, 0.6 tons of $PM_{2.5}$, 3.5 tons of PM_{10} and 7.8 tons of VOC.[2]

Table 3.3-3 Construction Emissions Inventory: Action Alternative 1

Category	Emissions (tons)					
	CO	NO_x	$PM_{2.5}$	PM_{10}	SO_2	VOC
Off-Road Equipment	1.9	3.8	0.2	0.2	<0.1	0.8
On-Road Vehicles	6.4	0.4	<0.1	0.1	<0.1	0.3
Fugitive Emissions	--	--	0.3	3.2	--	6.6
Total	**8.3**	**4.2**	**0.6**	**3.5**	**<0.1**	**7.8**

Sources: AECOM, 2016. Estimated Construction Equipment and Usage, NOAA OMAO AOC Relocation Project, August 2016. Values reflect rounding.

Action Alternative 2: St. Petersburg-Clearwater International Airport

In terms of operational emissions, air quality effects of the proposed Action Alternative 2 pertain to the emissions associated with the operation of AOC aircraft and support equipment that would be based at PIE. Construction-related emissions are temporary in nature and occur due to (1) construction equipment and vehicle operations, and (2) demolition, earthworks, ground disturbance and paving activities during the construction period.

Table 3.3-4 summarizes the CY 2020 operational emissions inventory of AOC aircraft and support equipment that will be based at PIE, compared to PIE emissions under the No-Action Alternative. As shown, emissions increases due to the Proposed Action total 1.4 tons of CO, 1.2 tons of NO_x, 0.0 tons of Pb, 0.1 tons of $PM_{2.5}$, 0.1 tons of PM_{10}, 0.2 tons of SO_2 and 0.2 tons of VOC.[3] However, because the AOC fleet would no longer be operating at MacDill AFB, emissions at MacDill AFB would be reduced commensurately, resulting in no net increase of emissions in the air shed of the Proposed Action at Action Alternative 2.

[2] Construction emissions sources do not use leaded fuel and therefore lead emissions are not included.
[3] NO_x and VOC are considered precursors to O_3 formation and are included as proxies for the purposes of air quality impact assessment.

Table 3.3-4 Operational Emissions Inventory: Action Alternative 2

Category	CY 2020 Emissions (tons)						
	CO	NO_x	Pb	$PM_{2.5}$	PM_{10}	SO_2	VOC
No-Action Alternative	538.5	92.1	0.1	2.1	2.1	9.0	16.7
Action Alternative 2	539.8	93.4	0.1	2.1	2.1	9.1	16.8
Difference	**1.4**	**1.2**	**0.0**	**0.1**	**0.1**	**0.2**	**0.2**

Sources: FAA, 2016a. Aviation Environmental Design Tool (AEDT) Version 2b SP3. Values reflect rounding.

As shown on **Table 3.3-5,** construction period emissions associated with Action Alternative 2 total 5.3 tons of CO, 3.4 tons of NOx, 0.4 tons of $PM_{2.5}$, 1.9 tons of PM_{10} and 4.1 tons of VOC.[4]

Table 3.3-4 Construction Emissions Inventory: Action Alternative 2

Category	Emissions (tons)					
	CO	NO_x	$PM_{2.5}$	PM_{10}	SO_2	VOC
Off-Road Equipment	2.8	3.2	0.2	0.2	<0.1	0.7
On-Road Vehicles	2.5	0.2	<0.1	<0.1	<0.1	0.1
Fugitive Emissions	--	--	0.2	1.6	--	3.3
Total	**5.3**	**3.4**	**0.4**	**1.9**	**<0.1**	**4.1**

Sources: AECOM, 2016. Estimated Construction Equipment and Usage, NOAA OMAO AOC Relocation Project, August 2016. Values reflect rounding.

No-Action Alternative

Under the No-Action Alternative, emissions associated with NOAA operations would occur as usual. No construction-related emissions would occur. NOAA-related emissions levels in CY 2020 would approximate those identified in **Tables 4.3-2** and **4.3-4** for the Proposed Action Alternatives.

3.3.4 Mitigation Measures

Because the Proposed Action at each of the Action Alternatives is located in areas considered by USEPA as attainment/unclassifiable with respect to the NAAQS, established impact significance thresholds do not apply to the Proposed Action at each of the Action Alternatives and under the No-Action Alternative. No mitigation measures are required.

However, standard and customary BMPs during construction should be applied to minimize construction-related emissions, including (but not limited to), dust suppression on unpaved areas, minimization of vehicle and equipment idling, covering of materials stockpiles, and recycling construction materials on-site where possible.

[4] Construction emissions sources do not use leaded fuel and therefore lead emissions are not included.

3.4 WATER RESOURCES

3.4.1 Regulatory Setting

Water resources, including stormwater management, are regulated by various federal, state, regional and local governmental agencies. The U.S. Army Corps of Engineers (USACE) has jurisdiction over Waters of the U.S. as defined under Section 404 of the Clean Water Act (CWA). The USACE also has jurisdiction of dredge and fill activities within wetlands and surface waters. No limits are placed on stormwater pollutants but the State agency responsible for water quality must certify the project meets State Water Quality Standards before they will issue a permit. The USACE has no requirement or control on stormwater volumes or peak runoff rates.

Under Section 401 of the CWA, USEPA has delegated the responsibility of regulating and granting permits through the National Pollutant Discharge Elimination System (NPDES) to the FDEP. The NPDES permit process places limits on the concentration of pollutants in stormwater discharges and wastewater discharges. The objective of the permitting process is to limit the pollutants entering Waters of the U.S. to a level that will not harm its natural functions. The FDEP issues permits under the NPDES program for stormwater discharges for construction activity, municipal systems, industrial activities, and wastewater discharges, as discussed below:

- Industrial Activities: The FDEP requires facilities with industrial activities to obtain coverage under the NPDES general permit, known in Florida as a "generic" permit. A generic permit is a general permit issued by FDEP under the authority of Section 403.0885, Florida Statutes. The FDEP identifies the generic permit as the State of Florida Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity (MSGP). The MSGP divides the regulated industrial activities into 30 sectors of related activity and specifies both general and sector-specific requirements for each. Airports are in sector S, which is associated with industrial activities such as vehicle and aircraft maintenance, fueling, and the storage and handling of hazardous materials.
- Construction Activities: The NPDES stormwater program for construction activity regulates "large" and "small" construction activity. The program regulates stormwater associated with construction activities that discharge to surface waters of the State or into a municipal separate storm sewer system (MS4). “Large” construction activity is defined as activity that disturbs five acres or greater of land, or disturbs less than five acres of land that is part of a larger common plan of development or sale that will ultimately disturb five acres or greater. “Small” construction activity is defined as activity that disturbs equal to or greater than one acre of land and less than five acres of land, or disturbs less than one acre of land that is part of a larger common plan of development or sale that will ultimately disturb between one and five acres. An NPDES Notice of Intent (NOI) must be submitted to the FDEP before any construction activity begins within the detailed study area.
- Municipal Separate Storm Sewer Systems: An MS4 is a publicly-owned conveyance or system of conveyances (i.e., ditches, curbs, catch basins, underground pipes, etc.) that is designed or used for collecting or conveying stormwater and that discharges to surface waters of the State. An MS4 can be operated by public agencies including, but not limited to, municipalities, counties, drainage districts, colleges, or military bases. The FDEP categorizes MS4s into two programs identified as Phase 1 and Phase II. Phase I addresses discharges of stormwater runoff from "medium" and "large" MS4s (i.e., those in areas with populations of 100,000 or greater). Under Phase II, the program regulates discharges from certain MS4s not regulated under Phase I, and that meet designation criteria in Chapter 62-624, FAC.

The FDEP and the five water management districts have the ultimate responsibility for regulating stormwater treatment and attenuation management systems within the State. Each NOAA AOC Action Alternative, and the No-Action Alternative, is within the jurisdiction of the Southwest Florida Water Management District (SWFWMD) and they would be responsible for issuing an Environmental Resource Permit (ERP) for land development activities. Projects affecting wetlands, water quality of stormwater runoff, and water quantity attenuation of stormwater runoff are permitted through an ERP.

The rules found in Chapters 40D-4 and 40D-40, FAC establish guidelines for obtaining individual and general ERPs, respectively, for stormwater management systems. The SWFWMD has established criteria which govern the issuance of ERPs in "Part II Criteria for Evaluation" in the Environmental Resource Permit Applicant's Handbook (SWFWMD, 2013a; 2013b). The criteria for evaluation guidelines address stormwater quality, stating that "projects shall be designed so that discharges will meet State water quality standards as set forth in Chapter 17-3, FAC". The criteria for evaluation provide guidelines for a variety of recommended BMPs with regards to stormwater quantity and stormwater quality.

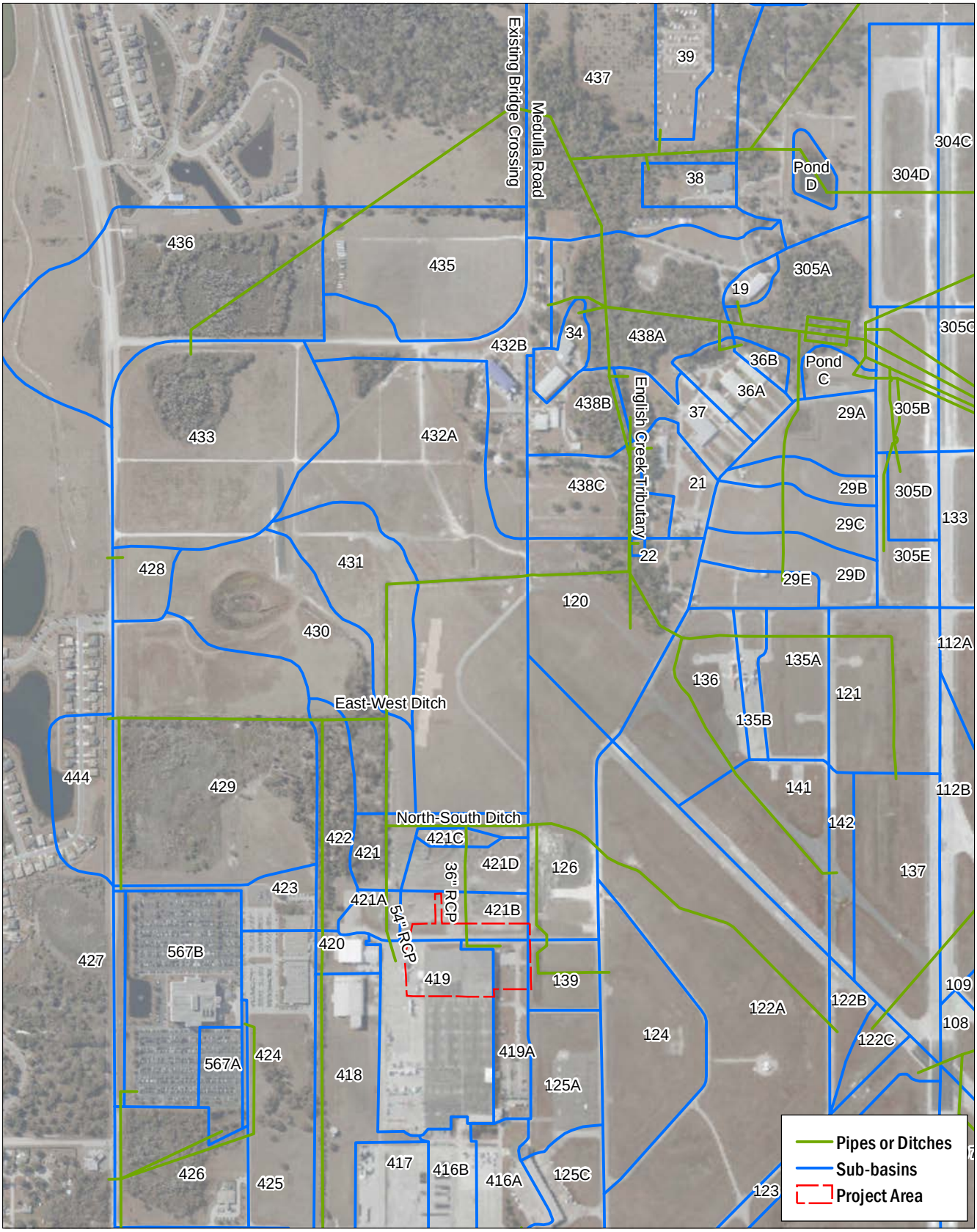
Commercial and industrial projects are required to install a drainage system to provide flood attenuation and any additional retention/detention required for water quality purposes. The required water quality system must have treatment capacity for one inch of runoff if wet detention is used, or one half-inch of runoff if retention, effluent filtration or exfiltration is used, from the total developed site and contributing offsite area.

3.4.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

Action Alternative 1 is located within three drainage sub-basins identified as 419, 419A and 421B, which collectively encompass approximately 31.49 acres (see **Figure 3.4-1**). Stormwater runoff from the two sub-basins identified as 419A and 421B located north of the existing hangar building and along Taxiway E1 west of the existing hangar building, respectively, is collected in the existing underground closed pipe storm sewer system. This existing storm sewer was constructed as part of the recently completed Taxiway E1 project and consists of 36-inch diameter reinforced concrete pipe (RCP) that conveys the stormwater westward for approximately 553 feet where it crosses under taxiway E1 and outfalls into an existing ditch (Amherst Consulting, no date). This ditch is oriented in a north-south direction and conveys the stormwater southward to another ditch oriented in an east-west direction.

Sub-basin 419 includes the entire subject hangar building and the concrete apron to the south. Stormwater runoff from sub-basin 419 is collected in an underground closed pipe storm sewer system. The downstream end of the closed storm sewer system is a 54-inch RCP located at the southwest corner of the existing apron. Stormwater runoff discharges from this 54-inch RCP into the upstream end of the aforementioned ditch that is oriented in an east-west direction. This ditch flows westward for approximately 670 feet where intersects the aforementioned ditch oriented in an east-west direction that conveys the stormwater runoff southward from Sub-basins 419A and 421B. The east-west ditch continues to convey water westward for approximately 865 feet where it makes a 90-degree turn to the north and conveys the water northward for approximately 1,550 feet where it joins a bay swamp tributary of English Creek. This bay swamp tributary of English Creek flows westward for approximately half a mile up to Medulla Road where it passes under this road through an existing bridge structure and continues to flow for approximately 7 miles into English Creek just north of Pipkin Road West.



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Imagery: ESRI, 2016;
Drainage: AECOM, no date

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 3.4-1

Lakeland-Linder Regional Airport
Drainage Map

Stormwater within the three sub-basins is currently not being treated in a SWFWMD-permitted stormwater management system, such as dry retention pond, wet detention pond, exfiltration systems, among other systems. However, stormwater runoff flowing off the pavement for Taxiway E1 and the connector taxiway that connects Taxiway E1 to the existing apron to the east is treated by overland flow within the vegetated buffer adjacent to both sides of the taxiway (GTC Engineering Corporation, 2013). This vegetated buffer was authorized to function as a stormwater treatment system by the SWFWMD as part of the ERP application for the Taxiway E1 project.

The water quantity design criteria mandated by the SWFWMD for stormwater management systems within an open drainage basin, which the detailed study area is within is as follows:

- The allowable discharge shall be no more than the pre-development discharge leaving the site by gravity for the 25-year 24-hour storm.
- The 25-year 24-hour discharges for the pre- and post-developed conditions shall be computed using the SWFWMD's 25-year 24-hour rainfall maps and the NRCS type II Florida Modified 24-hour rainfall distribution with an antecedent moisture condition of II.

This requirement only applies to LAL because the storm sewer systems ultimately discharge runoff into off-site drainage systems that are not tidally influenced.

The governing authority of LAL must provide reasonable assurance in the ERP application that the proposed Action Alternative 1 will not cause the following adverse impacts:

- Water quantity impacts to receiving waters and adjacent lands;
- Flooding to on-site of off-site property;
- Impacts to existing surface water storage and conveyance capabilities; and
- The maintenance of surface or ground water levels or surface water flows.

Regulated MS4 operators must obtain an NPDES stormwater permit and implement a comprehensive stormwater management program to reduce the contamination of stormwater runoff and prohibit illicit discharges to the MS4. LAL is within the City of Lakeland. The City of Lakeland and all of the other incorporated cities and towns within Polk County are co-permittees with Polk County as MS4 operators linked to one permit. Polk County submitted an NOI to the FDEP to obtain coverage for Polk County and all co-permittees under the Phase I MS4 NPDES and the FDEP issued coverage on 9/12/2011 with the Facility ID FLS000015. Coverage under the generic MS4 NPDES permit will expire on 9/11/2016. Polk County and all co-permittees will reapply for coverage prior to this expiration date in order to maintain coverage for Polk County and all municipalities.

The Lakeland-Linder Regional Airport prepared a Stormwater Pollution Prevention Plan (SWPPP) and submitted an NOI to the FDEP to receive coverage under the NPDES MSGP for Industrial Activities. The FDEP issued coverage for the Lakeland-Linder Regional Airport under the MSGP for Industrial Activity on 7/29/2011 with the Facility ID FLR05A537. The latest information obtained from the FDEP web site indicates coverage under the MSGP for Industrial Activity expired on 7/28/2016 (FDEP, 2016).

Action Alternative 2: St. Petersburg-Clearwater International Airport

Stormwater runoff from the St. Petersburg Clearwater International Airport discharges into Tampa Bay which is classified as an "Outstanding Florida Water" by the FDEP. Therefore, retention/detention systems at PIE are required to provide a treatment volume 50 percent more than required for the selected treatment system. A stormwater collection and conveyance system must be provided to interconnect the retention/detention system with the project outfall. The system is not required to limit discharge under full build-out design conditions because the drainage system discharges to a tidal water body. Currently there are no existing retention/detention systems that treat stormwater runoff from the Action Alternative 2 site.

Action Alternative 2 is located within three drainage sub-basins identified as B19050, B19060 and B21145, which collectively encompass approximately 21.85 acres (see **Figure 3.4-2**). Stormwater runoff from the two sub-basins identified as B19050 and B19060, located on the west side of the subject hangar building, is collected in the existing concrete apron. The stormwater concentrates in a v-bottom concrete swale within the apron that runs parallel to the west side of the subject hangar building. The high point of the concrete swale is located at the sub-basin boundary between Sub-basins B19050 and B19060 where stormwater runoff splits and drains to the north and south in Sub-basins B19050 and B19060, respectively.

The concrete swale in Sub-basin B19060 conveys stormwater runoff southward for approximately 130 feet into an existing storm sewer inlet located on the edge of pavement where the black asphalt pavement on the south side of the hangar building joins the concrete apron on the west side of the hangar building. An existing, 18-inch diameter reinforced RCP conveys stormwater collected in this storm sewer inlet southward to another inlet located in the grassed infield area where all of the stormwater runoff in Sub-basin B19060 eventually ends up.

The concrete swale in Sub-basin B19050 conveys stormwater runoff northward for approximately 435 feet into an existing storm sewer inlet located within the grassed infield area located on the north side of the hangar building where all of the stormwater runoff in Sub-basin B19050 eventually ends up. The two storm sewer inlets located within the grassed infield areas at the north and south sides of the existing hangar building are both connected to 18-inch diameter RCP that convey the stormwater runoff from Sub-basins B19050 and B19060 westward to an 18-inch diameter primary trunk line that conveys the stormwater northward for approximately 1,700 feet to an existing ditch located north of the terminal area. This ditch conveys water northward for approximately 400 feet to an existing 48-inch diameter RCP that conveys water northward under Fairchild Drive into the tidally influenced Cross Bayou Canal where the tidal flux moves water in a northward direction during the descending tide for approximately 2,800 feet to Tampa Bay and a southward direction away from Tampa Bay during the rising tide.

Stormwater runoff from the sub-basin identified as B21145 located on the east side of the existing hangar building where the alternative site is located is collected in the existing large grassed infield area located west of Runway 18-36. Stormwater runoff sheet flows eastward to an existing swale located along the west side of Runway 18-36. This swale is approximately 1,500 feet long and conveys water northward to an existing inlet at the north end of the grass infield area. An existing 36-inch RCP conveys stormwater runoff from this inlet northward under the paved taxiway pavement into an existing drainage ditch that continues to convey stormwater northward for approximately 1,300 feet up to an existing 42-inch RCP. This 42-inch RCP conveys water under Fairchild Drive into a rectangular shaped pond that is directly connected to the tidally influenced Cross Bayou Canal.

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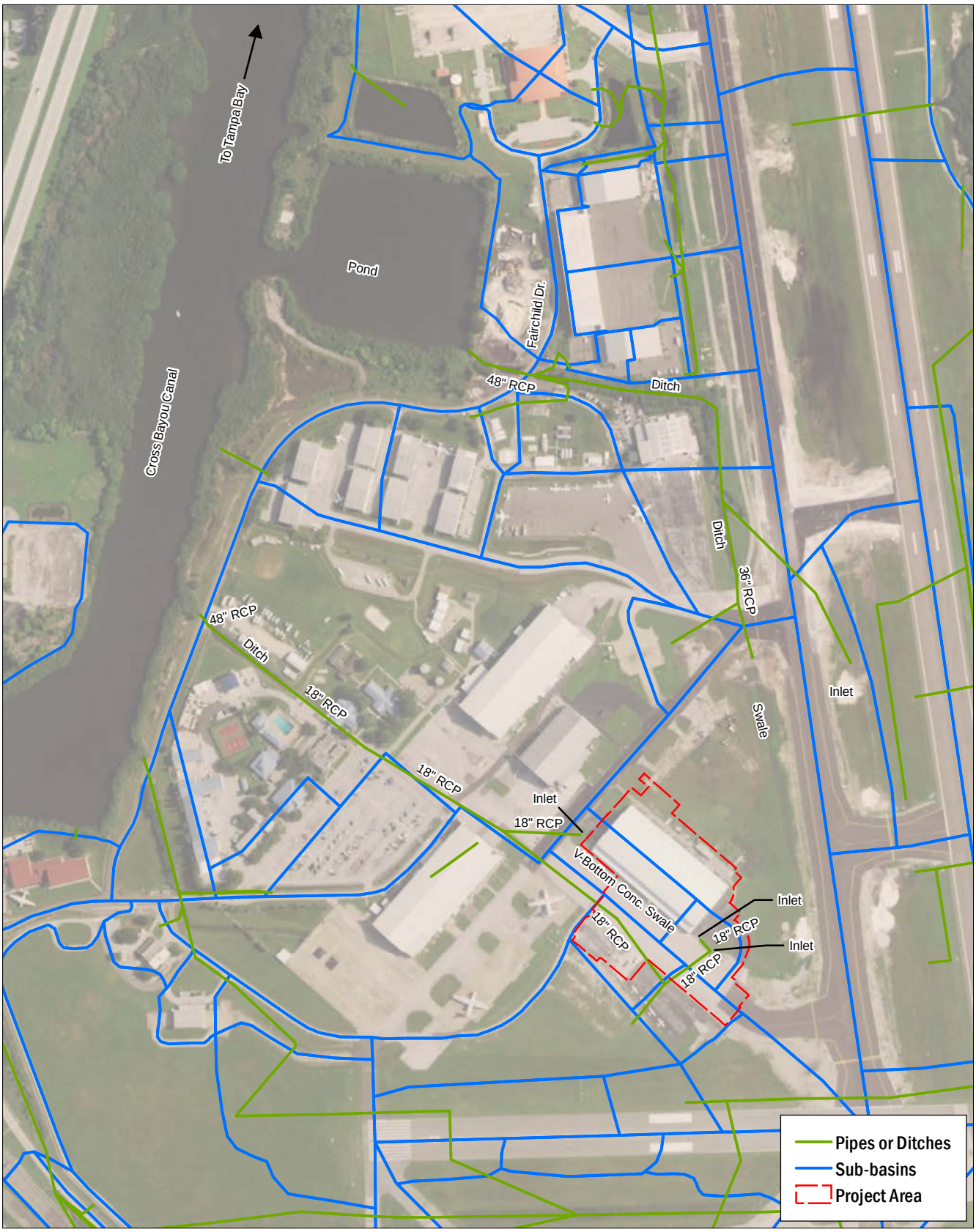

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Imagery: ESRI, 2016;
Drainage: AECOM, no date

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 3.4-2

St. Petersburg Clearwater International Airport
Drainage Map

Stormwater within the three sub-basins is currently not being treated in a SWFWMD-permitted stormwater management system, such as dry retention pond, wet detention pond, exfiltration systems, among other systems. PIE is within a drainage area where the stormwater runoff is conveyed to the Cross Bayou Canal, which ultimately discharges into Tampa Bay. The Cross Bayou Canal and Tampa Bay are tidally influenced water bodies. The SWFWMD does not regulate the discharge rate of stormwater runoff into tidal water bodies; hence, the water quantity regulations mandated by the SWFWMD do not apply to Action Alternative 2 at PIE.

Regulated MS4 operators must obtain an NPDES stormwater permit and implement a comprehensive stormwater management program to reduce the contamination of stormwater runoff and prohibit illicit discharges to the MS4. The St. Petersburg/Clearwater International Airport is within the unincorporated area of Pinellas County. Pinellas County submitted an NOI to the FDEP for coverage under the Phase I MS4 NPDES and the FDEP issued coverage on 1/1/2013 with the Facility ID FLS000005. Coverage under the generic MS4 NPDES permit will expire on 12/31/2017. Pinellas will reapply for coverage prior to this expiration date in order to maintain coverage.

PIE prepared a SWPPP and submitted an NOI to the FDEP to receive coverage under the NPDES MSGP for Industrial Activities. The FDEP issued coverage for the St. Petersburg/Clearwater International Airport under the MSGP for Industrial Activity on 4/28/2013 with the Facility ID FLR05A364. Coverage under the MSGP for Industrial Activity expired on 4/27/2018. The St. Petersburg/Clearwater International Airport will reapply for coverage prior to this expiration date in order to maintain coverage.

No-Action Alternative

Under the No-Action Alternative, NOAA would not relocate its AOC program to either Action Alternative. The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill AFB. The affected environment would not change under this alternative.

3.4.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

Land will be disturbed within a limited area at LAL by clearing, excavation, and construction activities associated with proposed Action Alternative 1. Therefore, some short-term and temporary water quality impacts may result from construction activities. The proposed Action Alternative 1 has the potential to exceed applicable water quality standards in adjacent drainage ways during construction. The potential impacts may include increases in sedimentation and turbidity during rainfall events. Since these activities would also involve the use of vehicles and equipment, fuels and lubricants, and the storage of construction materials, there is a potential risk of release or spills of construction-related hazardous materials or petroleum substances. In this regard, the proposed Action Alternative 1 has the potential to exceed applicable State of Florida water quality standards promulgated in Chapter 62-302, FAC.

Permanent environmental effects with regards to water resources are determined by the amount of new impervious surfaces that are exposed to rainfall and therefore generate stormwater runoff. The new impervious area increases the volume of stormwater runoff that could potentially cause adverse flooding. Additionally the stormwater runoff from the new impervious areas can potentially carry pollutants associated with industrial

activity that occurs at the Action Alternative 1 site. The Action Alternative 1 site contains parking lots and aircraft aprons that contain oils, greases, heavy metals and other pollutants associated with aircraft operations. Therefore, stormwater runoff flowing off these impervious surfaces comes in contact with these pollutants and becomes polluted.

Polluted stormwater runoff introduces oils, heavy metals, chemicals, sediments, and nutrients into receiving waters. The receiving water at PIE is Cross Bayou and ultimately Tampa Bay. The results can generate a human health risk or change the structure and processes of the aquatic ecosystems. Elevated levels of these pollutants, affects the recreation use of receiving waters. Enrichment of nutrients in a water body can lead to eutrophication, which includes excessive algal growth, turbidity, increased metabolism, and changes in community structure.

The proposed Action Alternative 1 in the includes the construction of new taxiway pavement, apron pavement, new parking lot and the renovation and expansion of an existing hangar building that collectively add approximately 122,343 square feet of new impervious surfaces. However, a portion of the new impervious surfaces are constructed over approximately 63,190 square feet of existing impervious surfaces. Therefore, the net increase in impervious surfaces is approximately 59,153 square feet. The breakdown of new impervious surfaces added for each new development component along with their respective amounts constructed over existing impervious surfaces and the net new impervious area is shown on **Table 3.4-1**.

Table 3.4-1: Summary of New Impervious Surfaces: Action Alternative 1

New Development Component	New Impervious Area (SF)	Over Existing Impervious Area (SF)	Net New Impervious Area (SF)
North Parking Area	92,390	62,740	29,650
Apron Pavement	5,500	450	5,050
Taxiway Pavement	21,500	0	21,500
Hangar Addition	2,953	0	2,953
Total	**122,343**	**63,190**	**59,153**

The net new impervious surfaces of 59,153 square feet would increase the volume of stormwater runoff. Therefore, the SWFWMD would require the additional stormwater runoff from this new pavement to be attenuated to prevent the additional runoff volume from adversely impacting the offsite portion of English Creek tributary and ultimately English Creek.

The SWFWMD would require stormwater runoff from the 122,343 square feet of new impervious area to be treated in retention/detention ponds even if the new pavement is constructed where existing pavement is currently located. If the new pavement consists of only milling and resurfacing then the stormwater runoff from this pavement does not have to be treated. However, the stormwater runoff from the new pavement would have to be treated if the existing pavement is completely removed down to the lime rock base layer.

Action Alternative 2: St. Petersburg-Clearwater International Airport

Land will be disturbed at the St. Petersburg/Clearwater International Airport by clearing, excavation, and construction activities associated with proposed Action Alternative 2. Therefore, short term and temporary water quality impacts may result from construction activities. The proposed Action Alternative 2 has some potential to exceed applicable water quality standards in adjacent drainage ways during construction. The potential impacts may include increases in sedimentation and turbidity during rainfall events. Since these activities would also involve the use of vehicles and equipment, fuels and lubricants, and the storage of construction materials, there is a risk of release or spills of construction-related hazardous materials or petroleum substances. In this regard, the proposed Action Alternative 2 has the potential to exceed applicable State of Florida water quality standards promulgated in Chapter 62-302, FAC.

Permanent environmental effects with regards to water resources are determined by the amount of new impervious surfaces that are exposed to rainfall and therefore generate stormwater runoff. The new impervious area increases the volume of stormwater runoff that could potentially cause adverse flooding. Additionally the stormwater runoff from the new impervious areas can potentially carry pollutants associated with industrial activity that occurs at the Action Alternative 2 site. The Action Alternative 2 site contains parking lots and aircraft aprons that contain oils, greases, heavy metals and other pollutants associated with aircraft operations. Therefore, stormwater runoff flowing off these impervious surfaces comes in contact with these pollutants and becomes polluted.

Polluted stormwater runoff introduces oils, heavy metals, chemicals, sediments, and nutrients into receiving waters. The receiving water at PIE is Cross Bayou and ultimately Tampa Bay. The results can generate a human health risk or change the structure and processes of the aquatic ecosystems. Elevated levels of these pollutants, affects the recreation use of receiving waters. Enrichment of nutrients in a water body can lead to eutrophication, which includes excessive algal growth, turbidity, increased metabolism, and changes in community structure.

Proposed Action Alternative 2 includes the construction of new parking areas, an HVAC building, fire sprinkler pump house, and an addition to the existing hangar building that collectively add approximately 74,907 square feet of new impervious surfaces. However, the new impervious surfaces are constructed over approximately 43,205 square feet of existing impervious surfaces. Therefore, the net increase in impervious surfaces is approximately 31,712 square feet. The breakdown of new impervious surfaces added for each new development component along with their respective amounts constructed over existing impervious surfaces and the net new impervious area is shown on **Table 3.4-2.**

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Table 3.4-2:Summary of New Impervious Surfaces: Action Alternative 2

New Development Component	New Impervious Area (SF)	Over Existing Impervious Area (SF)	Net New Impervious Area (SF)
West Parking Area	30,305	30,305	0
Northeast Parking Area	11,427	1,259	10,168
Southeast Parking Area	17,039	8,788	8,251
Proposed HVAC Building	4,050	0	4,050
Fire Sprinkler Pump House	4,050	0	4,050
Hangar Addition	8,046	2,853	5,193
Total	**74,917**	**43,205**	**31,712**

The net new impervious surfaces of 31,712 square feet would increase the volume of stormwater runoff. However, the stormwater runoff from the site remains within the property boundary of PIE prior to discharging into the tidally influenced Cross Bayou and ultimately Tampa Bay. Therefore, the additional stormwater runoff volume does not adversely impact offsite properties outside of the airport property. The SWFWMD does not consider increased volumes of stormwater from new impervious surfaces from development an adverse impact if the stormwater runoff outfalls directly into tidal water bodies without passing through offsite properties. Therefore, the increased runoff volume from the 31,712 square feet of net new impervious area is not considered an adverse impact with regard to water quantity. As a result the SWFWMD does not require stormwater runoff from impervious surfaces associated with new development that discharges directly into tidal water bodies to be attenuated within retention/detention ponds or other stormwater BMPs that control the rate of discharge. However, the SWFWMD would require stormwater runoff from the 74,917 square feet of new impervious area to be treated in retention/detention ponds even if the new pavement is constructed where existing pavement is currently located. If the new pavement consists of only milling and resurfacing then the stormwater runoff from this pavement does not have to be treated. However, the stormwater runoff from the new pavement would have to be treated if the existing pavement is completely removed down to the lime rock base layer.

No-Action Alternative

Because the No-Action Alternative does not include construction of new facilities or modification of existing facilities, the amount of impervious surface would not change. Therefore, the amount of storm water runoff generated would not change and no surface water impacts would occur. However, surface waters would continue to be susceptible to contamination by spills and industrial activity at the AOC facility.

3.4.4 Mitigation Measures

Action Alternative 1: Lakeland-Linder Regional Airport

Stormwater runoff from the new taxiway pavement at LAL can be treated by overland flow. The FDOT published the Florida Airports Stormwater Best Management Practices Manual in December 2010 (FDOT, 2010). Recognizing that aircraft and airport operations differ from other regulated development, the manual provides alternative methods to meet statutory water quality and water quantity requirements. These BMPs include

overland flow, swales and dry retention areas which can be applicable to airside facilities such as taxiways and runways.

However, the stormwater runoff from the proposed parking lot at the north end of the site has to be treated by a retention/detention pond, exfiltration etc. Stormwater runoff generated from the net increase of 59,153 square feet of impervious area would have to attenuated with a stormwater pond to ensure post development peak discharge rates are less than or equal to existing condition peak discharge rates for the 25-year, 24-hour storm event.

Mitigation for the water quantity and quality impacts for proposed Action Alternative 1 would consist of designing a proposed project drainage system that meets State water quality standards as set forth in Chapter 17-3, FAC, by apply its recommended BMPs and/or those published in the Florida Airports Stormwater Best Management Practices Manual.

Action Alternative 2: St. Petersburg-Clearwater International Airport

Attenuating stormwater runoff generated from the net increase of 31,712 square feet of impervious area at the St. Petersburg/Clearwater International Airport is not required because the stormwater discharges into a tidal water body. However, retention/detention ponds or other approved BMPs would have to be designed to treat the stormwater runoff from the new impervious areas.

Mitigation for the water quantity and quality impacts for proposed Action Alternative 2 would consist of designing a proposed project drainage system that meets State water quality standards as set forth in Chapter 17-3, FAC, and its recommended BMPs.

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3.5 RECREATIONAL RESOURCES

3.5.1 Regulatory Setting

National, state and regional recreational resources incorporate established parks, hiking trails, camping, boating and touring facilities potentially affected by the proposed action. Local recreational resources may include city, county and tribal owned facilities and properties, or locations informally established for recreational activities.

3.5.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

LAL hosts an annual SUN 'n FUN Fly-In & Expo since 1975. The event brings over 4,000 aircraft and more than 150,000 people to the airport over a period of six days each year. Several flight school companies are located on the airport's property, including the Central Florida Aerospace Academy. There are no other recreational resources present or around the area of the proposed action (Lakeland-Linder Regional Airport, 2015).

Action Alternative 2: St. Petersburg-Clearwater International Airport

There are no recreational resources present in or adjacent to PIE.

No-Action Alternative

MacDill Airforce Base has established recreational areas outside of the Base perimeter. The U.S. Air Force (USAF) maintains Raccoon Creek Recreational Area southwest of the base, providing camping amenities to active duty and retired military personnel. Other recreational resources near the Base include Lewis Lake, MacDill's Marina and the City of Tampa Picnic Island Park offering beach swimming, boating and fishing (6th Force Support Squadron, 2014).

3.5.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

LAL hosts the annual SUN 'n FUN Fly-in & Expo in early April. The proposed action would not directly impact this event, but may result in advanced planning and heightened awareness by AOC flight operators during the event. The airport's flight schools would not be affected by the proposed action.

The proposed Action Alternative 1 at LAL would have no adverse effects to recreational resources.

Action Alternative 2: St. Petersburg-Clearwater International Airport

PIE does not host recreational activities, and resources adjacent to the airport would be unaffected.

The proposed Action Alternative 2 would have no adverse effects to recreational resources.

No-Action Alternative

The No-Action Alternative assumes that NOAA would continue to operate their AOC program out of MacDill. No recreational resources would be impacted by the No-Action Alternative.

3.5.4 Mitigation Measures

No mitigation measures are required for either of the two action alternatives or for the No-Action Alternative with regard to impacts to recreational resources.

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3.6 CULTURAL RESOURCES

3.6.1 Regulatory Setting

The term "cultural resources" is used to describe archaeological sites, illustrating evidence of past human use of the landscape; the built environment, represented by structures such as dams, roadways, and buildings; and traditional resources, such as sacred sites and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966 is the primary federal legislation that outlines the federal government's responsibility to consider cultural resources. Other applicable cultural resources laws and regulations that could apply include the Native American Graves Protection and Repatriation Act and the Archaeological Resources Protection Act.

Section 110 of the NHPA sets out the broad historic preservation responsibilities of federal agencies and is intended to ensure that historic preservation is fully integrated into the ongoing programs of all federal agencies. Section 110 states federal agency responsibility for identifying and protecting historic properties and avoiding unnecessary damage to them. Section 110 also charges each federal agency with the affirmative responsibility for considering projects and programs that further the purposes of the NHPA, and it declares that the costs of preservation activities are eligible project costs in all undertakings conducted or assisted by a federal agency.

Section 106 of the NHPA requires the federal government to take into consideration the effects of an undertaking on historic properties. Historic properties are those cultural resources listed or eligible to be listed on the NRHP. The criteria used to determine whether a cultural resource is a historic property, and therefore eligible for inclusion on the NRHP, are defined in 36 CFR, Part 60.

The Section 106 process is outlined in the federal regulations at 36 CFR, Part 800. These regulations describe the criteria that a lead federal agency uses to evaluate cultural resources. In summary, NOAA must first determine if the action has the potential to affect historic properties, defined as cultural resources listed or eligible to be listed in the NRHP. If so, NOAA must identify the area of potential effects (APE), determine if historic properties are present within that APE, determine the effect that the undertaking will have on historic properties through application of the criteria of adverse effect (defined in 36 CFR Part 800.5), and consult with the State Historic Preservation Officer (SHPO) and federally recognized tribes with historic ties to the APE.

3.6.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

The APE defined for the proposed Action Alternative 1 is confined to the maximum extent of the proposed improvements at the subject hangar at LAL (refer to the Project Area in **Figures 2.1-2** and **2.1-3** above), constructed circa 1974 through 1980; and related features associated (e.g., flight aprons, ramp ways), and adjacent areas that may be used for staging areas, construction equipment storage, vehicle access and parking, underground utility improvements, new modular building locations, and site work improvements (e.g., pedestrian ramps). Since the proposed Action Alternative 1 would not substantially alter the existing height, massing, and form of the existing buildings in the APE and are surrounded by other recently constructed buildings and structures, an indirect APE to consider the visual effects to nearby historic properties was not established. The vertical disturbance associated with the proposed Action Alternative 1 within the APE is limited to 6 feet beneath the surface for the site work improvements and modular replacement building.

The APE for the proposed Action Alternative 1 must also include the AOC relocation efforts from its current location at Hangar 5 at MacDill AFB, constructed between 1939 and 1941. Hence, the existing conditions at this APE are also described in this section and applicable to the analysis under the NHPA.

LAL is located approximately 30 miles east of Tampa in Lakeland, Polk County. In 1940, the Lakeland City Commission passed a resolution to replace the city's municipal airport, built in 1933. By 1942, construction began on the new airport, and it was named Drane Field in honor of former Lakeland mayor and Florida State House of Representatives member Herbert J. Drane (City of Lakeland, 2011; U.S. Congress, 2016). However, following the Japanese attack on Pearl Harbor, the airfield was acquired by the military and renamed Lakeland Army Air Field (FLGenWeb, 2016).

During World War II, Lakeland Army Air Field housed several squadrons of fighter aircrafts. In 1943, it was considered a sub-base to MacDill AFB (Brooks, 2011). After the conclusion of World War II, the airport was sold to the City of Lakeland for "one dollar upon stipulation that the military could reclaim the field should the need arise" (FLGenWeb, 2016). The airfield was then seldom used through the 1950s, until a civilian municipal airport was built in 1960 at the site and the airfield was renamed Lakeland-Linder Regional Airport.

The subject hangar at LAL was built circa 1974 through 1980, as an attached facility to a building first constructed in 1971. Prior to 1971, the 1941, 1953, 1958, and 1968 aerial photographs show undeveloped vacant land with no observable structures or improvements (Chastain-Skillman, Inc., 2016). The structure on the subject property is less than 50 years of age and reflects a common design seen in prefabricated hangar construction, with a sliding multi-leaf door, rectangular plan, monumental scale, open interior truss system.

A records search of the Florida Master Site File was conducted for the APE and its environs in August 2016. The search areas were defined using Township, Range and Section (and quarter-section) within which the Action Alternative 1 APE is located. As a result of the records review, no previously recorded cultural resources were identified in or near the LAL search areas.

MacDill AFB is located on southwestern tip of the Interbay Peninsula, which separates Old Tampa Bay from Hillsborough Bay in Hillsborough County. Prior to its occupation by the USAF, the land served as a military staging area during the Spanish- American War. In 1939, the U.S. War Department officially commissioned MacDill AFB with the base eventually activated by 1941 (USAF, 2014). MacDill AFB was originally known as Southeast Air Base, Tampa, but was renamed in 1941 in honor of Colonel Leslie MacDill, a World War I veteran and Army aviator (Airplanes of the Past, 2016).

Following its activation, MacDill AFB primarily served as the training center for bomber aircraft pilots during World War II for European engagements. The base housed several B-17 "Flying Fortress" and B-26 "Marauder" aircrafts, training hundreds of servicemen as pilots and crew members (USAF, 2014; Airplanes of the Past, 2016).

Following World War II, MacDill AFB was used for training crews to fly and operate B-29 "Superfortress" aircraft from 1945 through 1953. During the early period of the Cold War in January 1948, MacDill AFB became an operational base for the military's Strategic Air Command; however, by 1960, as the bomber was phased out for new missile systems and fighter planes, the base's mission and function shifted. Due to its strategic location near Cuba, the base's importance grew and became home to the U.S. Strike Command in 1961 and the Tactical Air Command Training base in 1963. At the onset of the Vietnam War through the Gulf War in 1991, MacDill

AFB housed the F-4 "Phantoms" and F-16 "Fighting Falcons, with nearly half of all F-16 pilots trained at the base (USAF, 2014; Airplanes of the Past, 2016).

The subject building at MacDill AFB, known as Hangar 5, was constructed between 1939 through 1941 by the USACE, during the base's activation period. Hangar 5 was one of the original five hangars constructed at the base, and was part of the initial core group of buildings constructed at MacDill AFB along Hangar Loop Drive. Prior to its construction, servicemen and activities were housed in temporary tents and structures. In 1993, NOAA began use of the hangar for its AOC aircraft operations.

The building has a monumental scale with a rectangular plan. Overall, the exterior can be divided into several parts: the large two-story hangar bay portion with a barrel roof and curved parapet, a pair of two-story shed roofed projections lining the center of both sides of the building, and four two-story projections located at each corner of the building. The building is an example of a Pull-Thru hangar, featuring door pockets extending laterally from behind the front and rear elevations. Generally, the building features symmetrical elevations, clean lines, and minimal architectural ornamentation. The hangar possesses several elements common to USAF World War II military hangars, include its massive scale, rectangular plan, exposed steel truss structural system, varied exterior cladding (concrete and corrugated, standing seam, and sheet metal), and multiple leaf hangar doors. Other typical property type features include its interior arrangement, and its spatial relationship with runway, other hangars, and the rest of base.

The APE is confined to Hangar 5 and its adjacent apron, and AOC storage structures. In 2011, the Florida SHPO evaluated Hangar 5 as a contributing property to the MacDill AFB Historic District, which was found eligible for listing in the NRHP under Criterion A and Criterion C for its association with World War II and its Mediterranean Revival architecture. The district includes 20 contributing properties, and 10 non-contributing resources with a period of significance stretching from 1941 through 1950. Therefore, Hangar 5 has been previously determined to be a historic property under Section 106 of the NHPA and NEPA.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The APE defined for Action Alternative 2 is confined to the maximum extent of the proposed improvements at the subject hangar at PIE (refer to the Project Area in **Figures 2.2-3** and **2.2-4** above), constructed circa 1964 and historically identified as the Avant Air Hangar. The APE also include related features proposed for NOAA-only operations (e.g., flight aprons, ramp ways) and adjacent construction staging areas, vehicle access and parking, underground utility improvements, new building (e.g., high bay, utility structure) locations, and site work improvements (e.g., pedestrian ramps). Since the proposed Action Alternative 2 would not substantially alter the existing height, massing, and form of the existing structures in the APE and is surrounded by other recently constructed buildings and structures, an indirect APE to consider the visual effects to nearby historic properties was not established. The vertical disturbance within the APE is limited to 6 feet beneath the surface for the site work improvements, including utility extensions.

The APE for Action Alternative 2 also includes the extent of current AOC operations at Hangar 5 at MacDill AFB constructed between 1939 and 1941, which would cease following relocation efforts proposed under Action Alternative 2.

PIE is located on the western shore of Old Tampa Bay in Pinellas County. The airport was originally a small municipal airfield and was acquired in 1941 by the U.S. Army Air Forces immediately following the Japanese attack on Pearl Harbor. Following its acquisition, the property was known as the Pinellas Army Airfield in order to train pilots for service during World War II. The Third Air Force and the 304th Fighter Squadron were the main tenants during World War II, and the base housed P-40 "Warhawks" and P-51 "Mustangs". Antisubmarine patrols seeking German U-boats in the Gulf of Mexico also occurred from the base (St. Petersburg-Clearwater International Airport, 2015).

After WWII, Pinellas County acquired the airfield and began operating it as a commercial airport. The name of the airfield was changed to Pinellas International Airport. In 1958, the name changed again to St. Petersburg-Clearwater International Airport following the dedication of the original terminal building the year prior (St. Petersburg-Clearwater International Airport, 2015). To accommodate the new "jet age" of air travel, the airport's runways were expanded and new commercial carriers began service to the airport. The U.S. Coast Guard (USCG) began operations at the airport, establishing USCG Air Station Clearwater, which was its largest air station in 1976 after relocating from downtown St. Petersburg. The most notable mission out of USCG Air Station Clearwater was the response to the Space Shuttle Challenger disaster in 1986 (USCG, 2015). PIE received its current name during airport rebranding efforts in 2013 (St. Petersburg-Clearwater International Airport, 2015).

The subject building at PIE, historically known as the Avant Air hangar, was built circa 1964, years after the construction of the main original terminal building in 1958 (EPAC, 2016a; St. Petersburg-Clearwater International Airport, 2015). The hanger has been utilized for aircraft repair, storage, and maintenance since the 1960s. The hanger has remained relatively unchanged except for the removal of the water treatment system by 2008, signifying that the operations within the hanger had changed (EPAC, 2016a). The hangar is typical of Cold War-era construction of hangars, constructed from standardized designs developed by the USACE, who had updated the Army's standard plans from World War II and reissued them. The hangar features a similar layout and format as Hangar 5, and includes a monumental scale with a rectangular plan. Overall, the exterior can be divided into several parts: the large two-story hangar bay portion with a gabled roof flanked by a pair of one-story shed roofed projections lining the center of both sides of the building. In 2012, the Florida SHPO found the property ineligible for listing the NRHP.

A records search of the Florida Master Site File was conducted for the Action Alternative 2 APE and its environs in August 2016. The search areas were defined using the Township, Range and Section (and quarter-section) in which the APE is located. PIE is located in Sections 3 and 34, Township 29 South, Range 16 East of the Safety Harbor 7.5' USGS Quadrangle. The records search results revealed ten previously recorded cultural resources within and adjacent to the APE: PI12027, PI12028, PI12029, PI12030, PI12031, PI12032, PI12033, PI12034, PI12040, and PI12076. Of the ten total resources, nine resources were found ineligible for listing in the NRHP and one resource (PI12076) no longer exists. The subject building at PIE was the only building located in the APE, recorded as PI2033, and was not evaluated. It was previously evaluated as ineligible for listing in the NRHP in 2012.

The affected environment relating to Hangar 5 at MacDill AFB is the same as described above under Action Alternative 1.

No-Action Alternative

The APE defined for the No-Action Alternative is confined to the maximum extent of current AOC operations at Hangar 5 at MacDill AFB constructed between 1939 and 1941, including related features (e.g., flight aprons, ramp ways). Since the No-Action Alternative would not alter the existing height, massing, and form of the building in the APE, an indirect APE to consider the visual effects to nearby historic properties was not established.

The affected environment for Hangar 5 at MacDill AFB is described above under Action Alternative 1.

3.6.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

No archaeological resources have been identified in the APE for Action Alternative 1. As such, no known archaeological resources will be affected with implementation of proposed Action Alternative 1. Furthermore, due to the limited ground disturbance within the existing prism of ground disturbance, there is a low likelihood the proposed Action Alternative 1 would cause an impact to undisturbed archaeological resources.

The APE contains two built environment properties: the subject hangar at LAL and Hangar 5 at MacDill AFB. The subject hangar at LAL was built less than 50 years ago and it lacks exceptional significance to qualify it for listing in the NRHP as a historic property. Consequently, the relocation of the NOAA AOC to LAL will not affect historic resources, since no historic properties were identified.

Hangar 5 at MacDill AFB is an historic property. The consequences considered at MacDill AFB only include those involved with NOAA's departure. Future occupancy or use of Hangar 5 would be part of a separate NEPA or NHPA Section 106 action with a different lead federal agency. Based on the review of an architectural historian that meets the Secretary of the Interior's Professional Qualification Standards, the departure of NOAA from MacDill AFB would not cause an adverse effect to Hangar 5 since the property would not be altered in a manner that affects its historic integrity. Relocating from MacDill AFB would require NOAA moving equipment, aircraft, and personnel; however these actions would not cause a physical or visual change to Hangar 5 or other APE elements at MacDill AFB. Therefore, the proposed Action Alternative 1 will not cause an adverse effect to Hangar 5 or historic properties at MacDill AFB.

In summary, proposed Action Alternative 1 is not expected to have an adverse effect to historic properties, due to the absence of historic properties at the Action Alternative 1 site, and a lack of substantial alterations to the existing historic property at MacDill AFB and the characteristics that make it significant.

Action Alternative 2: St. Petersburg-Clearwater International Airport

No archaeological resources have been identified in the APE for proposed Action Alternative 2. As such, no known archaeological resources will be affected with implementation of proposed Action Alternative 2. Furthermore, due to the limited ground disturbance within the existing prism of ground disturbance, there is a low likelihood the proposed Action Alternative 2 would cause an impact to undisturbed archaeological resources.

The APE contains two built-environment properties: the Avant Air Hangar at PIE and Hangar 5 at MacDill AFB. The Avant Air Hangar was previously found ineligible for listing in the NRHP in 2011. As a result of this assessment, the property continues to be ineligible for listing in the NRHP, since it is not directly associated with events that are important to its past and never played an important role towards the mission of the military or during the Cold War. It is reflective of a typical standardized design that was common for hangar construction during this period, and is not an early example of the property type. As a result, the relocation of the NOAA AOC to the Avant Air Hangar at PIE will not affect historic resources, since no historic properties were identified.

Hangar 5 at MacDill AFB is an historic property. The consequences considered at MacDill AFB only include those involved with NOAA's departure. Future occupancy or use of Hangar 5 would be part of a separate NEPA or NHPA Section 106 action with a different lead federal agency. The departure of NOAA from MacDill AFB would not cause an adverse effect to Hangar 5 since the property would not be altered in a manner that affects its historic integrity. Relocating from MacDill AFB would require NOAA move equipment, aircraft, and personnel but actions would not cause a physical or visual change to Hangar 5 or other APE elements at MacDill AFB. Therefore, the proposed Action Alternative 2 will not cause an adverse effect to Hangar 5 or historic properties at MacDill AFB.

In summary, proposed Action Alternative 2 is not expected to have an adverse effect to historic properties, due to the absence of historic properties at the Action Alternative 2 site, and a lack of substantial alterations to the existing historic property at MacDill AFB and the characteristics that make it significant.

No-Action Alternative

No archaeological resources have been identified in the APE for the No-Action Alternative. Furthermore, the No-Action Alternative would not involve any construction or ground-disturbing activities. As such, no known archaeological resources will be affected under the No-Action Alternative.

Based on this current analysis, the APE for the No-Action Alternative contains Hangar 5 at MacDill AFB. Hangar 5 was previously evaluated in 2012 as an historic property as part of the MacDill AFB Historic District, and has retained its aspects of historic style, design, purpose and physical integrity to continue to qualify as a historic property.

Under the No-Action Alternative, NOAA AOC operations would remain at MacDill AFB and would not cause an adverse effect on Hangar 5, since the property would not be altered in a manner that affects its historic integrity. Therefore, the No-Action Alternative will not cause an adverse effect to Hangar 5 or historic properties at MacDill AFB.

3.6.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to cultural resources.

3.7 FLORA AND FAUNA

3.7.1 Regulatory Setting

The federal Endangered Species Act (ESA) (16 USC 1536) provides for the conservation of endangered and threatened species of fish, wildlife and plants. Federal agencies must ensure that proposed actions do not jeopardize the continued existence of any endangered or threatened species, or cause the destruction or adverse modification of their habitat. If listed species or designated critical habitat are present and could be affected by the proposed action, a biological assessment must be prepared to analyze the potential effects of the proposed action on listed species and critical habitat and make a determination of effect. The U.S. Fish and Wildlife Service (USFWS) implements the ESA. The USFWS protects federally-listed plant and animal species pursuant to Section 7 of the federal ESA, as amended, as well as designated Critical Habitats, under 17 CFR 35.1532.

Migratory birds listed in 50 CFR 10.13 and their occupied nests are protected by the Migratory Bird Treaty Act (MBTA). This applies to all wild birds except the house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), rock dove (*Columba livia*), and some game species. The MBTA makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird including feathers, parts, nests, or eggs and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum. Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction.

The Florida Fish and Wildlife Conservation Commission (FWC) protects state-listed plant and animal species pursuant to Chapters 5B-40 and 68A-27, FAC.

3.7.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

Available site-specific literature and data was reviewed to characterize habitat features and land use patterns within the Action Alternative 1 site at LAL. On August 15, 2016 an ecologist familiar with Florida's natural communities conducted a field review to verify preliminary vegetative communities and classification codes established through literature reviews and photointerpretation. All vegetative habitats and land uses within the site were classified using the *Florida Land Use, Cover and Forms Classification System* (FLUCFCS) (FDOT, 1999).

Each vegetative community and land use type within the Action Alternative 1 site was visually inspected to assess approximate boundaries and dominant vegetation. Exotic plant infestations and other disturbances, such as erosion and existing structures (i.e., riprap) were noted. Field activities also included identifying wildlife and signs of wildlife usage within the Action Alternative 1 site and adjacent habitats.

Based on in-house and field reviews, two upland land use/vegetative cover types were identified within the Action Alternative 1 site. A summary description of each land use/vegetative cover type is provided below.

The developed land use type defined as *Airports* (FLUCFCS: 811) makes up the majority of the Action Alternative 1 site and includes the paved aprons, ramps, parking areas, and industrial hangars. The undeveloped,

vegetative community within the Action Alternative 1 site is defined by *Undeveloped Land within Urban Areas* (FLUCFCS: 191) and consists of the grassed infields located between the paved parking areas, aprons, and ramps. This vegetative community is dominated by ruderal grasses, sedges, and forbs, including St. Augustine grass (*Stenotaphrum secundatum*), bahia grass (*Paspalum notatum*), frog fruit (*Phyla nodiflora*), Carolina pony's foot (*Dichondra carolinensis*), pennyworts (*Hydrocotyle* sp.), crows foot grass (*Eleusine indica*), and nut sedges (*Cyperus* sp.). The grassed areas at the Alternative Action 1 site are mowed weekly as part of the airport maintenance and operations.

A list of all the state and federally-listed species that may occur in the vicinity of LAL is provided in **Appendix A**. For a species to be considered potentially present, the site must be within the species' range and must contain suitable habitat for the species. Based on evaluation of collected data and field reviews, the federally and state-listed species discussed below were considered as having the potential to occur within or adjacent to the Action Alternative 1 site. An effect determination was then established for each federally and state-listed species described below based on an analysis of the potential impacts of the proposed action to each species.

***Eastern* Indigo *Snake* (*Drymarchon corais couperi*)**

The eastern indigo snake is listed as threatened by the USFWS. The indigo snake can be found in a variety of habitats including mesic flatwoods, upland pine forests, swamps, wet prairies, xeric pinelands, and scrub (Savannah River Ecology Laboratory, 2016a). Within the Alternative Action 1 site, suitable habitat for this species is available within the undeveloped grass fields.

Blue-Tailed Mole Skink (*Plestiodon egregious lividus*) and Sand Skink (*Plestiodon reynoldsi*)

The blue-tailed mole skink and the sand skink are listed as threatened by the USFWS due to severe population declines and habitat degradation. These species are known only to occur along the central Florida ridges at elevations of 82 feet or more above sea level. This species prefers xeric habitats, such as sandhill, scrub, and longleaf pine-turkey oak associations with excessively drained, well-drained, and moderately well-drained sandy soils (USFWS, 2012).

Gopher Tortoise (*Gopherus polyphemus*)

The gopher tortoise is federally listed as candidate species with the USFWS and is listed as threatened by the FWC. The gopher tortoise requires well-drained, loose sandy soils for burrowing, and low-growing herbs and grasses for food(Savannah River Ecology Laboratory, 2016b). Suitable habitat is available within the Alternative Action 1 site within undeveloped grass fields and gopher tortoises have been documented at LAL.

Florida Burrowing Owl (*Athene cunicularia floridana*)

The Florida burrowing owl is listed as a species of special concern by the FWC. This species inhabits open areas that offer an expanse of short, herbaceous groundcover such as prairies, sand hills, and farmland (Defenders of Wildlife, 2016). Within the Alternative Action 1 site, suitable habitat for this species is available within the undeveloped grass fields.

Southeastern American Kestrel (*Falco sparverius paulus*)

The southeastern American kestrel is listed as threatened by FWC and is non-migratory. The species utilizes open habitats for foraging and nests in tree cavities (Cornell Lab of Ornithology, 2016). Suitable habitat for this species is available within the Alternative Action 1 site in undeveloped grass fields and manmade structures.

Migratory Birds

The Alternative Action 1 site is located along the Atlantic Flyway and several avian species protected by the MBTA have been documented at LAL, including the American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), northern cardinal (*Cardinalis cardinalis*), and eastern meadowlark (*Sturnella magna*).

Action Alternative 2: St. Petersburg-Clearwater International Airport

Available site-specific literature and data was reviewed to characterize habitat features and land use patterns within the Action Alternative 2 site at PIE. On August 19, 2016 an ecologist familiar with Florida's natural communities conducted a field review to verify preliminary vegetative communities and classification codes established through literature reviews and photointerpretation. All vegetative habitats and land uses on the site were classified using FLUCFCS (FDOT, 1999).

Each vegetative community and land use type within the Action Alternative 2 site was visually inspected to assess approximate boundaries and dominant vegetation. Exotic plant infestations and other disturbances, such as erosion and existing structures (i.e., riprap) were noted. Field activities also included identifying wildlife and signs of wildlife usage within the Action Alternative 2 site and adjacent habitats.

Based on inhouse and field reviews, two upland land use/vegetative cover types were identified within the Action Alternative 2 site: Airports (FLUCFCS: 811) and Undeveloped Land within Urban Areas (FLUCFCS: 191). These classifications are described above under Action Alternative 1.

A list of all the state and federally-listed species that may occur in the vicinity of the Action Alternative 2 site at PIE is provided in **Appendix A**. For a species to be considered potentially present, the Action Alternative 2 site must be within the species' range and must contain suitable habitat for the species. Based on evaluation of collected data and field reviews, the federally and state-listed species discussed below were considered as having the potential to occur within or adjacent to the Action Alternative 2 site. An effect determination was then established for each federally and state-listed species described below based on an analysis of the potential impacts of the proposed action to each species.

Eastern Indigo Snake (*Drymarchon corais couperi*)

The eastern indigo snake is listed as threatened by the USFWS. Eastern indigo snakes are restricted to Florida and southern areas of Georgia, Alabama, and Mississippi. The indigo snake can be found in a variety of habitats including mesic flatwoods, upland pine forests, swamps, wet prairies, xeric pinelands, and scrub (Savannah River Ecology Laboratory, 2016a). Within the Alternative Action 2 site, suitable habitat for this species is available within the undeveloped grass fields.

Southeastern American Kestrel (*Falco sparverius paulus*)

The southeastern American kestrel is listed as threatened by FWC and is non-migratory. While some American Kestrels migrate to Central America, the great majority spend the winter in the southern U.S. The species utilizes open habitats for foraging and nests in tree cavities (Cornell Lab of Ornithology, 2016). Suitable habitat for this species is available within the Alternative Action 2 site in undeveloped grass fields and manmade structures.

No-Action Alternative

Under the No-Action Alterative, existing OMAO operations would continue unchanged. No adverse effects to protected species or their habitat is present within the extent of existing NOAA uses at Hangar 5 and adjacent areas.

3.7.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

Eastern Indigo Snake

The eastern indigo snake has been documented within Polk County; however, no eastern indigo snakes or gopher tortoise burrow were observed during the field reviews. The proposed Action Alternative 1 would not impact any xeric habitats and the latest version of the USFWS-approved *Standard Protection measures for the Eastern Indigo Snake* would be followed. Therefore, in accordance with USFWS' *North and South Florida Ecological Field Services Offices Programmatic Concurrence for Use of Original Eastern Indigo Snake Key*, the proposed Action Alternative 1 *may affect, but is not likely to adversely affect* the eastern indigo snake.

Blue-Tailed Mole Skink and Sand Skink

The Action Alternative 1 site is located within the USFWS consultation area for the blue-tailed mole skink and the sand skink and the elevations at the site are between 130 and 135 feet above MSL. Both sand skinks and blue-tailed mole skinks are endemic to, which means they occur only on, the sandy ridges of central Florida. Primary populations of sand skinks occur on the Lake Wales, Winter Haven, and Mt. Dora Ridges in Highlands, Lake, Marion, Orange, Osceola, Polk, and Putnam counties (Hipes, et al, 2001). Blue-tailed mole skinks seem to be restricted to the Lake Wales Ridge in Highlands, Polk, and Osceola counties. However, the site does not contain designated skink soils as defined in the *USFWS Sand Skink and Blue-tailed Mole Skink Biology and Survey Protocol* (USFWS, 2011). In addition, no sinusoidal skink tracks were observed during the field reviews at the site. Therefore, it has been determined that the proposed Action Alternative 1 would have *no effect* on the blue-tailed mole skink or the sand skink.

Gopher Tortoise

Gopher tortoises are found in the Lower Coastal Plain of the Southeast, from southern South Carolina to Louisiana and throughout Florida. This species prefers well-drained sandy areas (in which it can burrow) and is absent from extensive wetland areas. The gopher tortoise has been documented at LAL, but no gopher tortoise burrows were observed within the Action Alternative 1 site during the field review. In addition, LAL has a current Wildlife Hazard Management Plan for mitigating potential wildlife hazards, which includes relocating gopher tortoises from the airport area of affect.

Based on current FWC regulations, any gopher tortoises located within 25 feet of a construction area must be relocated to an FWC approved recipient site. If gopher tortoises or potentially occupied burrows are found within the Action Alternative 1 site prior to construction, the airport would coordinate with the FWC to secure all proper permits needed to relocate the tortoises. With this commitment, it has been determined that proposed Action Alternative 1 *may affect, but is not likely to adversely affect* the gopher tortoise.

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Florida Burrowing Owl

Burrowing owls are distributed from the Mississippi to the Pacific, and from Canadian prairie-provinces into South America. They are also found in Florida and the Caribbean islands. Burrowing owls have disappeared from much of their historic range. Within the Action Alternative 1 site, marginally suitable habitat for this species is available within the undeveloped grass fields. However, the Florida burrowing owl has not been documented within one mile of the site (FNAI, 2016) and no individuals or burrows were observed during the field review. In addition, there is a lack of elevated perches available within the site. Therefore, it has been determined that the proposed Action Alternative 1 would have *no effect* on the Florida burrowing owl.

Southeastern American Kestrel

Suitable foraging habitat, but only marginal nesting habitat for the southeastern American kestrel, is available within the Action Alternative 1 site. The southeastern American kestrel has been documented in Polk County, but no individuals or their nests were observed field reviews. There is a lack of suitable perches available and LAL has a current Wildlife Hazard Management Plan for mitigating potential wildlife hazards, which includes hazing southeastern American kestrels. Therefore, it has been determined that the proposed Action Alternative 1 *may affect, but is not likely to adversely affect* the southeastern American kestrel.

Critical Habitat

No designated Critical Habitat for any federally-listed species is present within the Action Alternative 1 site. Therefore, it has been determined that the proposed Action Alternative 1 would have *no effect* on designated Critical Habitat.

Migratory Birds

According the USFWS' Information and Conservation Planning (IPAC) website, 26 migratory bird species have the potential be affected by proposed Action Alternative 1 (USFWS, 2016). However, LAL's Wildlife Hazard Management Plan includes a depredation permit that allows hazing and lethal take of migratory bird species. The proposed construction under Action Alternative 1 would result in an insignificant loss of grassed field and is not anticipated to result in the intentional or unintentional killing of any migratory bird species. Therefore, proposed Action Alternative 1 would not adversely affect migratory birds.

Summary

Overall, proposed Action Alternative 1 may have a minor effect on flora and fauna. Mitigation is proposed below in **Section 3.7.4**.

Action Alternative 2: St. Petersburg-Clearwater International Airport

Eastern Indigo Snake

The eastern indigo snake has been documented within Pinellas County; however, no eastern indigo snakes or gopher tortoise burrow were observed during the field review at the Action Alternative 2 site. Proposed Action Alternative 2 would not impact any xeric habitats and the latest version of the USFWS-approved *Standard Protection Measures for the Eastern Indigo Snake* would be followed (USFWS, 2013a). Therefore, in accordance with USFWS' *North and South Florida Ecological Field Services Offices Programmatic Concurrence for Use of Original Eastern Indigo Snake Key* (USFWS, 2013b) proposed Action Alternative 2 *may affect, but is not likely to adversely affect* the eastern indigo snake.

Southeastern American Kestrel

Suitable foraging habitat, but only marginal nesting habitat for the southeastern American kestrel, is available within the Action Alternative 2 site. The southeastern American kestrel has been documented in Pinellas County, but no individuals or their nests were observed field reviews. There is a lack of suitable perches available and PIE has a current Wildlife Hazard Management Plan for mitigating potential wildlife hazards, which includes hazing southeastern American kestrels. Therefore, it has been determined that proposed Action Alternative 2 *may affect, but is not likely to adversely affect* the southeastern American kestrel.

Critical Habitat

No designated Critical Habitat for any federally-listed species is present within the Action Alternative 2 site. Therefore, it has been determined that proposed Action Alternative 2 would have *no effect* on designated Critical Habitat.

Migratory Birds

According the USFWS' Information and Conservation Planning (IPAC) website, 38 migratory bird species have the potential be affected by the proposed Action Alternative 2 (USFWS, 2016). However, PIE's Wildlife Hazard Management Plan includes a depredation permit that allows hazing and lethal take of migratory bird species. The proposed construction at the Alternative Action 2 site would result in an insignificant loss of grassed field and is not anticipated to result in the intentional or unintentional killing of any migratory bird species. Therefore, proposed Action Alternative 2 would *not adversely affect* migratory birds.

Summary

Overall, proposed Action Alternative 2 may have a minor effect on flora and fauna. Mitigation is proposed below in **Section 3.7.4**.

No-Action Alternative

Under the No-Action Alterative, existing OMAO operations would continue unchanged. No adverse effects to state or federally listed species would result based on historical uses at Hangar 5 and adjacent areas.

3.7.4 Mitigation Measures

Action Alternative 1: Lakeland-Linder Regional Airport

To avoid and/or minimize the potential of impacting a state or federally listed species under proposed Action Alternative 1, NOAA should ensure that the commitments listed below will be followed by the site owner and the construction-related contractors implementing the proposed action at this site:

1. The USFWS' Standard Protection Measures for the eastern indigo snake shall be adhered to during construction of the proposed action;

2. Prior to construction, appropriate habitats at the site shall be surveyed for gopher tortoise. If any burrows are located within the site, the site owner shall inform NOAA and coordinate with the FWC to secure any permits needed to relocate gopher tortoises prior to construction.

Action Alternative 2: St. Petersburg-Clearwater International Airport

To avoid and/or minimize the potential of impacting a state or federally listed species under either of the proposed Action Alternatives, NOAA should ensure that the commitments listed below will be followed by the site owner and the construction-related contractors implementing the proposed action:

1. The USFWS' Standard Protection Measures for the eastern indigo snake shall be adhered to during construction of the proposed action;

No-Action Alternative

No mitigation measures are required for the No-Action Alternative in relation to flora and fauna.

DRAFT

3.8 WETLANDS

3.8.1 Regulatory Setting

The SWFWMD regulates impacts to wetlands and stormwater management within the area of the proposed Action Alternative 1, Action Alternative 2, and No-Action Alternative. In addition, the FDEP regulates stormwater discharges from construction sites during all construction related activities. The permit acquisition process for effects to wetlands and stormwater management will depend on the degree of the impact to jurisdictional areas. It is anticipated that an ERP from the SWFWMD and a NPDES permit from the FDEP will be required for this proposed action.

The proposed action would not impact jurisdictional waters of the U.S. at either of the airports. Therefore, a USACE Individual or Nationwide Permit for dredge and fill would not be required due to construction at either of the proposed project locations.

In accordance with 62-330, FAC., SWFWMD requires an ERP when construction of any project results in the creation of a new or modification of an existing water management system or results in impacts to waters of the state. The proposed action would not impact state jurisdictional wetlands or surface waters. The complexity associated with the ERP permitting process would depend on the size of the proposed action. Under current state rules, the SWFWMD may require an individual ERP, or modification of an existing ERP, for this proposed action.

40 CFR Part 122 prohibits point source discharges of stormwater to waters of the U.S. without a NPDES permit. Under the State of Florida's delegated authority to administer the NPDES program, construction sites that would result in greater than one acre of disturbance must file for and obtain either coverage under an appropriate generic permit contained in Chapter 62-621, FAC, or an individual permit issued pursuant to Chapter 62-620, FAC. A major component of the NPDES permit is the development of a SWPPP. The SWPPP identifies potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the site and discusses good engineering practices (i.e., BMPs) that would be used to reduce the pollutants.

3.8.2 Affected Environment

Prior to field visits, site-specific literature and available data was reviewed to characterize habitat features and land use patterns within the vicinity of the Action Alternative sites. On August 15, 2016 and August 19, 2016, an ecologist familiar with Florida's natural communities conducted a field review of the Lakeland-Linder and St. Petersburg-Clearwater sites, respectively. The purpose of the field reviews was to verify preliminary wetland boundaries and classification codes established through literature reviews and photointerpretation. All vegetative habitats and land uses within the sites were classified using the *Florida Land Use, Cover and Forms Classification System* (FLUCFCS) (FDOT, 1999). The proposed Action Alternative sites were reviewed for wetlands and surface waters in accordance with the State of Florida Wetlands Delineation Manual (Chapter 62-340, FAC.) and the criteria found within the USACE (2010*) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Plain Region (Version 2.0) (ERDC/EL TR-10-20).*

Action Alternative 1: Lakeland-Linder Regional Airport

During the field review, each vegetative community and land use type within the Action Alternative 1 site were visually inspected to assess approximate boundaries and dominant vegetation. Exotic plant infestations and other disturbances, such as erosion and existing structures (i.e. riprap) were noted. Field activities also included identifying wildlife and signs of wildlife usage within the site and adjacent habitats.

Based on in-house and field reviews, two upland land use/vegetative cover types were identified within the LAL project area: Airports (811) and Undeveloped Land within Urban Areas (191), as described in **Section 3.7.2** above.

No jurisdictional wetlands and/or surface waters are located within the site of proposed Action Alternative 1.

Action Alternative 2: St. Petersburg-Clearwater International Airport

During the field review, each vegetative community and land use type within the project area was visually inspected to assess approximate boundaries and dominant vegetation. Exotic plant infestations and other disturbances, such as erosion and existing structures (i.e. riprap) were noted. Field activities also included identifying wildlife and signs of wildlife usage within each project area and within adjacent habitats.

Based on in-house and field reviews, two upland land use/vegetative cover types were identified within the PIE project area: Airports (811) and Undeveloped Land within Urban Areas (191), as described in **Section 3.7.2** above.

No jurisdictional wetlands and/or surface waters are located within the site of proposed Action Alternative 2.

No-Action Alternative

Under the No-Action Alterative, existing OMAO operations would continue unchanged. No adverse effects to the jurisdictional wetlands would result based on the paved extent of existing NOAA areas at and adjacent to Hangar 5.

3.8.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

Based on inhouse and field reviews, there are no jurisdictional wetlands and/or surface waters are located within the Action Alternative 1 site at LAL. All proposed impacts would occur within areas that are already developed, and/or are upland grass areas that area regularly mowed as part of normal airport maintenance.

The proposed Action Alternative 1 would have no effect on state or federal jurisdictional wetlands.

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Action Alternative 2: St. Petersburg-Clearwater International Airport

Based on inhouse and field reviews, there are no jurisdictional wetlands and/or surface waters are located within the Action Alternative 2 site at PIE. All proposed impacts would occur within areas that are already developed, and/or are upland grass areas that area regularly mowed as part of normal airport maintenance.

The proposed Action Alternative 2 would have no effect on state or federal jurisdictional wetlands.

No-Action Alternative

Under the No-Action Alterative, existing OMAO operations would continue unchanged. No adverse effects to state or federal jurisdictional wetlands would result based on the extent of existing uses at Hangar 5 and adjacent areas.

3.8.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to wetlands.

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3.9 FLOODPLAINS

3.9.1 Regulatory Setting

The 100-year floodplain is an area with a flood elevation that has a one percent chance of being equaled or exceeded each year. Although the name implies such a flood every 100 years, in reality, a 100-year flood could occur in any year. Executive Order (EO) 11988, *Floodplain Management*, dated May 24, 1977, requires that federal agencies locate facilities outside the 100 year or base floodplain unless there is no practicable alternative location. If locating outside the floodplain is unavoidable, structures should be built so that the finished floor elevation is above the 100-year flood elevation as determined by the FEMA and depicted on their Flood Insurance Rate Maps (FIRMs), or should be flood-resistant. Floodplain management is intended to minimize the potential for property damage and to maintain functions of the hydrologic cycle. EO 11988 and NOAA Floodplain Guidance, *Guidance on Compliance with the Implementing Procedures for Executive Orders 11988 and 1199,* (2012) are applied to determine effects to these resources.

Under the provisions of EO 11988 Section 2(a)(1), before taking an action, each agency shall determine whether the proposed action will occur in a floodplain--for major Federal actions significantly affecting the quality of the human environment, the evaluation required below will be included in any statement prepared under Section 102(2) (C) of the NEPA. This determination shall be made according to a Department of Housing and Urban Development (HUD) floodplain map or a more detailed map of an area, if available. If such maps are not available, the agency shall make a determination of the location of the floodplain based on the best available information (President, 1977). Per HUD Guidance, the FEMA designates floodplains and the FEMA Map Service Center provides this information in the form of FIRMs (HUD, 2016).

Likewise, NOAA Guidance on implementing EO11988 states that in order to determine whether a proposed action will occur in a 100-year (or 500-yr for a critical action) floodplain, the first reference should be the FEMA FIRM. If the maps prepared by FEMA do not adequately characterize the flood hazard potential for the proposed action, other sources that merit investigation may be used, such as flood hazard studies, hydrologic studies, soil surveys, and other investigations.

In advisory guidance prepared by the Water Resources Council, entitled "Guidelines for Implementing Executive Order 11988, Floodplain Management, and Executive Order 13690" (Water Resources Council, 2015), it states:

> *Agencies were directed to update their regulations and procedures, as appropriate, for implementing EO 11988 after these Guidelines were finalized. Each agency may have a different schedule for these updates based on the form of their agency-specific procedures. Agencies will continue to comply with the requirements of the 1977 version of E.O. 11988 until they update their regulations and procedures to incorporate the amendments from E.O. 13690. These regulations and procedures will describe an agency's schedule for applying any new requirements.*

NOAA or the U.S. Department of Commerce has not amended its procedures to incorporate the amendments from EO 13690. For this reason, NOAA applies its own guidance under EO 11988.

Under Section 62-330.301, FAC, the FDEP and the five water management districts also have responsibility for regulating floodplain development within the State. The SWFWMD has jurisdiction over areas within which the proposed action would occur, including Polk, Pinellas, and Hillsborough Counties.

Under the General Stormwater Quantity and Flood Control requirements in Part III of the SWFWMD ERP Applicant's Handbook Volume II, flood protection for structures for industrial, commercial or other non-residential buildings susceptible to flood damage should have the lowest floor elevated above the 100-year flood elevation or be designed and constructed so that below the 100-year flood elevation the structure and attendant utility facilities are watertight and capable of resisting the effects of the regulatory flood. The design should take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effect of buoyancy and impacts from debris. Flood proofing measures should be operable without human intervention and without an outside source of electricity. Any required compensating storage shall be equivalently provided between the seasonal high water level and the 100-year flood level to allow storage function during all lesser flood events. Therefore, provisions must be made to replace or otherwise mitigate the loss of historic basin storage provided within the project site.

SWFWMD also requires commercial and industrial projects to install a drainage system to provide flood attenuation and any additional retention/detention required for water quality purposes as stated in the General Stormwater Quantity and Flood Control requirements in Part IIV of the SWFWMD ERP Applicant's Handbook Volume II. The required water quality system must have treatment capacity for one inch of runoff if wet detention is used, or one half-inch of runoff if retention, effluent filtration or exfiltration is used, from the total developed site and contributing offsite area.

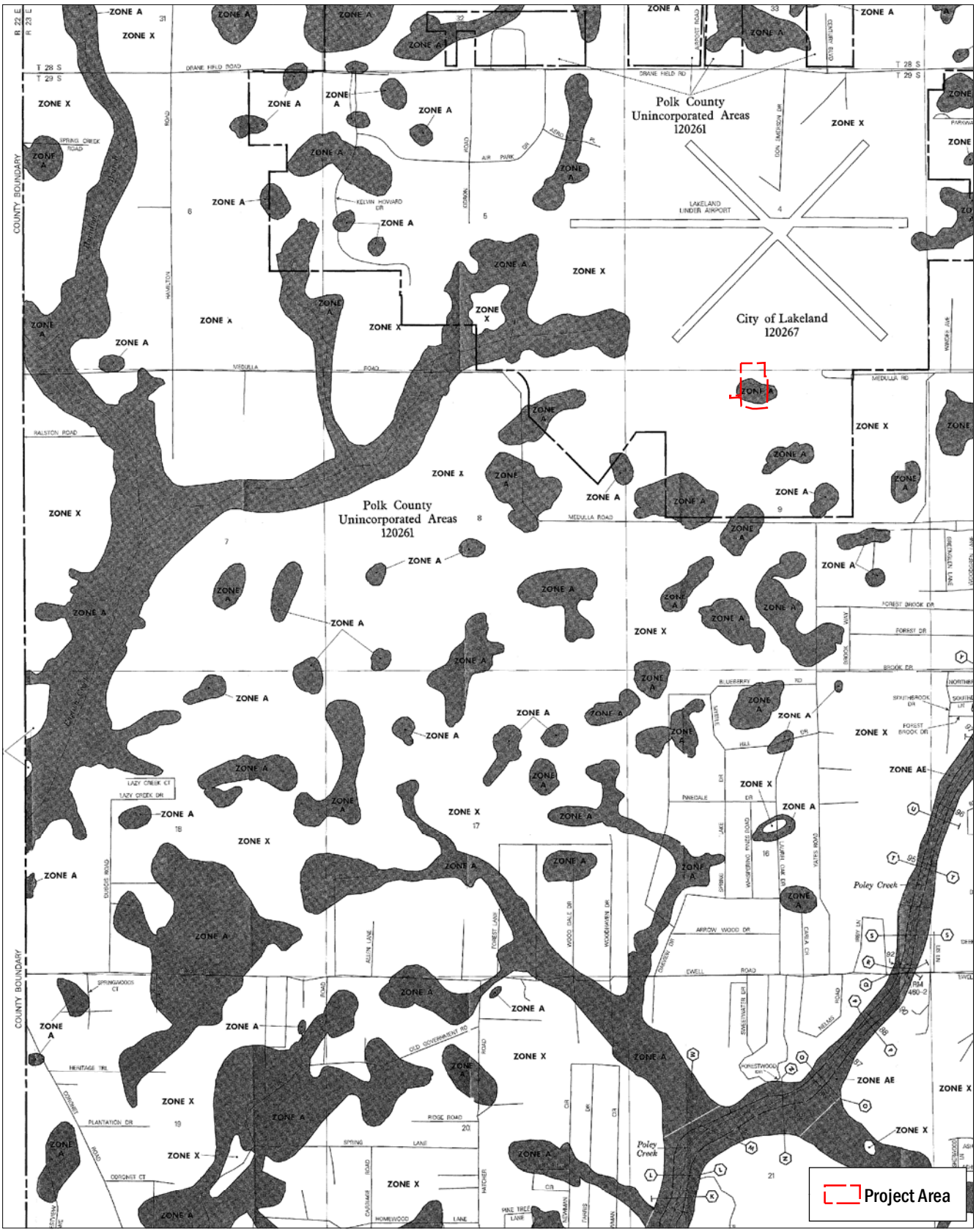
3.9.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

Action Alternative 1 at LAL contains approximately 5.05 acres of 100-year floodplains as delineated by FEMA on the current official FIRM identified as 12105C0460F dated December 20, 2000 (see **Figure 3.9-1**; FEMA, 2000). FEMA classifies this 100-year floodplain as Zone A. Zone A 100-year floodplains do not have a base flood elevation associated with them. However, the December 2000 FIRM will not be in effect when the proposed action would be permitted for construction.

FEMA and Cooperating Technical Partners initiated physical map revisions to the FIRMS for all of Polk County in 2014, which were completed in August 2014. The analysis was performed to change zone designations, Base Flood Elevations, and Special Flood Hazard Areas, and to incorporate previously issued Letters of Map Revision, and to reflect updated topographic information.

This analysis is the "best available data" for floodplains in Polk County, including at the prospective project location, and is provided in the pending FEMA FIRM identified as 12105C0460G, which will become the official FIRM on December 22, 2016 (FEMA, 2016). The pending FIRM indicates no floodplains within Action Alternative 1 at LAL; however, a portion of taxiway typically used for aircraft movements would be within Zone A (see **Figure 3.9-2**).



N 0 0.5 Miles

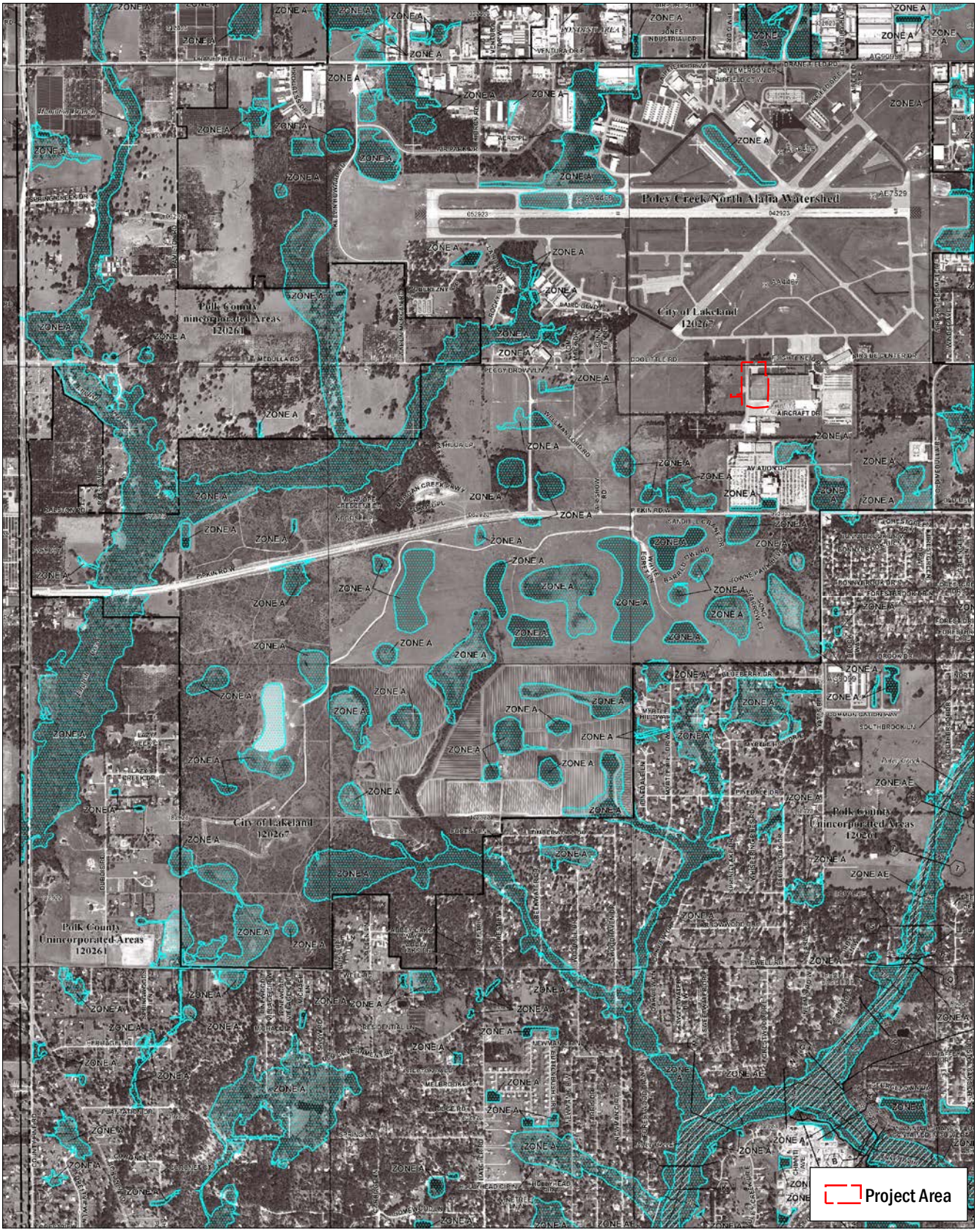
Imagery: ESRI, 2016;FEMA, 2000. Flood Insurance Rate Map, Polk County, Florida, Panel 460 of 1025, Map Number 12105C0460 F, Effective Date December 20, 2000.

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 3.9-1

Lakeland-Linder Regional Airport Flood Plain (2000)



N 0 0.5 Miles

Imagery: ESRI, 2016;FEMA, 2016. Flood Insurance Rate Map, Polk County, Florida, Panel 460 of 1025, Map Number 12105C0460 G, Map Effective December 22, 2016.

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 3.9-2

Lakeland-Linder Regional Airport Pending Flood Plain (2016)

Action Alternative 2: St. Petersburg-Clearwater International Airport

The entire site proposed for Action Alternative 2 is located within the 100-year floodplain, as are runways and taxiways used by aircraft, per the FEMA FIRM identified as 12103C0137G and dated September 3, 2003 (see **Figure 3.9-3**; FEMA, 2003). This floodplain designation has not changed (nor is it being updated) since the FIRM was issued in 2003. FEMA classifies this 100-year floodplain as a Zone AE with a base flood elevation of 9 feet referenced to North American Vertical Datum of 1988 (NAVD88).

No-Action Alternative

Under the No-Action Alterative, existing OMAO operations would continue unchanged. No adverse effects to the 100-year floodplain would result based on the extent of existing NOAA uses at Hangar 5 and adjacent areas.

3.9.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

The proposed project includes the construction of adjacent taxiway pavement, apron pavement, added vehicle parking and the renovation and expansion of an existing hangar building. The environmental effects are quantified by the estimated volume of 100-year floodplains filled.

Floodplain impacts do occur based on the December 20, 2000 FIRM, however as discussed above, this FIRM will not be in effect when the proposed action would be permitted for construction, therefore the pending FIRM is used to evaluate and determine floodplain impacts for this analysis, and impacts under the existing FIRM are not analyzed. NOAA aircraft operations would occur on taxiways and runways located outside Zone A.

Floodplain impacts would not occur from the proposed Action Alternative 1 under the pending FIRM. However, given a portion of taxiway is within Zone A, NOAA may choose to implement the 8-step process in accordance with EO 11988 for the review of actions within a floodplain.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The proposed Action Alternative 2 within PIE would include the construction or rehabilitation of three vehicle parking areas (west, northeast, and southeast), an HVAC building, fire sprinkler pump house, and an addition to the existing hangar building. The environmental effects are quantified by the estimated volume of 100-year floodplains filled and floodplain resources affected.

The entirety of Action Alternative 2 is located within the 100-year Zone AE floodplain with a base flood elevation of 9 feet, NAVD 88. Therefore, any fill added due to constructing the development components would reduce the floodplain storage capacity. Available floodplain storage is contained between the seasonal high water elevation and the 100-year base flood elevation. The seasonal high water elevation at this site is below grade. Therefore, the available floodplain storage volume is between the existing grade and the 100-year base flood elevation of 9 feet, NAVD 88.

DRAFT

N

0 0.5

Miles

Imagery: ESRI, 2016;FEMA, 2003. Flood Insurance Rate Map, Pinellas County, Florida, Panel 137 of 327, Map Number 12103C0137 G, Effective Date September 3, 2003.

AECOM

NOAA Aircraft Operations Center Relocation

FIGURE 3.9-3

St. Petersburg-Clearwater International Airport Flood Plain (2003)

At this phase the exact finished grades proposed for the development components associated with this project are not precisely known. Therefore, the exact volume of material placed within the floodplains cannot be quantified. Fill would be added to construct all of the new development components with the exception of the 30,305 square feet of new parking area associated with the West Parking Area. The West Parking area is an existing parking lot that would be milled and resurfaced at the existing grade.

However, the remaining five development items would require some fill in order to be properly constructed. These five development items collectively encompass approximately 44,612 square feet and are located on the east side of the existing hangar building where the average existing grade elevation approximates 8 feet, NAVD 88. Therefore, the volume of floodplain loss from the average existing grade elevation of 8 feet NAVD 88 to the 100-year base flood elevation of 9 feet NAVD 88 over 44,612 square feet is 44,612 cubic feet (1.02 acre-feet). This is a conservative estimate of floodplain because it assumes the finish grades for all five development components would be at elevation 9 feet, NAVD 88 or higher. This may not be the case, especially for the parking lots, where the finish grades could be only a few inches above existing grade.

From the perspective of the SWFWMD, impacts to floodplains from the proposed Action Alternative 2 would be negligible because the floodplains are located within a drainage area that discharges to a tidal water body. Therefore, any loss in storage capacity within the floodplain is insignificant. As a result the SWFWMD does not require the loss in floodplain storage to be replaced. However, the proposed facility and associated aircraft operation on runways and taxiways would be within the 1%-chance floodplain. NOAA may choose to implement the 8-step process per EO 11988 for review of actions within a floodplain.

No-Action Alternative

Because the No-Action Alternative does not include construction of new facilities or modification of existing facilities, no fill would be added to a floodplain. Therefore, no impacts to floodplains would occur.

3.9.4 Mitigation Measures

No mitigation measures are required for either of the two proposed Action Alternatives, or for the No-Action Alternative, in relation to floodplains.

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3.10 COASTAL ZONE MANAGEMENT

3.10.1 Regulatory Setting

The Coastal Zone Management Act (CZMA) was passed by Congress in 1972, as amended, authorizes coastal states to actively manage and protect coastal and shoreline resources from residential, recreational, commercial and industrial uses. States have the primary role of managing coastal areas via a Coastal Zone Management Program (CZMP), which describes how the state will manage its coastal zones and resources.

Any federal activity, regardless of its location, is subject to the consistency requirement if it will affect any natural resources, land uses, or water uses in the coastal zone. CZMA requires that Federal actions that have the potential to impact coastal resources be consistent, to the maximum extent practicable, with State enforceable policies. Federal consistency requirements are described in Section 307 of the CZMA and at 15 CFR Section 930 (BOEM, 2016).

Florida's Department of Environmental Protection is responsible for implementation of the Florida Coastal Management Program (FCMP) aimed at protecting coastal resources and managing human uses in the coastal zone. As a direct federal action funded by a federal agency for the benefit of a federal agency, a Federal Consistency Determination is typically required under each state's approved Coastal Management Program (CMP) and its CZMP.

Enforceable policies with which such activities must be deemed consistent are policies that are legally binding under state law, such as constitutional provisions, laws, regulations, land use plans, ordinances, or judicial or administrative decisions, and by which a state exerts control over private and public coastal uses and resources. Twenty-four Florida Statutes make up the FCMP. Under the FCMP, federal activities that affect any land use, water use or natural resource of the coastal zone must comply with enforceable policies within these 24 laws (FDEP, 2016b).

3.10.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

The entire state of Florida is within the federally approved coastal zone. Thus, the proposed action at LAL in Polk County lies within the Florida's coastal zone. Polk County is located in the interior part of Florida, approximately 40 miles from major coastal bodies to the west and approximately 65 miles from coastal bodies to the east. The affected area is developed with hangars, taxiways, and aircraft ramp areas, in addition to adjacent lawn and an established stormwater drainage system.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The affected environment for the proposed action at PIE lies within Florida's coastal zone and in a paved airport environment located just south of Old Tampa Bay. The affected area is developed with hangars, taxiways, and aircraft ramp areas, in addition to adjacent lawn and an established stormwater drainage system.

No-Action Alternative

Under the No-Action Alternative, NOAA would not relocate its AOC program to either Action Alternative. The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill Airport, also within the state coastal zone. The affected environment would not change under this alternative.

3.10.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

The proposed action at LAL Action Alternative 1 site would have no adverse impacts to coastal zone resources. Existing facilities on the leased area at the airport would be utilized. Improvements would be made, but largely within the footprint of the existing facilities, except for additional 5 feet of width to portions of the west side of the hangar to be replaced.

Where applicable, each of the Florida Statutes make up the FCMP have been analyzed in the appropriate subsection of this EA. For these resources, the proposed federal action is expected to be consistent with the affected Florida Statute. Provided mitigation measures are implemented, no significant impact to coastal resources would result and the proposed action at this location would be consistent with the FCMP.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The proposed action at the PIE Action Alternative 2 site would have no adverse impacts to coastal zone resources. Existing facilities on the leased area at the airport would be utilized. Improvements would be made, but largely within the footprint of the existing facilities, except for additional expansion to the northwest corner of the hangar to be replaced.

Where applicable, each of the Florida Statutes make up the FCMP have been analyzed in the appropriate subsection of this EA. For these resources, the proposed federal action is expected to be consistent with the affected Florida Statute. Provided mitigation measures are implemented, no significant impact to coastal resources would result and the proposed action at this location would be consistent with the FCMP.

No-Action Alternative

Under the No-Action Alternative, NOAA would not relocate its AOC program at MacDill AFB and would continue to operate within existing leased areas in a manner consistent with the FCMP. No effects to coastal zone resources would result.

3.10.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to coastal zone management.

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3.11 AGRICULTURAL RESOURCES

3.11.1 Regulatory Setting

The Farmland Protection Policy Act (FPPA) became law in 1981, as a result of millions of acres of farmland being converted to non-agricultural uses in the U.S. each year (NRCS, 2016c). FPPA is intended to minimize the impact of federal programs converting farmland to nonagricultural uses. Farmland includes: prime farmland, unique farmland, and land of Statewide or local importance. The U.S. Department of Agriculture (USDA) defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses, including cultivated land, pastureland, forest land, or other land.

Under the FPPA, federal agencies must examine whether potentially adverse effects to prime or unique farmlands or farmlands of state or local importance would occur before approving any action that would irreversibly convert farmland to non-agricultural uses. Soil units and land surface conditions are provided in survey data available from the NRCS for each county. Regulations at 7 CFR 658.2(a) exclude land from definition of farmland as those lands already in urban use or committed to urban development or water storage (NRCS, 2002).

For projects that have the potential to convert important farmland to non-farm use, USDA Service Center uses a land evaluation and site assessment system to establish a farmland conversion impact rating score on proposed sites. This score is used as an indicator for the project sponsor to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level. In instances where the conversion of prime farmland is necessary, the USDA has created the Farmland Conversion Impact Rating system.

4.1.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

Action Alternative 1 at LAL is located in the city of Lakeland, Polk County, Florida. Soil survey data prepared by the NRCS for Polk County indicates the affected project area at LAL is within an Urban Land classification and not a current or prospective area defined as prime farmland (NRCS, 2016a). The airport does not support agricultural practices. The areas surrounding LAL are primarily medium-density, single-family residences and clusters of retail/commercial businesses. There are areas with agricultural practices to the west of the airport. However, no FPPA-defined agricultural resources, including prime farmland, unique farmland, and land of Statewide or local importance are present in areas potentially affected under Action Alternative 1.

Action Alternative 2: St. Petersburg-Clearwater International Airport

Action Alternative 2 proposed at PIE sits within an urbanized area north of St. Petersburg, Florida in unincorporated Pinellas County. Soil survey data prepared by the NRCS for Pinellas County indicates the affected project area at PIE is within an Urban Land and Matlacha/St. Augustine soils classification and is not a current or prospective area defined as prime farmland (NRCS, 2016b). The airport does not support agricultural practices. The areas immediately surrounding PIE do not support agricultural activities on. No FPPA resources, including prime farmland, unique farmland, and land of Statewide or local importance are present on or within areas potentially affected under Action Alternative 2.

No-Action Alternative

Under the No-Action Alternative, NOAA's AOC program would not be relocated to either Action Alternative. The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill Airport. The affected environment would not change under this alternative.

3.11.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

LAL is in a dedicated airport environment surrounded by low-density residential and commercial development. Prime farmland, unique farmland, and land of Statewide or local importance are not present in areas where the proposed action at LAL would take place. Thus, there would be no effect on any FPPA resources under Action Alternative 1.

Action Alternative 2: St. Petersburg-Clearwater International Airport

PIE is in an urbanized area within the city of St. Petersburg, Florida. There are no FPPA resources, including prime farmland, unique farmland, and land of Statewide or local importance present in or outside the airport that would be affected by the proposed activities. Thus, there would be no effect on any FPPA resources under Action Alternative 2.

No-Action Alternative

Under the No-Action Alternative, NOAA's AOC program would not be relocated. The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill Airport. No farmland resources are present within the AOC operating areas. No effects to protected farmland resources would result.

3.11.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to agricultural resources.

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3.12 NOISE

3.12.1 Regulatory Setting

FAA Order 1050.1F (FAA, 2015a), FAA Order 5050.4B (FAA, 2006), and Title 14 CFR, Part 150 (referred to as Part 150 in this EA), specify the methodologies required for evaluation of the airport noise environment. For aviation noise analysis, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of DNL as the FAA's primary metric. DNL is the 24-hour average sound level in decibels using the A-weighted scale (dBA). This average is derived from all aircraft operations during a 24-hour period representing an average annual operational day (AAD) (FAA, 2015a). For convenience, this EA uses the term "DNL xx" as a representation for "DNL xx dBA" (for example, DNL 65 for DNL 65 dBA).

FAA Order 1050.1F Desk Reference (FAA, 2015b), paragraph 11.1.3 allows for the use of the Area Equivalent Method (AEM) noise screening tool to eliminate the need for a more detailed noise analysis when a proposed action results in an general overall increase in daily aircraft operations or change in aircraft type in use. Due to the limited number of aircraft operations produced by the relocation of the NOAA AOC, it is expected that the use of the FAA's AEM noise screening tool will show a minimal increase in the DNL 65 contour area. As dictated by Order 1050.1F, if the AEM calculations results in an increase of less than 17 percent in area of the DNL 65 noise contour, there would be no significant impacts over noise sensitive areas and no further noise analysis would be required. The use of AEM is limited to actions that result in a change in fleet mix and/or number of aircraft operations only (FAA, 2013); changes to airfield layout and flight tracks cannot use AEM. AEM does not require runway or flight track utilization, the only data inputs are Landing and Take-off cycles (LTO) and day – night split. An LTO consists of a landing and a take-off, hence, existing condition aircraft operations numbers provided in the following sections are halved for input into AEM.

Not all aircraft are available in the AEM database, so when necessary similar aircraft are substituted. The AEM database does provide a list of approved substitutions but in some cases assumptions regarding aircraft types are made based on available information. This is the case with the P-3C Orion used by NOAA. There is no official substitution in the AEM database, so for this EA analysis, the C-130 as a military, four-engine, turboprop driven aircraft is used as the substitution.

3.12.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

The FAA completed an EA in 2016 for proposed actions at LAL to construct and operate an Aircraft Maintenance, Repair, and Overhaul (MRO) facility and an Air Cargo Facility (FAA, 2016b). According to that MRO EA, the 2023 With Project Noise Contours do not extend off of airport property. For the purposes of this EA, the MRO EA 2023 with Project will be used as the baseline for this analysis.

The 2023 With Project MRO EA forecast 116,561 annual aircraft operations at LAL, or approximately 320 average annual day operations. AEM does not include rotary wing aircraft in the aircraft database, therefore rotary wing operations are eliminated for the analysis. **Table 3.12-1** provides the aircraft operations broken down by aircraft type and time of day.

Table 3.12-1: Existing Condition Aircraft Operations at LAL

Aircraft Type	Average Annual Day			Annual		
	Day	Night	Total	Day	Night	Total
727200	0.01	0.00	**0.01**	3.77	0.24	**4.02**
737700	0.01	0.00	**0.01**	3.77	0.24	**4.02**
737800	0.11	0.00	**0.11**	40.00	0.00	**40.00**
767300	2.02	0.22	**2.25**	738.00	82.00	**820.00**
A320-232	0.11	0.00	**0.12**	41.89	0.12	**42.01**
BEC58P	41.48	2.65	**44.12**	15138.70	966.30	**16105.00**
C130	3.22	0.21	**3.42**	1175.01	75.00	**1250.02**
CIT3	0.55	0.04	**0.59**	201.16	12.84	**214.00**
CL600	3.07	0.20	**3.27**	1120.43	71.56	**1191.99**
CNA172	138.79	8.86	**147.65**	50658.47	3233.52	**53891.99**
CNA206	4.40	0.28	**4.68**	1605.54	102.48	**1708.02**
CNA182	3.52	0.22	**3.74**	1284.05	81.96	**1366.01**
CNA208	4.46	0.28	**4.74**	1627.15	103.86	**1731.01**
CNA441	5.52	0.35	**5.87**	2013.68	128.32	**2142.00**
CNA500	3.93	0.25	**4.18**	1435.19	91.82	**1527.01**
CNA560XL	3.58	0.23	**3.81**	1306.59	83.40	**1389.99**
CNA750	1.38	0.09	**1.46**	501.96	32.04	**534.00**
DHC6	0.69	0.04	**0.74**	252.86	16.14	**269.01**
DO228	3.16	0.20	**3.36**	1154.33	73.68	**1228.01**
F10062	0.28	0.02	**0.29**	100.60	6.42	**107.02**
GASEPF	5.28	0.34	**5.61**	1926.06	122.94	**2049.00**
GASEPV	43.39	2.77	**46.16**	15839.01	1011.00	**16850.01**
GV	0.61	0.04	**0.64**	221.16	12.84	**234.00**
LEAR25	0.11	0.01	**0.12**	40.42	2.58	**43.00**
LEAR35	14.39	0.92	**15.31**	5253.45	335.54	**5588.99**
MD83	0.04	0.00	**0.05**	15.99	1.02	**17.01**
PA28	9.68	0.62	**10.29**	3531.60	225.42	**3757.02**
PA31	2.64	0.17	**2.81**	963.49	61.50	**1024.99**
PA42	0.86	0.06	**0.92**	314.90	20.10	**335.00**
SD330	0.43	0.03	**0.46**	157.93	10.08	**168.01**
TOTAL	**297.72**	**19.08**	**316.80**	**108667.16**	**6964.97**	**115632.13**

Source: LAL EA for Airport Development Actions, July 2016.

The day – night split illustrated in **Table 3.12-1** is based on the information provided in the LAL MRO EA. According to the MRO EA, approximately 94 percent of civilian fixed wing operations, including those generated by the Proposed MRO, occurred during daytime hours and 6 percent during night time hours; with 100 percent of military and rotary wing operations occurring during daytime hours. For future MRO and air cargo operations, the MRO EA assumes 90 percent of the operations would occur during daytime hours and 10 percent at night.

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Action Alternative 2: St. Petersburg-Clearwater International Airport

PIE has not completed an environmental study containing noise contours since 2007. Therefore, this EA will compile current aircraft operational data to complete the AEM study. PIE provided a breakdown of commercial aircraft operations by aircraft type and time of day. In addition, PIE provided counts of military and general aviation aircraft operations by time of day.

Based on the information provided by PIE, there were approximately 104,500 annual aircraft operation, or 286 average day operations. Fleet mix for commercial operations was also provided by PIE staff. Fleet mix for military operations and general aviation aircraft were obtained from the FAA Traffic Flow Management System Counts (TFMSC) online database (FAA, 2016c). The data provided by TFMSC was filtered to remove the rotary wing operations and the military fleet mix was limited to the fixed wing military aircraft regularly operating at PIE, in particular the C-130 and the CASA-235. A breakdown of these operations by aircraft type and time of day is provided in **Table 3.12-2**.

TABLE 3-12.2: Existing Conditions Aircraft Operations at PIE

Aircraft Type	Average Annual Day			Annual		
	Day	Night	Total	Day	Night	Total
Commercial Aircraft (COM)						
MD83	16.88	0.53	17.41	6,159.40	193.60	6,353.00
A320-211	10.89	0.34	11.23	3,974.09	124.91	4,099.00
A300-622R	1.57	0.05	1.62	572.02	17.98	590.00
737400	0.03	0.00	0.03	10.66	0.34	11.00
737700	1.31	0.04	1.35	477.01	14.99	492.00
737800	0.43	0.01	0.44	157.06	4.94	162.00
757PW	1.18	0.04	1.22	430.47	13.53	444.00
767CF6	0.16	0.01	0.16	58.17	1.83	60.00
EMB190	0.03	0.00	0.04	12.60	0.40	13.00
COM Total	**32.47**	**1.02**	**33.49**	**11,851.49**	**372.51**	**12,224.00**
General Aviation Aircraft (GA)						
1900D	0.03	0.00	0.03	10.04	0.32	10.36
BEC58P	32.77	1.03	33.80	11,962.55	376.00	12,338.56
CIT3	1.43	0.04	1.48	522.08	16.41	538.49
CL600	9.05	0.28	9.33	3,303.13	103.82	3,406.95
CL601	5.01	0.16	5.16	1,827.26	57.43	1,884.70
CNA172	11.75	0.37	12.11	4,287.04	134.75	4,421.79
CNA182	4.96	0.16	5.12	1,812.20	56.96	1,869.16
CNA206	2.43	0.08	2.51	888.53	27.93	916.46
CNA208	7.04	0.22	7.26	2,570.22	80.79	2,651.00
CNA441	12.03	0.38	12.41	4,392.46	138.06	4,530.52
CNA500	9.57	0.30	9.87	3,493.89	109.82	3,603.71
CNA55B	8.55	0.27	8.82	3,122.41	98.14	3,220.56

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Aircraft Type	Average Annual Day			Annual		
	Day	Night	Total	Day	Night	Total
CNA680	0.74	0.02	0.77	271.08	8.52	279.60
CNA750	0.87	0.03	0.89	316.26	9.94	326.20
DHC6	2.71	0.09	2.79	988.93	31.08	1,020.02
DO228	0.45	0.01	0.47	165.66	5.21	170.87
ECLIPSE500	3.96	0.12	4.09	1,445.75	45.44	1,491.19
EMB145	1.44	0.05	1.49	527.10	16.57	543.66
EMB190	0.03	0.00	0.03	10.04	0.32	10.36
F10062	1.58	0.05	1.63	577.29	18.15	595.44
GASEPF	3.97	0.12	4.10	1,450.77	45.60	1,496.37
GASEPV	26.31	0.83	27.14	9,603.18	301.84	9,905.02
GII	0.03	0.00	0.03	10.04	0.32	10.36
GIIB	0.36	0.01	0.37	130.52	4.10	134.62
GIV	2.37	0.07	2.44	863.43	27.14	890.57
GV	1.44	0.05	1.49	527.10	16.57	543.66
IA1125	4.47	0.14	4.61	1,631.49	51.28	1,682.77
LEAR25	0.10	0.00	0.10	35.14	1.10	36.24
LEAR35	16.45	0.52	16.97	6,003.87	188.71	6,192.58
MD81	0.06	0.00	0.06	20.08	0.63	20.71
MU3001	5.31	0.17	5.48	1,937.70	60.91	1,998.61
PA28	18.57	0.58	19.15	6,776.94	213.01	6,989.95
PA30	0.50	0.02	0.51	180.72	5.68	186.40
PA31	6.07	0.19	6.26	2,213.80	69.58	2,283.38
SD330	2.48	0.08	2.55	903.59	28.40	931.99
SF340	0.01	0.00	0.01	5.02	0.16	5.18
GA Total	**204.90**	**6.44**	**211.34**	**74,787.30**	**2,350.70**	**77,138.00**
Military Aircraft (MIL)						
737700	2.63	0.08	2.71	959.39	30.16	989.54
C130	25.41	0.80	26.21	9,274.09	291.50	9,565.59
SF340	12.27	0.39	12.65	4,477.14	140.72	4,617.87
MIL Total	**40.30**	**1.27**	**41.57**	**14,710.62**	**462.38**	**15,173.00**
All Aircraft Types						
TOTAL	**277.67**	**8.73**	**286.40**	**101,349.41**	**3,185.59**	**104,535.00**

Sources: Sprague, pers. comm., 2016; FAA, 2016c.

The day – night split illustrated in **Table 3.12-1** is based on the information provided in the PIE. According to this information, approximately 97 percent of all aircraft operations occurred during daytime hours and 3 percent occur during night time hours, regardless of aircraft category.

3.12.3 Environmental Consequences

For purposes of this EA, the 2020 forecast level of operational activity for the NOAA facility was used to provide a worst case aircraft noise scenario. **Table 3-12-3** provides the expected level of NOAA aircraft operations for the forecast year regardless of proposed alternative site formatted for use in AEM. The original data provided by NOAA regarding aircraft operations in 2020 is provided in **Appendix B**.

TABLE 3-12.3: 2020 Forecast of NOAA Aircraft Landing Take Off Cycles

Aircraft Type	Average Annual Day			Annual		
	Day	Night	Total	Day	Night	Total
C130	0.70	0.20	**0.90**	256.67	73.33	**330.00**
CNA441	0.22	0.07	**0.30**	81.00	27.00	**108.00**
DHC6	1.23	0.22	**1.45**	450.07	79.93	**530.00**
DO228	0.35	0.12	**0.46**	126.00	42.00	**168.00**
GIV	0.16	0.03	**0.19**	58.33	11.67	**70.00**
Total	**2.66**	**0.64**	**3.30**	**972.07**	**233.93**	**1,206.00**

Source: Appendix B.

Action Alternative 1: Lakeland-Linder Regional Airport

The Proposed NOAA Relocation AEM analysis results in an increase to approximately 0.52 square miles, or 332.42 acres within the DNL 65 contour. This increase of approximately 0.038 square miles, or 24.15 acres, results in a change in area within the DNL 65 noise contour of approximately 7.8 percent, as shown in **Table 3-12.4**. The complete AEM analysis is provided in **Appendix B**.

TABLE 3-12.4: AEM Analysis for LAL

Area Measurement	Area within DNL 65		Change in Area	
	Base	Future	Area	%
Square Miles	0.48	0.52	0.04	7.8%
Acres	308.27	332.42	24.15	7.8%

Source: Appendix B.

As dictated by FAA Order 1050.1F, if the AEM calculations results in an increase of less than 17 percent in area of the DNL 65 noise contour, there would be no significant impacts over noise sensitive areas and no further noise analysis would be required. Effects relating to noise from proposed Action Alternative 1 would be negligible.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The Proposed NOA Relocation AEM analysis results in an increase to approximately 0.95 square miles, or 608.02 acres within the DNL 65 contour. This increase of approximately 0.037 square miles, or 23.85 acres, results in a change in area within the DNL 65 noise contour of approximately 4.1 percent, as shown in **Table 3-12.5**. The complete AEM analysis is provided in **Appendix B**.

TABLE 3-12.5: AEM Analysis for PIE

Area Measurement	Area within DNL 65		Change in Area	
	Base	Future	Area	%
Square Miles	0.91	0.95	0.037	4.1%
Acres	584.16	608.02	23.85	4.1%

Source: Appendix B.

As dictated by Order 1050.1F, if the AEM calculations results in an increase of less than 17 percent in area of the DNL 65 noise contour, there would be no significant impacts over noise sensitive areas and no further noise analysis would be required. Effects relating to noise from proposed Action Alternative 2 would be negligible.

No-Action Alternative

The AEM analysis conducted for LAL using the MRO EA 2023 with Project indicate that approximately 0.48 square miles, or 308.27 acres are encompassed within the DNL 65 contour. As indicated in the MRO EA, this contour not only does not encroach upon any noise sensitive land uses, but the contour does not extend off airport property.

Similarly, the AEM analysis conducted for PIE using the data provided by PIE and obtained from the FAA TFMSC database, indicates that approximately 0.91 square miles, or 584.16 acres are encompassed within the DNL 65 contour. The AEM study does not provide information as to whether the noise contours would extend off of airport property.

3.12.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to noise.

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3.13 TRANSPORTATION

3.13.1 Regulatory Setting

The transportation impact analysis assesses the effects of the proposed action on the transportation network in the community. A qualitative analysis is used to assess whether the proposed action has the potential to result in a significant impact, and whether a quantitative analysis and prospective improvements to transportation infrastructure may be necessary. The approach applied involves the use of trip generation data, essentially the number of inbound and outbound vehicle trips expected to be generated due to the proposed action during an average day or during peak hour traffic. The expected trip generation is compared to accepted thresholds to determine whether a more comprehensive traffic analysis is needed. The trip generation process applied provides an estimate of the number of trips that would be generated under worst-case conditions. Trip generation rates are then compared to the latest available traffic counts. When available, a roadway Level of Service (LOS) is identified and the potential to change to the LOS to a more adverse condition due to the proposed action is considered.

LOS is a qualitative measurement used to describe traffic conditions of a transportation route. It is based on the number of vehicles using the roadway compared to the maximum number of vehicles the route/intersection was designed to accommodate. Six LOS are defined in the Highway Capacity Manual for each type of facility (Transportation Research Board, 2000). They are expressed qualitatively using letters from ‘A’ through ‘F’. LOS A represents free flow conditions, while F represents gridlock. LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing over-saturated conditions where traffic flows exceed capacity resulting in long queues and delays). LOS grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving.

It is the Florida Department of Transportation’s (FDOT’s) intent to plan, design and operate the State Highway System at an acceptable LOS for the traveling public. The automobile mode LOS standards for the State Highway System during peak travel hours are “D” in urbanized areas and “C” outside urbanized areas (FDOT, 2015).

3.13.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

The proposed action at the LAL Action Alternative would require use of internal and adjacent access roads about one mile south of State Road 570, primarily within Polk County jurisdiction. There are at least two main routes that can be taken to enter the proposed site. These routes are described below:

Route 1: Via Interstate 4, State Road 570 east to Waring Road or Pipkin Road South, southbound, to either W. Pipkin Road or Old Medulla Road, westbound. Old Medulla Road becomes Airside Center Drive, then west on Flightline Drive to the project area. Airside Center Drive and Flightline Drive are privately owned by the Airport.

Route 2: Via Interstate 4, County Line Road southbound, West Pipkin Road eastbound, then Airside Center Drive northbound and Flightline Drive westbound into the project area.

Based on 2016 data received from the Polk Transportation Planning Organization, the annual average daily traffic (AADT) count for affected portions of West Pipkin Road is 15,000 to 20,000. The LOS is "D" (Polk Transportation Planning Organization, 2016).

Based on data received from City of Lakeland, the traffic count for Airside Center Drive was approximately 2,300 trips per day in 2015. The mean speed on Airside Center Drive was 29 miles per hour (City of Lakeland, 2015b).

Action Alternative 2: St. Petersburg-Clearwater International Airport

The proposed action at the PIE Action Alternative would occur near Pinellas County Route 611 and Florida State Route 686, known as Roosevelt Boulevard, to the west. From these key travel corridors, access to the project area is via the Fairchild Drive eastbound onto Rescue Way eastbound. Then, southeast on Spadco Drive to the project area. Similarly, access from the Bayside Bridge Bride southbound via State Highway 686 and County Route 611 provides access to Fairchild Drive eastbound.

According to traffic counts provided by Pinellas County, the AADT for State Highway 686 (Roosevelt Boulevard) was 42,500 and 42,000 trips per day in 2013 and 2014, respectively. The AADT on County Route 611 were 43,331 and 42,500 trips per day in 2013 and 2014, respectively (Pinellas County Metropolitan Planning Organization, 2013).

No-Action Alternative

Under this alternative, no change to traffic volume or routing at or near MacDill AFB would occur.

3.13.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

Implementation of Alternative 1 would result in slight increases in traffic on the roads near the southern portion of LAL to accommodate approximately 110 NOAA AOC staff and delivery vehicles. Access can be achieved with comparable time and distance via two common public routes with variant detours. Based on a worst-case increase of 440 weekday trips per day by AOC staff and delivery vehicles distributed across multiple public access routes and intersections, the proposed action would not cause a discernable change to existing AADT or reduction of the LOS. Action Alternative 1 would have a negligible effect on transportation resources based on the current amount of vehicles on the road and the capacity of the roads to accommodate traffic.

Action Alternative 2: St. Petersburg-Clearwater International Airport

Implementation of Alternative 2 would result in slight increases in traffic on the state and county routes and private roads at the west side of PIE due to anticipated traffic movements from the approximately 110 NOAA AOC staff. When compared to recent traffic counts on Highway 686 and Highway 611, the worst-case increase of 440 weekday trips per day AOC staff and delivery vehicles would not be substantial or affect current LOS. Action Alternative 1 would have a negligible effect on transportation resources.

No-Action Alternative

The No-Action Alternative assumes that NOAA would remain on MacDill AFB. There would be no change to the existing site conditions or traffic generation under the No-Action Alternative.

3.13.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to transportation.

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3.14 UTILITIES AND SOLID WASTE

3.14.1 Regulatory Setting

There are no directly applicable federal regulations pertaining to effects of federal actions on local utilities and public services (i.e., solid waste disposal). Regulatory constraints related to the existing capacity and distribution of utility services is typically considered through local zoning or land use law. While the federal government is not required to follow local regulations under the *Public Building Amendments of 1988* (Public Law 100-678), they strive to assess potential effects of projects and conform to local requirements to the extent practicable. This assessment considers the apparent capacity of utility services and the effects of extending those services to the project area.

3.14.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

The City of Lakeland currently supplies LAL with water and sewage utility services. The airport's power services are provided by Lakeland Electric. In the event Alternative 1 is chosen, landline utility services would be provided by Frontier (Hallstrand, pers. comm., 2016).

Action Alternative 2: St. Petersburg-Clearwater International Airport

Pinellas County provides PIE with water and sewage utility services. Duke Power currently provides electric utilities to the airport. Landline utility services to St. Petersburg-Clearwater are provided by Frontier (Jackson, pers. comm., 2016).

No-Action Alternative

The City of Tampa provides water, wastewater (sewer) and solid waste (refuse and recycling) to MacDill AFB (Vichich, 2011). The No-Action Alternative assumes continuation of these services to be provided by the City of Tampa.

3.14.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

Existing utility services have supported similar aviation-related office and light-industrial operations at this project location. Substantially higher demand for services such as water, power, wastewater, telephone/internet or solid waste disposal is not required and, based on past usage of facilities at the project area, the expected demand would be within the capacity of existing service providers. No added service capacity or major new utility infrastructure would be required; hence, no adverse environmental effects with respect to utilities and solid waste would result from the proposed Action Alternative 1.

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Action Alternative 2: St. Petersburg-Clearwater International Airport

Existing utility services have supported similar aviation-related office and light-industrial operations at this project location. Substantially higher demand for services such as water, power, wastewater, telephone/internet or solid waste disposal is not required and, based on past usage of facilities at the project area, the expected demand would be within the capacity of existing service providers. No added service capacity or major new utility infrastructure would be required; hence, no adverse environmental effects with respect to utilities and solid waste would result from the proposed Action Alternative 2.

No-Action Alternative

The No-Action Alternative assumes continuation of these services to be provided by the City of Tampa. No environmental consequences with respect to utilities and solid waste would result from the No-Action Alternative.

3.14.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to utilities and service systems.

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3.15 AESTHETICS AND VISUAL RESOURCES

3.15.1 Regulatory Setting

Federal Land Policy and Management Act of 1976

Federal Land Policy and Management Act, 43, U.S.C. Section 1701 (a)(8) states that public lands must be managed in a manner that will protect the quality of the scenic values. Additionally, Section 1701(c) identifies scenic values as a resource that should be managed by the public (USGPO, 2012).

National Environmental Policy Act of 1969

While NEPA does not establish particular guidance for determining the significance of visual/aesthetic resources impacts, in 43 U.S.C. Section 4331(b)(2), it requires measures be taken to assure that esthetically pleasing surroundings are available for all Americans (US Senate, 2002).

Bureau of Land Management's Visual Resource Management System

The Bureau of Land Management (BLM) developed a system for analysis of visual effects on federal lands. This system is called Visual Resource Management, which involves inventorying scenic values and establishing management objectives for those values. While Visual Resource Management is typically applied to large federal landholdings requiring an EIS, these concepts can be applied to provide a basis for assessing effects within an EA for less expansive federal actions proposed on non-federal land parcels (BLM, 2012).

The concepts include actions to:

- Identify those views potentially affected and for which the public may express concern.
- Describe the existing visual conditions and potentially affected critically sensitive views.
- Estimate the intensity of possible adverse visual impacts on those views.
- Evaluate the significance of the possible impacts; mitigate, as needed.

Visual/scenic resources, such as, national, state or local parks, areas adjacent to designated wild and scenic rivers, and regionally scenic byways, routes or views from designated viewing areas have a social setting, which includes public expectations, values, awareness, and concern regarding visual quality. This social setting is addressed as "visual sensitivity," and is important to assessing how important a visual impact may be and whether or not it represents a significant impact. The visual condition and degree of visual sensitivity is expressed as one of the following four levels:

- High sensitivity: A great potential for the public to react strongly to a threat to visual quality.
- Moderate sensitivity: A substantial potential for the public to express concern.
- Low sensitivity: A small minority of the public may have a concern.

- No sensitivity: There is no sensitivity where the potentially affected views are not "public" (not accessible to the general public).

Levels of visual quality consist of three components evaluated using the following general definitions:

- Low quality: Landscape is common to the region and exhibits few, if any, memorable features or patterns which provide visual diversity.
- Moderate: Landscape exhibits reasonably attractive natural and human-made features.
- High: Landscape exhibits distinctive and memorable visual features.

3.15.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

The anticipated level of visual sensitivity at LAL is considered to be low. There are no definitive areas present in or adjacent to the airport that would be considered "scenic resources." The Ridge Scenic Highway over 10 miles east in Polk County extends 39 miles along the Lake Wales Ridge and through the historic communities of Frostproof, Hillcrest Heights, Babson Park, the Village of Highland Park, Lake Wales, Lake of the Hills, Dundee, Lake Hamilton and Haines City.

The landscape is common to the region and exhibit few, if any, memorable features or patterns which provide diversity. To the north of the airport site are residential and industrial areas, lakes and wetlands; to the south are residential and business areas, open spaces and wetlands; to the east are residential areas and open space; and to the west are mainly agricultural land and estates.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The anticipated level of visual sensitivity at PIE is considered to be low to moderate. The project would use an existing hangar at the airport for expansion and certain improvements largely within the existing hangar footprint. There are no areas present in or around areas adjacent to the airport that would be considered "scenic resources", other than the Tampa Bay. A corridor that leads out to Old Tampa Bay is designated by the City as a natural scenic corridor. Otherwise, the landscape is common to the region and exhibit few, memorable features or patterns which provide diversity. To the north of the airport site is the Tampa Bay's coastal area; to the south are business/industrial areas; to the east are residential areas and the gulf's forests and coastal area; and to the west are business/industrial areas.

No-Action Alternative

Under the No-Action Alternative, NOAA's AOC program would not be relocated to either Action Alternative. The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill Airport. Current visual aesthetics would remain unchanged.

3.15.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

The level of visual sensitivity at LAL is considered to be low. There are no areas in or adjacent to the airport that would be considered "scenic resources." The project would modify an existing hangar building within the airport, which would result in a visually imperceptible degree of change in height and footprint when considered from views off of the airport property. The landscape is common to the region and exhibits few, if any, memorable features or patterns which provide diversity or unique public interest. The nearest scenic corridor, the Ridge Scenic Highway, located several miles to the east would not be visually affected.

Consequently, there are no definitive visual resources associated with Action Alternative 1 that would be adversely affected by the proposed project. There would be no effect.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The anticipated level of visual sensitivity at PIE is considered to be low to moderate, as there are no areas present in or immediately adjacent to the airport that would be considered "scenic resources," except for transient views from the public traversing the Bayside Bridge or in waterways within the Old Tampa Bay.

The landscape is common to the region and exhibits few, if any, memorable features or patterns which provide diversity or unique interest. There are no designated visual resources such as parks or vistas that would be affected by the proposed action at existing airport facilities.

The project would modify an existing hangar building within the airport, which would have a visually imperceptible degree of change in height and footprint when considered from views off of the airport property. Distant views from the Bayside Bridge or in waterways within the Old Tampa Bay would not discern such a change in building footprint or height.

Consequently, there are no definitive visual resources associated with Action Alternative 2 that would be adversely affected by the proposed project. There would be no effect.

No-Action Alternative

Under the No-Action Alternative, NOAA's AOC program would not be relocated to either Action Alternative. The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill Airport. The existing affected environment within MacDill AFB would not be affected under this alternative.

3.15.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to aesthetics and visual resources.

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3.16 HAZARDOUS MATERIALS

3.16.1 Regulatory Setting

Hazardous materials handling and hazardous waste management are subject to numerous laws and regulations at all levels of government. State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. Hazardous materials storage and reporting requirements, known as Tier II Requirements, have been delegated to the States by the USEPA.

Hazardous materials and wastes are regulated in Florida by the FDEP. On February 12, 1985, Florida received final authorization from the USEPA to administer its own hazardous waste management and regulatory program under the Resource Conservation and Recovery Act (RCRA). The FDEP Hazardous Waste Regulation Section is responsible for implementing the hazardous waste regulatory portion of RCRA. The FDEP also regulates underground storage tanks and solid waste disposal facilities in Florida. These laws impose "cradle to grave" regulatory systems for the generation, transportation, treatment, storage, and disposal of hazardous waste in a manner that protects human health and the environment.

Florida has adopted and incorporated portions of Title 40 CFR Part 124 and Parts 260-279 into its administrative code as Rule 62-730, FAC effective 04-05-16; Rule 62-710, FAC effective 04/23/13; Rule 62-731, FAC effective 02/16/12; Rule 62-737, FAC effective 02/16/12; and Rule 62-740, FAC effective 02/16/12.

The federal Occupational Safety and Health Administration (OSHA), is the agency responsible for assuring worker safety in the workplace, including safety during construction activities that may result in exposure to hazardous materials. Florida does not have an OSHA-Approved State Plan. Federal OSHA also has an asbestos survey requirement under Title 29 CFR, which require facilities to take all necessary precautions to protect employees and the public from exposure to asbestos. The removal and handling of ACM is governed primarily by USEPA regulations under Title 40 CFR. The FDEP Asbestos Removal Program began in 1982 when the USEPA delegated enforcement authority to the state. It requires notification to the FDEP about the removal of asbestos from certain types of facilities throughout Florida that have the potential to contain contaminated materials. These include institutional, commercial, public, and industrial structures and residential buildings with four or more units; as well as ships or any active or inactive waste disposal sites.

Phase I Environmental Site Assessments (Phase I ESAs) have been prepared for both Action Alternative Sites under consideration. A Phase I ESA is currently under preparation for the existing AOC facility at MacDill AFB. Phase I ESAs are generally performed in conformance with the scope of limitations of the American Society of Testing and Materials Practice E1527-13 for the purpose of identifying recognized environmental conditions (RECs). The Phase I ESAs for each Action Alternative are intended to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner or bona fide prospective purchaser limitations on liability under the Comprehensive Environmental Response, Compensation and Liability Act.

This analysis considers project-related effects on identified RECs (e.g., effects on contaminated soil, groundwater or sediments), as well as the potential for release of additional hazardous materials during construction, operation and maintenance activities under the proposed action.

3.16.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

The hangar at Action Alternative 1 is currently occupied by Rob Dinic Interiors, a firm that customizes and refurbishes aircraft and helicopter interiors. The existing facility contains two spray paint booths and a floor trench drain system, waste paint drums, and flammable materials cabinets. An electrical substation, wastewater lift station, and an inactive groundwater well/holding tank are located outside of the existing structure (Chastain Skillman, 2016). Former operations at the site include occupation by Piper Aircraft Corporation, which conducted aircraft manufacturing and fluid power valve and hose fitting manufacturing from at least 1975 to 1980. No staining or evidence of discharges were observed, and review of available regulatory records did not identify any discharges or required cleanups associated with the subject property. No RECs were identified resulting from current or former operations at Action Alternative 1 (Chastain Skillman, 2016).

It is understood that the current hangar structure was constructed between 1974 and 1980 (Chastain Skillman, 2016), therefore it is possible that asbestos-containing materials and/or lead-based paint may have been used in construction. Federal regulations prohibiting the use of these hazardous materials did not come into full effect until the mid-late 1970s.

Action Alternative 2: St. Petersburg-Clearwater

The hangar at Action Alternative 2 is currently owned and operated by Sheltair Aviation, which uses the existing hangar to house three aircraft. Otherwise, the facility is currently unoccupied, and was formerly occupied by Clearwater Aviation Incorporated for aircraft storage and repair maintenance. Due to the age of the structure (circa 1964) it is likely that asbestos-containing materials and/or lead-based paint may be present in building materials (EPAC, 2016a).

The subject property has involved handling of hazardous materials for over 30 years, including presence of aboveground and underground storage tanks (since removed). The site once contained an on-site closed loop chemical treatment system for residue from a commercial and military aircraft restoration and painting facility adjacent (west) to the site. Review of FDEP records show violations and spills have occurred in the past (EPAC, 2016a).

The Phase I ESA for the site (prepared when Clearwater Aviation was still using the facility) found several drums within the hangar, as well as in and adjacent to the storage shed, several of which were unlabeled, without secondary containment, and in need of disposal (EPAC, 2016a). The Phase I ESA identified several RECs at the site, due to the history of the site as a handler of hazard waste, the history of the adjacent site to the west as a generator of hazardous waste, and the current hazardous waste operations at the site.

A Phase II investigation was undertaken for the subject property, as well as adjacent parcels to the northwest and south in 2016, to determine if any of the RECs have resulted in soil and/or groundwater contamination at the site (EPAC, 2016b). The Phase II investigation found carcinogenic polyaromatic hydrocarbons in soil [benzo (a) pyrene equivalent] and groundwater (benzene and naphthalene) at concentrations above the FDEP Soil and Groundwater Cleanup Target Levels in some locations, and concluded that there is an indication of contaminated soil and groundwater at the site.

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No-Action Alternative

The existing AOC facility is located at MacDill AFB. The Phase I Environmental Site Assessment (Phase I ESA) for the facility (AECOM, under prep) identifies several RECs at the facility; however, these are due to historical and/or current activities on the wider Air Force Base, and not as a result of historic or current operations at the AOC. Groundwater monitoring at the site in March 2015 found levels of arsenic, iron, and vinyl chloride above the Corrective Action Objective in several of the wells near Hangar 5 (HydroGeoLogic, 2015). The potential source for this contamination is thought to be from activities in and around the adjacent Hangar 4 structure to the northwest.

The AOC facility currently uses various chemicals for janitorial and building maintenance purposes, as well as for equipment maintenance activities, as detailed in **Table 3.16-1** below. Equipment at the site is also fueled by and/or contains hazardous materials.

Table 3.16-1: Chemicals and Hazardous Materials used at AOC Facility

Equipment	Equipment Maintenance	Building Maintenance	Janitorial
Battery-powered pallet jack (lead acid/gel) Battery-powered forklift (lead acid/gel) Battery-powered manlift (lead acid/gel) Diesel-powered forklift Propane-fueled forklift Propane-fueled manlift	Acetylene Argon Carbon Dioxide Degreaser Gasoline Hydraulic oil Lubricant Motor oil Oxygen Paint Parts Washer Propane Spray Paint Transmission Fluid	Acetylene Adhesive Argon Carbon Dioxide Carpet Cleaner Degreaser Floor Cleaner/Wax Gasoline Insecticide Lubricant Oxygen Paint Parts washer Propane Spray Paint	Bleach Carpet Cleaner Detergent Floor Cleaner/Wax Insecticide Polish Soap Window Cleaner

Source: Harrison, pers.comm., 2016.

The existing AOC facility currently generates various wastes, including small quantities of hazardous wastes under RCRA, including fuel filters, PT wash fluid, paint/solvent, MOGAS filters, and paint booth filters. Non-RCRA hazardous wastes such as oil-contaminated rags, cutting fluids, and jet propellant-contaminated rags are also generated on site. The maximum annual weight of RCRA hazardous wastes generated by the AOC facility over the last three years was 382 pounds (Harrison, pers. comm., 2016). These wastes are managed and disposed of in accordance with applicable federal and state regulations as part of the wider Air Force Base operations, under USEPA Generator ID# FL6570024582.

Other wastes containing small amounts of hazardous materials, such as batteries and fluorescent lamps, are managed under the Universal Waste Program. Wastes such as used oil, used hydraulic fluids, scrap metals, and

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tires are recycled through commercial recycling vendors. These wastes are also managed in accordance with applicable federal and state regulations.

The Phase I ESA for this site (AECOM, under prep) did not identify any past releases from the AOC facility, nor any indication that hazardous material handling procedures were lacking.

3.16.3 Environmental Effects

Action Alternative 1: Lakeland-Linder Regional Airport

The proposed Action Alternative 1 would involve minor construction relating to the replacement of two-thirds of the existing hangar structure, including replacement of the foundation in that portion of the structure.

The proposed action would require demolition of part of the existing hangar, which could have potentially significant impacts on worker health and safety and environmental quality, if appropriate federal, state, and/or local regulations, precautions and processes are not followed with respect to closure and decommission of the existing building and its contents. There is potential for spills if the existing operation is not completely emptied of all containers of hazardous materials prior to demolition and such containers are not disposed of in accordance with relevant regulations. Such regulations may include (but are not limited to) Title 29 CFR 1910 and 1926, and Title 40 CFR 260-268. It is recommended that an hazardous materials storage, closure and management plan be prepared by the entity responsible for closure and decommissioning of the existing facility operations.

The proposed demolition of a portion of the existing hangar could also have potentially significant impacts on worker health and safety, as the hangar may contain asbestos and/or lead-based paint. Compliance with state and federal regulations requires an AHERA-style asbestos survey be conducted prior to any renovation or demolition. It is anticipated that if asbestos and/or lead-based paint is present in the structure, that applicable state and federal regulations would be adhered to during demolition activities, in which case impacts on worker health and safety would be reduced to less than significant.

Machinery and vehicles used during demolition and construction activities, such as graders, backhoes, loaders and haul trucks, will use diesel and other fuel. This could have potentially significant impacts on environmental quality if BMPs with respect to spill prevention and protection, as required by a NPDES permit, are not utilized. It is anticipated that such BMPs would be utilized during construction, and that impacts would be less than significant.

As there is no there is no known site contamination at Action Alternative 1, construction activities for the proposed action at this site would not result in exposure of workers to contaminated soils or groundwater, nor would it result in release of contaminants or contaminated sediments, nor generation of contaminated cut/fill materials or contaminated groundwater.

Operation of the AOC facility at Action Alternative 1 would include maintenance and fueling activities, which pose a risk of accidental spills or leaks. Hazardous materials would be stored and used on the site, similar to the existing operations at the existing AOC facility at MacDill AFB described in **Section 3.16.2**, above. Once constructed and operational, the majority of the site would be paved and impervious. It is anticipated that NOAA would establish its own Generator ID with the USEPA for management of its hazardous wastes, and would

manage its hazardous wastes in accordance with applicable federal, state, and local regulations. As such, the use of hazardous materials at the site would have negligible adverse environmental impacts.

Proposed Action Alternative 1 could result in minor impacts in relation to hazardous materials and hazardous wastes if the mitigation measures outlined in **Section 3.16.4,** below, or equivalent measures, are not implemented.

Action Alternative 2: St. Petersburg-Clearwater

The proposed Action Alternative 2 would include removal of the hangar siding and roofing, as well as office interior and remnant and unnecessary utility infrastructure. Site work would include extension of underground mechanical, electrical and plumbing conduit, placement of metal building shell siding and roofing, installation of man-doors, glazing and siding, construction of the attached high bay segment and completion of site work for ramps, tie-downs, striping, and parking.

Site preparation activities during construction (e.g., removal of siding and roofing) could have potentially significant impacts on worker health and safety and environmental quality, if appropriate federal, state, and/or local regulations, precautions and processes are not followed with respect to closure and decommission of the existing building and its contents. There is potential for spills if the existing operation is not completely emptied of all containers of hazardous materials prior to demolition and such containers are not disposed of in accordance with relevant regulations. Such regulations may include (but are not limited to) Title 29 CFR 1910 and 1926, and Title 40 CFR 260-268. It is recommended that an hazardous materials storage, closure and management plan be prepared by the entity responsible for closure and decommissioning of the existing facility operations.

The proposed removal of siding and roofing could also have potentially significant impacts on worker health and safety, as these items may contain asbestos and/or lead-based paint. Compliance with state and federal regulations requires an AHERA-style asbestos survey be conducted prior to any renovation or demolition. It is anticipated that if asbestos and/or lead-based paint is present in the structure, that applicable state and federal regulations would be adhered to during demolition activities, in which case impacts on worker health and safety would be reduced to less than significant.

Machinery and vehicles used during demolition and construction activities, such as graders, backhoes, loaders and haul trucks, will use diesel and other fuel. This could have potentially significant impacts on environmental quality if BMPs with respect to spill prevention and protection, as required by a NPDES permit, are not utilized. It is anticipated that such BMPs would be utilized during construction, and that impacts would be less than significant.

As there is potential for existing soil and groundwater contamination at Action Alternative 2, construction activities for the proposed action at this site could result in exposure of workers to contaminated soils or groundwater, or release of contaminants or contaminated sediments if appropriate regulations, precautions and processes, such as required by OSHA in Title 29 CFR 1910 and Title 29 CFR 1926, are not followed. It is anticipated that such regulations would be followed, and that impacts would be less than significant.

Operation of the AOC facility at Action Alternative 1 would include maintenance and fueling activities, which pose a risk of accidental spills or leaks. Hazardous materials would be stored and used on the site, similar to the existing operations at the existing AOC facility at MacDill AFB described above in **Section 3.16.2**. Once

constructed and operational, the majority of the site would be paved and impervious. It is anticipated that NOAA would establish its own Generator ID with the USEPA for management of its hazardous wastes, and would manage its hazardous wastes in accordance with applicable federal, state, and local regulations. As such, the use of hazardous materials at the site would have negligible adverse environmental impacts.

Proposed Action Alternative 2 could result in minor impacts in relating to hazardous materials and hazardous wastes, if the mitigation measures outlined in **Section 3.16.4** below, or equivalent measures, are not implemented.

No-Action Alternative

The No-Action Alternative assumes that NOAA would continue to operate their AOC program at their current location at MacDill Airport, and would continue to manage hazardous materials and wastes as they currently do. No impacts relating to hazardous materials would occur under the No-Action Alternative.

3.16.4 Mitigation Measures

Action Alternative 1: Lakeland-Linder Regional Airport

The following mitigation measures are recommended in relation to hazardous materials and waste for Action Alternative 1 at LAL. It is assumed that effects relating to hazardous materials would be negligible, provided that the following measures, or equivalent actions, are undertaken:

- NOAA shall ensure that the lease agreement includes conditions requiring that the owner prepare the existing building in a manner consistent with all applicable federal, state and local laws pertaining to hazardous materials handling, storage, transportation and disposal, including (but not limited to) relevant laws pertaining to asbestos and lead-based paint.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The following mitigation measures are recommended in relation to hazardous materials and waste for Action Alternative 2 at PIE. It is assumed that effects relating to hazardous materials would be negligible, provided that the following measures, or equivalent actions, are undertaken:

- NOAA shall ensure that the lease agreement includes conditions requiring that the owner prepare the existing building in a manner consistent with all applicable federal, state and local laws pertaining to hazardous materials handling, storage, transportation and disposal, including (but not limited to) relevant laws pertaining to asbestos and lead-based paint.

- NOAA shall ensure that the lease agreement with PIE includes conditions requiring that the existing owner is responsible for remediating existing soil and groundwater contamination at the site to required federal, state, and/or local standards.

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3.17 ENVIRONMENTAL JUSTICE AND SOCIOECONOMIC RESOURCES

3.17.1 Regulatory Setting

Executive Order (EO) 12898, known as the Federal Environmental Justice Policy, requires all federal agencies to identify and develop strategies to address *disproportionately high and adverse human health and environmental impacts of its programs, policies and activities on minority and low-income populations in the United States and its territories* to the greatest extent practicable and permitted by law (Federal Register, 1994). Federal agencies are required to make all documents, notices and hearings related to human health and the environment accessible to the public. The EO is intended to promote nondiscrimination in federal programs, as well as provide minorities and low income populations with access to information and public participation.

Impact assessment criteria associated with environmental justice require that a significant adverse impact will not be predominately borne by a minority population and/or a low-income population, and that the impact not be appreciably more severe or greater in magnitude than would be suffered by the non-minority population and/or non-low-income population. This section evaluates regional and census tract population and economic data from the U.S. Census Bureau to assess affected populations and the potential for disproportionately high adverse effects to occur.

3.17.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

The proposed action implemented at LAL would occur in the City of Lakeland, Polk County, Florida. Lakeland is located in central Florida, approximately halfway between Orlando and Tampa. The city of Lakeland's population in 2014 was estimated at 99,942 and Polk County was estimated at 617,323 (US Census Bureau, 2014). **Table 3,17-1** summarizes the change in population for the City, County and U.S. Census Tract 141.05, the tract associated with this Action Alternative, between 2000 and 2014. The County and City's population percent increase was approximately 27% from 2000 to 2014 (US Census Bureau, 2000; 2014).

Table 3.17-1: Population Change by Geographic Area: Action Alternative 1

Geographic Area	2000	2010 (% Change 2000-2010)	2014 (% Change 2010-2014)	(% Change 2000–2014)
US Census Tract 141.05	N/A	6,861 (N/A)	7,154	(N/A)
City of Lakeland	78,452	97,422 (24.2)	99,942 (2.6)	(27.4)
County of Polk	486,924	602,095 (23.7)	617,323 (2.5)	(26.8)

Sources: U.S. Census Bureau, 2000, 2010, 2014
N/A = not available

Individuals identified as white are the predominate race in the geographic area, making up approximately 79% of the population in 2014 (US Census Bureau, 2014). Between the years 2000 to 2014, minorities represented in the City, County and Census Tract 141.05 have remained static. **Table 3.17-2** illustrates the racial profile of County, City, and U.S. Census Tract 141.05 from 2000 to 2014.

Table 3.17-2: Racial Profile by Geographic Area: Action Alternative 1

	2000			2010			2014		
Race	**Census tract 141.05**	**Lakeland City**	**Polk County**	**Census tract 141.05**	**Lakeland City**	**Polk County**	**Census tract 141.05**	**Lakeland City**	**Polk County**
White	Unavailable	73.5%	79.6%	85.6%	71.0%	75.2%	84.5%	74.0%	78.8%
Minority	Unavailable	26.5%	20.4%	14.4%	29%	24.8%	15.5%	26.0%	21.2%

Sources: U.S. Census Bureau, 2000; 2010; 2014.

The percentage of the population living in poverty is determined by the family size and earning less than a certain amount of income, which is adjusted each year by the U.S. Census Bureau based on inflation and other factors. Poverty thresholds are the dollar amount used by the U.S. Census Bureau to determine a family's poverty status. The following values represent the National poverty thresholds since 2000 for a family of four, two adults and two dependents (U.S. Census Bureau, 2000; 2010; 2014):

- 2000 – $ 13,874
- 2010 – $ 22,314
- 2014 – $ 24,008

Table 3.17-3 illustrates the mean income for a household, families living under poverty status, the percentage of the population over 16 years of age in the labor force and the percentage of the population that is unemployed in the City, County, and Census Tract. The mean income of a household in 2014 in the County of Polk was $56,063, which was slightly higher than the City and Census Tract (U.S. Census Bureau, 2014). The County also experienced a slightly lower percentage of families living in poverty compared to the Census Tract and the City.

Table 3.17-3: Socioeconomic Factors by Geographic Area: Action Alternative 1

Geographic Area	Mean Household Income	Poverty Status for all families	Labor Force	Unemployment
U.S. Census Tract 141.05	$52,864	14.2%	50.7%	3.4%
Lakeland City	$54,073	14.4%	54.6%	7.1%
Polk County	$56,063	13.8%	55.9%	6.7%

Source: U.S. Census Bureau, 2014.

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Action Alternative 2: St. Petersburg-Clearwater International Airport

The proposed action implemented at St. Petersburg–Clearwater International Airport would occur in Unincorporated Pinellas County, Florida, adjacent the city of St. Petersburg. The site is on the Florida's gulf coast, located approximately 25 miles Southwest of Tampa, Florida, and 23 miles from NOAA's current AOC base of operations. The City and County experienced a population decrease between 2000 and 2010. However, there was a slight population increase between 2010 and 2014 of 1.0% for the City and 0.7% for the County (U.S. Census Bureau, 2010; 2014). This population growth rate is far lower than the state average rate of 21.14% and the national average rate of 11.61% (U.S. Census Bureau, 2010; 2014). **Table 3.17-4** illustrates Population Change by Geographic area from 2000 to 2014.

Table 3.17-4: Population Change by Geographic Area: Action Alternative 2

Geographic Area	2000	2010 (% Change 2000-2010)	2014 (% Change 2010-2014)	(% Change 2000–2014)
US Census Tract 245.09	N/A	3,688 (N/A)	3,235 (-12.3%)	(N/A)
City of St. Petersburg	248,232	245,715 (-1.01)	248,429 (1.0%)	(0.1%)
Pinellas County	921,482	918,263 (-0.4)	925,030 (0.7)	(0.39%)

Source: U.S. Census Bureau, 2000; 2010; 2014.
N/A = not available

Individuals identified as white are the predominate race in the geographic area, making up approximately 76% of the population in the City and County in 2014 (U.S. Census Bureau, 2014). However, between the years 2000 to 2014, minorities represented in the City, County and Census Tract have grown. The Census Tract experienced the most growth in minorities between these years from 8.8% to 16.7%. The minority population in the City of St. Petersburg was higher at 31.1% than that of Pinellas County at 17.1% in 2014 (U.S. Census Bureau, 2010 and 2014). **Table 3.17-5** illustrates the racial profile of County, City, and U.S. Census Tract from 2000 to 2014.

Table 3.17-5: Racial Profile by Geographic Area: Action Alternative 2

	2000			2010			2014		
	Census tract 245.09	City of St. Petersburg	Pinellas County	Census tract 245.09	City of St. Petersburg	Pinellas County	Census tract 245.09	City of St. Petersburg	Pinellas County
Race									
White	N/A	71.4%	85.9%	91.2%	69.3%	83.8%	83.3%	68.9%	82.9%
Minority	N/A	28.6%	14.1%	8.8%	30.7%	16.6%	16.7%	31.1%	17.1%

Source: U.S. Census Bureau, 2000; 2010; 2014.
N/A = not available

The mean annual income of a household was $64,335 and $64,834 in the City and County, respectively. In comparison, the Census Tract income was notably higher at $95,550 (U.S. Census Bureau, 2014). **Table 3.17-6**, below, illustrates the mean income for a household, families living under poverty status, the percentage of the population over age 16 in the labor force and the percentage of the population that is unemployed in the City, County, and Census Tract in 2014.

Table 3.17-6: Socioeconomic Factors by Geographic Area: Action Alternative 2

Geographic Area	Mean Household Income	Poverty Status for all families	Labor Force	Unemployment
U.S. Census Tract 245.09	$95,550	3.3%	75.9%	3.8%
City of St. Petersburg	$64,335	11.9%	64.5%	6.5%
Pinellas County	$64,834	9.7%	59.0%	5.7%

Source: U.S. Census Bureau, 2014.

No-Action Alternative

The No-Action Alternative assumes that NOAA's AOC and its fleet of aircraft operations will remain at its current location, MacDill AFB, in Tampa Florida. The No-Action Alternative assumes no substantive change occurs in the current socio-economic environment at MacDill AFB.

3.17.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

The proposed Action Alternative 1 would have negligible socioeconomic effects. Existing conditions in housing, incomes and poverty rates would most likely remain unchanged due to the proposed action. Some short-term economic benefits to the communities in or near Lakeland may be experienced, as improvements to the existing hangar facilities would require a small number of workers related to construction and evaluation activities and a long-term benefit due to AOC staff that may relocate to this area. A net increase in noise and air emissions from proposed aircraft operations would result from NOAA's AOC relocation. However, these effects are not expected to be substantial based on the analysis of these topics in other sections of this EA.

No minority or low-income populations are present that would be adversely affected. There would be no effects from proposed Action Alternative 1 with respect to environmental justice.

Action Alternative 2: St. Petersburg-Clearwater International Airport

The proposed Action Alternative 2 would have negligible socioeconomic effects. Existing conditions in housing, incomes and poverty rates would most likely remain unchanged. Short-term economic benefit to communities in St. Petersburg would be experienced, as improvements to the existing hangar facilities would require a small number of workers related to construction and evaluation activities.

No minority or low-income populations are present that would be adversely affected. There would be no effects from proposed Action Alternative 1 with respect to environmental justice.

No-Action Alternative

Under No-Action Alternative, NOAA's AOC program would remain at current location, MacDill AFB, in Tampa Florida. No effects to environmental justice or socioeconomic resources would result.

3.17.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to environmental justice and socioeconomics.

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3.18 CLIMATE AND GREENHOUSE GAS EMISSIONS

3.18.1 Regulatory Setting

The USEPA is the federal agency responsible for implementing national programs related to Greenhouse Gas (GHG) emissions and climate change under the federal Clean Air Act (CAA) and Clean Air Act Amendments (CAAA). The Supreme Court of the U.S. ruled on April 2, 2007, that CO_2 is an air pollutant as defined under the CAA, and that USEPA has the authority to regulate emissions of GHGs. In December 2009, the USEPA Administrator signed a final action under Section 202(a) of the CAA, which identifies six GHGs that constitute a threat to public health and welfare. In light of this, USEPA developed standards and regulations to limit the emissions of GHGs from new motor vehicles and for specific stationary sources, as well as a renewable fuel standard program.

U.S. Environmental Protection Agency "Endangerment" and "Cause or Contribute" Findings

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA which applies to the federal government's ability to regulate GHG emissions:

- *Endangerment Finding:* The current and projected concentrations of the six key GHGs—CO_2, methane, nitrous oxide, HFCs, PFCs, and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations.

- *Cause or Contribute Finding:* The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

On August 15, 2016, the USEPA published the final rule which finalizes CAA finding that GHG emissions from certain classes of aircraft endanger human health and welfare (USGPO, 2016).

Mandatory GHG Reporting Rule

On September 22, 2009, the USEPA issued the Mandatory GHG Reporting Rule, which requires reporting of GHG data and other relevant information from fossil fuel and industrial GHG suppliers, vehicle and engine manufacturers, and all facilities that would emit 25,000 Metric Tons or more of CO_2e per year. Facility owners are required to submit an annual report with detailed calculations of facility GHG emissions on March 31 for emissions from the previous calendar year. The Reporting Rule also mandates recordkeeping and administrative requirements to enable USEPA to verify the annual GHG emissions reports.

Council on Environmental Quality Guidance

On August 2, 2016, the Council on Environmental Quality published final guidance that supersedes the draft GHG and climate change guidance released by CEQ in December 2014. The final guidance applies to all proposed Federal agency actions, including land and resource management actions. This guidance explains that agencies should consider both the potential effects of a proposed action on climate change, as indicated by its estimated GHG emissions, and the implications of climate change for the environmental effects of a proposed action (CEQ, 2016). The guidance encourages agencies to draw from their experience and expertise to determine the appropriate level (broad, programmatic or project- or site-specific) and type (quantitative or qualitative) of analysis required to comply with NEPA. The guidance recommends that agencies quantify a proposed agency

action's projected direct and indirect GHG emissions, taking into account available data and GHG quantification tools that are suitable for the proposed agency action.

3.18.2 Affected Environment

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. GHG emissions re-radiate long-wave radiation back to the earth causing the retention of additional energy (heat) at and near the surface. This effect has the potential to adversely affect the local and regional environment because such emissions contribute, on a cumulative basis, to global climate change and associated effects (i.e., changes in rainfall patterns, sea level rise, and erosion rates). Since no single project is large enough to result in a measurable increase in global concentrations of GHG emissions, the global warming impacts of a project are considered on a cumulative basis. However, global GHG can lead to climate change which has effects on local areas.

St. Petersburg and Lakeland have humid subtropical climates, with mild weather during winters and hot weather during summers. High temperatures average about 90 degrees Fahrenheit (°F) throughout the year. High heat indices are not uncommon for the summer months in and around the Tampa area. Rainfall averages around 50 inches annually, with the wettest months being June through September. According to the United States Global Change Research Programs, 2014 National Climate Assessment the effects of climate change to the southeast region of the U.S. includes seal level rise threats, increasing temperatures, and decreased water availability.

Hurricane season in Florida extends from June through November; however, the frequency of hurricanes in the Gulf of Mexico is greatest during the months of August, September, and October. An estimated 75 percent of all damage from annual hurricanes is due to tidal flooding. According to the Intergovernmental Panel on Climate Change (IPCC), extreme precipitation events over most of the mid-latitude land mases and over wet tropical regions would very likely become more intense and more frequent by the end of this century, as global mean surface temperature increases (IPCC, 2013). According to the IPCC, the rate of sea-level rise since the mid-19th century has been larger than the mean rate during the previous two millennia. Over the period 1901 to 2010, global mean sea level rose by 7.48 inches. In addition, global mean seal level is expected to continue to rise during the 21st century. The IPCC reports that the rate of sea-level rise would very likely exceed that observed during 1971 to 2010 0.0787 inch, per year due to increased ocean warming and increased loss of mass from glaciers and ice sheets (IPCC, 2013).

Action Alternative 1: Lakeland-Linder Regional Airport

Since one effect of climate change is sea level rise, the location of LAL with regard to floodplains is relevant to climate change. The project location for Action Alternative 1 is generally away from a coastal region and in an area with generally level terrain with stormwater runoff infrastructure that allows adequate drainage within the airport. As described above in **Section 3.9.1**, the pending FIRM effective December 2016 indicates the 1%-chance floodplain is not present within Action Alternative 1 at LAL.

Action Alternative 2: St. Petersburg-Clearwater International Airport

As mentioned above, location within a floodplain is relevant to climate change due to increased threats of sea level rise and precipitation events. The project location for Action Alternative 2 is adjacent to Old Tampa Bay, a

tidally influenced embayment. The hangar proposed for modification to support NOAA operations would have an estimated elevation of 6.5 feet MSL. The hangar is within the 100-year floodplain, which is predicted to reach 9 feet MSL, as discussed above in **Section 3.9.1**.

No-Action Alternative

Under the No-Action Alterative, existing OMAO AOC operations at MacDill AFB located in an area above the 100-year floodplain and at an elevation of 14 feet MSL and abutting Old Tampa Bay would not result in adverse effects from GHG emissions from sea level rise based on the extent of existing NOAA uses at Hangar 5 and adjacent areas.

3.18.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

Operational GHG emissions at LAL will increase due to proposed Action Alternative 1; however, emissions at MacDill AFB would decrease due to the AOC fleet operations no longer being based there. Therefore, there would be no net increase in GHG emissions associated with the proposed Action Alternative 1. However, emissions from short-term use of construction equipment will generate minimal GHG emissions. There would be no measureable net increase or decrease of GHG emissions resulting from the continuation of AOC aircraft, vehicles, or ground service equipment operations, as these activities are not expected to change under any of the alternatives considered. For the purpose of this evaluation, it is reasonable to conclude that GHG emissions levels associated with the temporary construction activities are so low as to be considered inconsequential. No further analysis is warranted.

No adverse effects due to GHG emissions from the proposed Action Alternative 1 are anticipated and no further analysis is warranted. Note the project area is not in an area likely to be subject to adverse effects from climate change; however, a comprehensive regional assessment of drainage runoff capacity has not been prepared within the scope of this project.

Action Alternative 2: St. Petersburg-Clearwater International Airport

Operational GHG emissions at PIE will increase due to proposed Action Alternative 2; however, emissions at MacDill AFB would decrease due to the AOC fleet operations no longer being based there. Therefore, there would be no net increase in GHG emissions associated with the proposed Action Alternative 2. However, emissions from short-term construction will generate minimal GHG emissions. For the purpose of this evaluation, it is reasonable to conclude that GHG emissions levels associated with the temporary construction activities are so low as to be considered inconsequential. No further analysis is warranted.

No adverse effects due to GHG emissions from proposed Action Alternative 2 are anticipated and no further analysis is warranted. Note the selection of proposed Action Alternative 2 would be subject to climate change associated with sea level rise due to its location within a floodplain and adjacency to tidally influenced water body.

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No-Action Alternative

There would be no increase in GHG emissions due to construction or operational emissions. No adverse effects due to GHG emissions from the No-Action Alternative are anticipated and no further analysis is warranted.

3.18.4 Mitigation Measures

No mitigation measures are required. Because the Proposed Action at any of the Action Alternatives will not result in a net change in direct GHG emissions due to operational activates, and construction emissions will be negligible and temporary, no impact mitigations measures are warranted. Significance thresholds do not apply to the proposed action at each of the Action Alternatives and under the No-Action Alternative.

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3.19 CUMULATIVE EFFECTS

3.19.1 Regulatory Setting

A cumulative impact must be evaluated under the NEPA and is defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR, Part 1508.7).

Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects, and any resulting environmental degradation, that is the focus of this cumulative impact analysis. While impacts can be differentiated by direct, indirect, and cumulative, the concept of cumulative impacts takes into account all foreseeable disturbances, since cumulative impacts result in the compounding of the effects of all actions over time. Thus, the cumulative impacts of an action can be viewed as the total effects on a resource, ecosystem, or human community no matter what entity (federal, non-federal, or private) is taking the action.

This analysis of cumulative effects summarizes the evaluation of resources, ecosystems, and human communities identified and discussed in this EA relative to other foreseeable future actions. It considers the proximity and timing of other concurrent or future foreseeable actions and the potential for exacerbated effects or conflicts that would result in a potentially significant impact. The evaluation considers resources subject to potential cumulative effects and refers back, if necessary, to information presented in the earlier discussion of project-only effects.

In general, the proposed action is not reliant upon or connected to other actions, nor is it relied upon for the occurrence of other actions. For each of the subject areas analyzed, the contribution of the proposed action is not expected to be considerable provided that appropriate mitigation measures are implemented.

3.19.2 Affected Environment

Action Alternative 1: Lakeland-Linder Regional Airport

Recent, on-going and foreseeable future projects have been identified at and near LAL. Recently completed projects include an Air Traffic Control Tower in March 2016**,** the rehabilitation of aprons south of Airside Center and construct of a permanent Aircraft Rescue and Fire Fighting facility in 2015**,** and rehabilitation of a Runway 9/27 intersection in 2014. Other recently completed projects at LAL include various taxiway, ramp and apron rehabilitation projects, the Flight Safety Facility renovation, and a new turf runway (Runway 9R-27L).

One existing project is the Aircraft MRO Complex consisting of a hangar, air cargo facility and site infrastructure (FAA, 2016b). A new tenant secured by LAL to occupy a hangar at the airport will be the U.S. Customs Service.

Foreseeable future projects include runway extensions, the rehabilitation, extension or realignment of Taxiways E, D, and G, hangar roof replacement at Airside Center, construction of two new hangar facilities, and prospective terminal expansion and unspecified Intermodal opportunities planned for cargo and rail (FAA, 2016b).

Action Alternative 2: St. Petersburg-Clearwater International Airport

Recent, on-going and foreseeable future projects have been identified at and near PIE. This encompasses North St. Petersburg near to Largo and Clearwater. At PIE, passenger level is projected to increase from 1.7 million in FY 2017 to 2.1 million in FY 2022 (Tampa Bay Business Journal, 2016). A $9.8 million project to add 12,000-square feet to commercial aircraft gates and an additional 350 new seats to the waiting area is underway. The project is expected to be completed in summer 2017 (83 Degrees, 2016).

Recent and foreseeable future regional projects in the Gateway Development Area of north St. Petersburg were published in April 2016. These include commercial industrial development such as a 45,000 remodel underway for manufacturing and office space approximately ¾ mile southwest of Action Alternative 2. Beyond one mile is a proposed 240,000 square foot Federal Express distribution center to the southwest and two residential multi-unit developments to the southeast (Gateway Development Council, 2016).

No-Action Alternative

Under the No-Action Alternative, no substantive development would occur at or near the current area of the OMAO AOC operations at MacDill AFB.

3.19.3 Environmental Consequences

Action Alternative 1: Lakeland-Linder Regional Airport

Several taxiway improvements and apron expansions are expected to have minor environmental impacts as they would generally be constructed in developed areas on the airfield. Other projects, such as the Runway 9 extension, may have moderate environmental impacts associated with wetlands, aircraft noise, and land acquisition (FAA, 2016b).

The potential impacts of each project alternative are discussed in previous sections of this EA. Adverse impacts from the Proposed Action on each of these resources would either be no impact or a negligible, temporary, localized impact associated with construction. If an alternative would have no or negligible direct or indirect impacts to a resource, that alternative is assumed to not contribute to any cumulative impact on that resource, and is not discussed further in this section. Because Action Alternative 1 would have no or negligible impacts to the environmental resource topics analyzed, there would be no cumulatively significant contribution to impacts on these resources.

Action Alternative 2: St. Petersburg-Clearwater International Airport

None of the past, on-going and reasonably foreseeable projects at and nearest to PIE are not within close proximity and would not contribute to a cumulative impact to resources analyzed in this EA.

The potential impacts of each project alternative are discussed in previous sections of this EA. Adverse impacts from the Proposed Action on each of these resources would either be no impact or a negligible, temporary, localized impact associated with construction. If an alternative would have no or negligible direct or indirect impacts to a resource, that alternative is assumed to not contribute to any cumulative impact on that resource, and

is not discussed further in this section. Because Action Alternative 2 would have an impact to floodplain resources, it is further considered in this section.

NOAA data from the St. Petersburg tide gauge station since the 1940s indicate, on average, sea level has been rising in Tampa Bay at a rate of about an inch per decade (Tampa Bay Estuary Program, 2016). Lowland areas at and adjacent to PIE are more susceptible to the potential impacts of sea-level rise and severe storm events that would occur with global climate change. PIE and coastal areas in Pinellas County have been studied and mapped for the potential extent of protection likely required due to anticipated sea level rise. The area at and adjacent to PIE was given a protection scenario of "almost certain" (Tampa Bay Regional Planning Council, 2006). Most of the land is already developed (except for certain barrier islands). Both sea-level rise and storm events of increased severity could accelerate erosion at the project site and pose an increased risk for flooding.

The Proposed Action at PIE would result in a minor displacement of the floodplain; however, it would also contribute to protection of the hangar facility from these potential flood risks. The minor effects would not contribute to adverse cumulative impacts related to climate change over the life of the project (approximately 50 years). There would be no cumulative effects resulting from proposed Action Alternative 2.

No-Action Alternative

The Proposed Action at PIE would contribute to protection of the hangar facility from these potential risks, and therefore would not contribute to adverse cumulative impacts related to climate change.

Although military lands with uncertain protection are recommended to be given a "reasonably likely" protection scenario, MacDill AFB has such strategic importance nationally as well as for the Tampa Bay region it has been designated as "protection almost certain". Some undeveloped portions of MacDill AFB may not be protected but this cannot be anticipated at this time and therefore the entire area is shown as "almost certain" (Tampa Bay Regional Planning Council, 2006).

3.19.4 Mitigation Measures

No mitigation measures are required for either of the two Action Alternatives, or for the No-Action Alternative in relation to cumulative impacts. The proposed action at PIE includes measures to protect the hangar and attached structural areas with a floodwater barrier system.

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4.0 SUMMARY OF ANTICIPATED IMPACTS AND SUGGESTED MITIGATION

No anticipated environmental impacts were identified in relation to the No-Action Alternative. **Table 4-1** summarizes the anticipated environmental impacts by environmental resource identified for each action alternative and the mitigation measures required to support a finding of no significant impact

Table 4-1: Summary of Anticipated Environmental Impacts and Suggested Mitigation

Resource	Anticipated Impact	Suggested Mitigation
Land Use	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Geological Resources	**Action Alternative 1:** Negligible. **Action Alternative 2:** Negligible.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Air Quality	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are required. Standard BMPs to reduce construction related emissions can be applied. **Action Alternative 2:** No mitigation measures are required. Standard BMPs to reduce construction related emissions can be applied.
Water Resources	**Action Alternative 1:** Negligible. **Action Alternative 2:** Negligible.	**Action Alternative 1:** Mitigation for the water quantity and quality impacts would consist of designing a proposed project drainage system that meets State water quality standards as set forth in Chapter 17-3, FAC, by apply its recommended BMPs and/or those published in the Florida Airports Stormwater Best Management Practices Manual. **Action Alternative 2:** Mitigation for the water quantity and quality impacts would consist of designing a proposed project drainage system that meets State water quality standards as set forth in Chapter 17-3, FAC, and its recommended BMPs.
Recreational Resources	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.

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Table 4-1: Summary of Anticipated Environmental Impacts and Suggested Mitigation

Resource	Anticipated Impact	Suggested Mitigation
Cultural Resources	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Flora and Fauna	**Action Alternative 1:** Minor effect.	**Action Alternative 1:** NOAA shall ensure that the commitments listed below will be followed by the site owner and the construction-related contractors implementing the proposed action at this site: 1. The USFWS' Standard Protection Measures for the eastern indigo snake shall be adhered to during construction of the proposed action; 2. Prior to construction, appropriate habitats at the site shall be surveyed for gopher tortoise. If any burrows are located within the site, the site owner shall inform NOAA and coordinate with the FWC to secure any permits needed to relocate gopher tortoises prior to construction.
	Action Alternative 2: Minor effect.	**Action Alternative 2:** NOAA shall ensure that the commitments listed below will be followed by the site owner and the construction-related contractors implementing the proposed action at this site: The USFWS' Standard Protection Measures for the eastern indigo snake shall be adhered to during construction of the proposed action;
Wetlands	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Floodplains	**Action Alternative 1:** No effect. **Action Alternative 2:** Negligible effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Coastal Zone Management	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Agricultural Resources	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.

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Table 4-1: Summary of Anticipated Environmental Impacts and Suggested Mitigation

Resource	Anticipated Impact	Suggested Mitigation
Noise	**Action Alternative 1:** Negligible effect. **Action Alternative 2:** Negligible effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Transportation	**Action Alternative 1:** Negligible effect. **Action Alternative 2:** Negligible effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Utilities and Service Systems	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Visual and Aesthetic Resources	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Hazardous Materials	**Action Alternative 1:** Minor effect. **Action Alternative 2:** Minor effect.	**Action Alternative 1:** NOAA shall ensure that the lease agreement includes conditions requiring that the owner prepare the existing building in a manner consistent with all applicable federal, state and local laws pertaining to hazardous materials handling, storage, transportation and disposal, including (but not limited to) relevant laws pertaining to asbestos and lead-based paint. **Action Alternative 2:** NOAA shall ensure that the lease agreement includes conditions requiring that: 1. The owner prepare the existing building in a manner consistent with all applicable federal, state and local laws pertaining to hazardous materials handling, storage, transportation and disposal, including (but not limited to) relevant laws pertaining to asbestos and lead-based paint. 2. The owner is responsible for remediating existing soil and groundwater contamination at the site to required federal, state, and/or local standards.
Environmental Justice and Socioeconomics	**Action Alternative 1:** Negligible effect. **Action Alternative 2:** Negligible effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.

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Table 4-1: Summary of Anticipated Environmental Impacts and Suggested Mitigation

Resource	Anticipated Impact	Suggested Mitigation
Climate Change and Greenhouse Gas Emissions	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.
Cumulative	**Action Alternative 1:** No effect. **Action Alternative 2:** No effect.	**Action Alternative 1:** No mitigation measures are recommended. **Action Alternative 2:** No mitigation measures are recommended.

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5.0 FINDINGS

The findings of this Environmental Assessment (EA) indicate that no significant effects would result from implementation of the proposed action at either of the two Action Alternatives assuming standard and recommended impact mitigation measures listed in **Section 4: Summary of Anticipated Impacts and Suggested Mitigation** are implemented. Based on this analysis, a Finding of No Significant Impact (FONSI) is warranted.

Before a final decision to issue a FONSI or any other action, NOAA will complete a 30-day public comment period for agencies and the public to review and provide comments on the content and findings in the Draft EA. The comment period is expected to commence of September 22, 2016, and end on October 22, 2016.

Notice of the public comment period and how to submit comments will appear in a general circulation newspaper(s) serving the greater metropolitan Tampa Bay region, including Lakeland, Florida.

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6.0 PREPARERS

John A. Chamberlain
Mr. Chamberlain is a certified Senior Project Manager for AECOM's San Jose office and served as the Project Manager. Mr. Chamberlain has an MS in Environmental Studies with over 30 years of experience in National Environmental Policy Act analysis and preparing marine and terrestrial site-selection feasibility studies.

Otto Alvarez
Mr. Alvarez is a Senior GIS Specialist for AECOM's Oakland office and served as a GIS Specialist. He holds a PhD in Environmental Systems. Mr. Alvarez has conducted research on ecological niche modeling and specializes in ArcGIS.

Dan Botto
Mr. Botto is an Airport Environmental Planner for AECOM's Tampa office and served as the Noise Resource Specialist. He has worked exclusively on aviation-related projects with special emphasis on noise studies involving use of FAA's Integrated Noise Model (INM). Mr. Botto has a BS in Aviation Business Administration and has over 20 years of experience.

Terry Cartwright
Mr. Cartwright is a Senior Ecologist for AECOM's Tampa office and served as the Flora, Fauna and Wetlands Resource Specialist. He has a BS in Resource Conservation – Wetlands Ecology and 20 years of experience in wetlands ecology, biology, and environmental permitting. Mr. Cartwright is an FAA-qualified Airport Wildlife Hazard Biologist.

Dale Edgar
Mr. Edgar is a GIS Specialist for AECOM's Tampa office and served as a GIS Specialist. He holds a BA in Geography and has over 14 years of experience in GIS. Mr. Edgar has led the development of interactive mapping websites for AECOM's airport clients.

Jeremy Hollins
Mr. Hollins is an Architectural Historian for AECOM's San Diego office and served as the Cultural Resource Specialist. He holds an MA in History, has over 13 years of experience, and specializes in architectural evaluation. Mr. Hollins is a US Secretary of Interior professional qualified architectural historian.

Sarah Luce
Ms. Luce is an Environmental Analyst for AECOM's San Jose office and served as a Project Planner. She is in process of earning an MA in Applied Anthropology, with over four years of experience and specializes in environmental analysis and logistics.

Caitlin Miller
Ms. Miller is an Environmental Scientist and Planner for AECOM's Santa Maria office and served as the Greenhouse Gas Specialist. She has an MA in City and Regional Planning and has over six years of experience.

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Monica Mello
Ms. Mello is an Architectural Historian for AECOM's San Diego office and served as a Cultural Resource Specialist. She has an MA in Applied History and has five years of experience. Ms. Mello specializes in historical and archival research.

Stephanie Osby
Ms. Osby is an Environmental Planner for AECOM's San Jose office and served as a Project Planner. She has recent experience working for a congressional office evaluating public and environmental laws and regulations. Ms. Osby holds an MS in Environmental Management with six years of experience and specializes in agricultural and ecological evaluation.

Russell Pratt
Mr. Pratt is a Civil-Water Resource Engineer for AECOM's Tampa office and served as the Water Resources and Floodplains Specialist. He is experienced in the analysis and design for stormwater drainage systems for a wide variety of project types in rural and urban locations, and wetland mitigation. Mr. Pratt is a registered professional engineer in the state of Florida and has degrees in both construction and civil engineering, with over 27 years of experience.

Emma Rawnsley
Ms. Rawnsley is an Environmental Planner for AECOM's San Jose office and served as the Geology and Hazardous Materials Resource Specialist. She has an MS in Geology, over ten years of experience, and specializes in environmental impact analysis, environmental site assessments, and environmental, health and safety compliance.

Paul Sanford
Mr. Sanford is an Airport Planner for AECOM's Tampa office and served as the Air Quality Specialist. He holds a BS in Environmental Science and Policy and has two years of experience.

Michael Thompson
Mr. Thompson is a Planning Manager for AECOM's Tampa office and served as the Aviation Specialist. He holds a MBA and has over 35 years of experience. Mr. Thompson specializes in airport and heliport master planning, site selection, land use planning, airfield planning, airport layout plans, airport simulation and noise studies.

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Appendix A: Summary of Listed Species Impact Determinations

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APPENDIX A
SUMMARY OF LISTED SPECIES IMPACT DETERMINATIONS

Federal Listed Species (FWS)	Status	Suitable Habitat in Project Area		Impact Determination	
		LAL	PIE	LAL	PIE
Eastern indigo snake (*Drymarchon couperi*)	Threatened	Yes	Yes	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect
American alligator (*Alligator mississippiensis*)	Threatened-SA	No	No	No effect	No effect
Audubon's crested caracara (*Caracara cheriway)*	Threatened	No	No	No effect	No effect
Highlands tiger beetle (*Cicindelidia highlandensis*)	Candidate	No	No	No effect	No effect
Piping plover (*Charadrius melodus*)	Threatened	No	No	No effect	No effect
Red knot (*Calidris canutus rufa*)	Threatened	No	No	No effect	No effect
Florida bonneted bat *(Eumops floridanus)*	Endangered	No	No	No effect	No effect
Red-cockaded woodpecker (*Picoides borealis*)	Endangered	No	No	No effect	No effect
Wood stork (*Mycteria americana*)	Threatened	No	No	No effect	No effect
Everglade snail kite (*Rostrhamus sociabilis plumeus)*	Endangered	No	No	No effect	No effect
Florida grasshopper sparrow *(Ammodramus savannarum floridanus)*	Endangered	No	No	No effect	No effect
Florida scrub jay (*Aphelocoma coerulescens*)	Threatened	No	No	No effect	No effect
Ivory-billed woodpecker (*Campephilus principalis*)	Endangered	No	No	No effect	No effect
Sand skink *(Plestiodon reynoldsi*) & Blue-tailed mole skink *(P. egregious lividus)*	Threatened	No	No	No effect	No effect
Florida panther *(Puma concolor coryi)*	Endangered	No	No	No effect	No effect

State Listed Species (FWC)	Status	Suitable Habitat in Project Area		Impact Determination	
		LAL	PIE	LAL	PIE
Southeastern American kestrel (*Falco sparverius paulus*)	Threatened	Yes	Yes	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect
Gopher tortoise (*Gopherus polyphemus*)	Threatened	Yes	No	May affect, but not likely to adversely affect	No effect
Black skimmer (*Rynchops niger*)	Species of Special Concern	No	No	No effect	No effect
Florida mouse (*Podomys floridanus*)	Species of Special Concern	No	No	No effect	No effect
Florida pine snake (*Pituophis melanoleucus mugitis*)	Species of Special Concern	No	No	No effect	No effect
Gopher frog (*Rana capito*)	Species of Special Concern	No	No	No effect	No effect
Short-tailed snake (*Lampropeltis extenuate*)	Threatened	No	No	No effect	No effect
Limpkin (*Aramus guarauna*)	Species of Special Concern	No	No	No effect	No effect
Little blue heron (*Egretta caerulea*)	Species of Special Concern	No	No	No effect	No effect
Pine snake (*Pituophis melanoleucus*)	Species of Special Concern	No	No	No effect	No effect
Suwannee cooter (*Pseudemys concinna suwanniensis*)	Species of Special Concern	No	No	No effect	No effect
Snowy egret (*Egretta thula*)	Species of Special Concern	No	No	No effect	No effect
Tricolored heron (*Egretta tricolor*)	Species of Special Concern	No	No	No effect	No effect
Roseate spoonbill *(Platalea ajaja)*	Species of Special Concern	No	No	No effect	No effect
White ibis (*Eudocimus albus*)	Species of Special Concern	No	No	No effect	No effect
Florida burrowing owl (*Athene cunicularia floridana*)	Species of Special Concern	No	No	No effect	No effect
Florida sandhill crane (*Grus canadensis pratensis*)	Threatened	No	No	No effect	No effect
Least tern (*Sterna antillarum*)	Threatened	No	No	No effect	No effect
Sherman's fox squirrel (*Sciurus niger shermani*)	Species of Special Concern	No	No	No effect	No effect

Appendix B: Noise Modeling Data

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Federal Aviation Administration

Office of Environment and Energy
http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aem_model/

Area Equivalent Method (AEM) Version 7.0d

Airport Name/Code:	LAL

DNL (dBA)	Baseline Area (Sq. Mi.)	Alternative Area (Sq. Mi.)	Change in Area (Sq. Mi.)
65	0.5	0.5	7.8%

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
707				
720				
737				
707120				
707320				
717200				
727100				
727200	0.01	0.00	0.01	0.00
737300				
737400				
737500				
737700	0.01	0.00	0.01	0.00
737800	0.05		0.05	
747100				
747200				
747400				
7478				
757300				
767300	1.01	0.11	1.01	0.11
767400				
777200				
777300				
7773ER				
7878R				
1900D				
707QN				
720B				
727D15				
727D17				
727EM1				

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
727EM2				
727Q15				
727Q7				
727Q9				
727QF				
7373B2				
737D17				
737N17				
737N9				
737QN				
74710Q				
74720A				
74720B				
747SP				
757PW				
757RR				
767CF6				
767JT9				
A300B4-203				
A300-622R				
A310-304				
A319-131				
A320-211				
A320-232	0.06	0.00	0.06	0.00
A321-232				
A330-301				
A330-343				
A340-211				
A340-642				
A380-841				
A380-861				
A7D				
BAC111				
BAE146				
BAE300				
BEC58P	20.74	1.32	20.74	1.32
C130	1.71		2.42	0.20
C130E				
CIT3	0.28	0.02	0.28	0.02
CL600	1.53	0.10	1.53	0.10
CL601				
CNA172	69.40	4.43	69.40	4.43
CNA206	2.20	0.14	2.20	0.14
CNA182	1.76	0.11	1.76	0.11
CNA182FLT				
CNA208	2.23	0.14	2.23	0.14
CNA20T				
CNA441	2.76	0.18	2.98	0.25

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
CNA500	1.97	0.13	1.97	0.13
CNA510				
CNA525C				
CNA55B				
CNA560E				
CNA560U				
CNA560XL	1.79	0.11	1.79	0.11
CNA680				
CNA750	0.69	0.04	0.69	0.04
COMJET				
COMSEP				
CONCRD				
CRJ9-ER				
CRJ9-LR				
CVR580				
DC1010				
DC1030				
DC1040				
DC3				
DC6				
DC820				
DC850				
DC860				
DC870				
DC8QN				
DC910				
DC930				
DC93LW				
DC950				
DC95HW				
DC9Q7				
DC9Q9				
DHC-2FLT				
DHC6	0.35	0.02	1.58	0.24
DHC6QP				
DHC7				
DHC8				
DHC830				
DO228	1.58	0.10	1.93	0.22
DO328				
ECLIPSE500				
EMB120				
EMB145				
EMB14L				
EMB170				
EMB175				
EMB190				
EMB195				

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
F10062	0.14	0.01	0.14	0.01
F10065				
F28MK2				
F28MK4				
F4C				
FAL20				
GASEPF	2.64	0.17	2.64	0.17
GASEPV	21.70	1.38	21.70	1.38
GII				
GIIB				
GIV			0.16	0.03
GV	0.30	0.02	0.30	0.02
HS748A				
IA1125				
KC135				
KC135B				
KC135R				
L1011				
L10115				
L188				
LEAR25	0.06		0.06	
LEAR35	7.20	0.46	7.20	0.46
MD11GE				
MD11PW				
MD81				
MD82				
MD83	0.02	0.00	0.02	0.00
MD9025				
MD9028				
MU3001				
PA28	4.84	0.31	4.84	0.31
PA30				
PA31	1.32	0.08	1.32	0.08
PA42	0.43	0.03	0.43	0.03
SABR80				
SD330	0.22	0.01	0.22	0.01
SF340				
F16A				
F16GE				
F16PW0				
F16PW9				
Total LTOs	148.97	9.43	151.63	10.08

Federal Aviation Administration

Office of Environment and Energy
http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aem_model/

Area Equivalent Method (AEM) Version 7.0d

Airport Name/Code:	PIE

DNL (dBA)	Baseline Area (Sq. Mi.)	Alternative Area (Sq. Mi.)	Change in Area (Sq. Mi.)
65	0.9	1.0	4.1%

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
707				
720				
737				
707120				
707320				
717200				
727100				
727200				
737300				
737400	0.01	0.00	0.01	0.00
737500				
737700	1.97	0.06	1.97	0.06
737800	0.22	0.01	0.22	0.01
747100				
747200				
747400				
7478				
757300				
767300				
767400				
777200				
777300				
7773ER				
7878R				
1900D	0.01	0.00	0.01	0.00
707QN				
720B				
727D15				
727D17				
727EM1				

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
727EM2				
727Q15				
727Q7				
727Q9				
727QF				
7373B2				
737D17				
737N17				
737N9				
737QN				
74710Q				
74720A				
74720B				
747SP				
757PW	0.59	0.02	0.59	0.02
757RR				
767CF6	0.08	0.00	0.08	0.00
767JT9				
A300B4-203				
A300-622R	0.78	0.02	0.78	0.02
A310-304				
A319-131				
A320-211	5.44	0.17	5.44	0.17
A320-232				
A321-232				
A330-301				
A330-343				
A340-211				
A340-642				
A380-841				
A380-861				
A7D				
BAC111				
BAE146				
BAE300				
BEC58P	16.39	0.52	16.39	0.52
C130	12.70	0.40	13.41	0.60
C130E				
CIT3	0.72	0.02	0.72	0.02
CL600	4.52	0.14	4.52	0.14
CL601	2.50	0.08	2.50	0.08
CNA172	5.87	0.18	5.87	0.18
CNA206	1.22	0.04	1.22	0.04
CNA182	2.48	0.08	2.48	0.08
CNA182FLT				
CNA208	3.52	0.11	3.52	0.11
CNA20T				
CNA441	6.02	0.19	6.24	0.26

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
CNA500	4.79	0.15	4.79	0.15
CNA510				
CNA525C				
CNA55B	4.28	0.13	4.28	0.13
CNA560E				
CNA560U				
CNA560XL				
CNA680	0.37	0.01	0.37	0.01
CNA750	0.43	0.01	0.43	0.01
COMJET				
COMSEP				
CONCRD				
CRJ9-ER				
CRJ9-LR				
CVR580				
DC1010				
DC1030				
DC1040				
DC3				
DC6				
DC820				
DC850				
DC860				
DC870				
DC8QN				
DC910				
DC930				
DC93LW				
DC950				
DC95HW				
DC9Q7				
DC9Q9				
DHC-2FLT				
DHC6	1.35	0.04	2.59	0.26
DHC6QP				
DHC7				
DHC8				
DHC830				
DO228	0.23	0.01	0.57	0.12
DO328				
ECLIPSE500	1.98	0.06	1.98	0.06
EMB120				
EMB145	0.72	0.02	0.72	0.02
EMB14L				
EMB170				
EMB175				
EMB190	0.03	0.00	0.03	0.00
EMB195				

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
F10062	0.79	0.02	0.79	0.02
F10065				
F28MK2				
F28MK4				
F4C				
FAL20				
GASEPF	1.99	0.06	1.99	0.06
GASEPV	13.16	0.41	13.16	0.41
GII	0.01	0.00	0.01	0.00
GIIB	0.18	0.01	0.18	0.01
GIV	1.18	0.04	1.34	0.07
GV	0.72	0.02	0.72	0.02
HS748A				
IA1125	2.23	0.07	2.23	0.07
KC135				
KC135B				
KC135R				
L1011				
L10115				
L188				
LEAR25	0.05	0.00	0.05	0.00
LEAR35	8.22	0.26	8.22	0.26
MD11GE				
MD11PW				
MD81	0.03	0.00	0.03	0.00
MD82				
MD83	8.44	0.27	8.44	0.27
MD9025				
MD9028				
MU3001	2.65	0.08	2.65	0.08
PA28	9.28	0.29	9.28	0.29
PA30	0.25	0.01	0.25	0.01
PA31	3.03	0.10	3.03	0.10
PA42				
SABR80				
SD330	1.24	0.04	1.24	0.04
SF340	6.14	0.19	6.14	0.19
F16A				
F16GE				
F16PW0				
F16PW9				
Total LTOs	138.83	4.36	141.50	5.00

NOAA Aircraft Operations Center
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MacDill AFB, FL 33621

NEPA Environmental Assessment
Data Request

LCDR Nate Kahn
Flight Operations
Section Chief

FY2005

Sortie Information	N42RF	N43RF	N45RF	N46RF	N48RF	N49RF	N56RF	N57RF	N68RF	Total
KMCF Takeoffs	73	97	21	0	58	125	N/A	42	N/A	416
KMCF Landings	73	97	21	0	58	125	N/A	42	N/A	416
KMCF Closed Patterns	46	52	17	0	37	46	N/A	33	N/A	231
KMCF Day Sorties	19	38	4	0	17	47	N/A	9	N/A	134
KMCF Night Sorties	8	7	0	0	4	29	N/A	6	N/A	54
KMCF Total Sorties	27	45	4	0	21	76	N/A	15	N/A	188
Engine Use Information										
APU/GSE Cycles	35	58	N/A	N/A	N/A	98	N/A	N/A	N/A	191
APU/GSE Hours	70	117	N/A	N/A	N/A	147	N/A	N/A	N/A	334
Engine Run HRS (Full Pwr)	4	4	1	0	9	0	N/A	9	N/A	27
Engine Run HRS (partial Pwr)	4	4	0	0	2	0	N/A	2	N/A	12
Engine Run HRS (Idle Pwr)	0	0	0	0	0	0	N/A	0	N/A	0
Compressor Rinses	0	0	0	0	9	0	N/A	9	N/A	18

Notes:

(1) N56RF and N68RF were not part of the AOC fleet during this year.

(2) N46RF was deployed away from AOC for the duration of this fiscal year.

(3) Only N42RF, N43RF, and N49RF are equipped with APUs or utilize associated GSE.

(4) Due to the difficult nature of operating in KMCF airspace, a large portion of training events are conducted at other local fields. If AOC were based out of a different location, it can safely be assumed the number of Closed Pattern events would increase significantly.

(5) Idle Pwr Engine Runs are conducted in conjunction with normal aircraft starts.

FY 2015

Sortie Information	N42RF	N43RF	N45RF	N46RF	N48RF	N49RF	N56RF	N57RF	N68RF	Total
KMCF Takeoffs	9	108	45	56	110	47	9	83	47	514
KMCF Landings	8	109	45	57	111	47	9	84	47	517
KMCF Closed Patterns	0	75	33	41	72	21	0	60	35	337
KMCF Day Sorties	9	34	12	16	39	26	9	23	12	180
KMCF Night Sorties	0	0	0	0	0	0	0	0	0	0
KMCF Total Sorties	9	34	12	16	39	26	9	23	12	180
Engine Use Information										
APU/GSE Cycles	12	44	N/A	N/A	N/A	33	N/A	N/A	N/A	89
APU/GSE Hours	24	88	N/A	N/A	N/A	50	N/A	N/A	N/A	162
Engine Run HRS (Full Pwr)	4	4	2	9	9	0	9	9	0	46
Engine Run HRS (partial Pwr)	4	4	0	2	4	0	1	2	0	17
Engine Run HRS (Idle Pwr)	0	0	0	0	0	0	0	0	0	0
Compressor Rinses	0	0	0	9	9	0	9	9	0	36

Notes:

(1) Only N42RF, N43RF, and N49RF are equipped with APUs or utilize associated GSE.

(2) N45RF, N49RF, and N68RF maintenance and associated engine runs are conducted by contracted maintenance away from AOC.

(3) Due to the difficult nature of operating in KMCF airspace, a large portion of training events are conducted at other local fields. If AOC were based out of a different location, it can safely be assumed the number of Closed Pattern events would increase significantly.

(4) Idle Pwr Engine Runs are conducted in conjunction with normal aircraft starts.

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NEPA Environmental Assessment
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Flight Operations
Section Chief

FY 2020 Forecast (Existing Fleet)

Sortie Information	N42RF	N43RF	N45RF	N46RF	N48RF	N49RF	N56RF	N57RF	N68RF	Total
Takeoffs	100	100	60	56	110	50	10	70	48	604
Landings	100	100	60	56	110	50	10	70	48	604
Closed Patterns	65	65	48	40	70	20	0	52	36	396
Day Sorties	35	35	12	16	40	30	10	18	12	208
Night Sorties	10	10	4	4	4	6	0	4	4	46
Total Sorties	45	45	16	20	44	36	10	22	16	254
Engine Use Information										
APU/GSE Cycles	58	58	N/A	N/A	N/A	46	N/A	N/A	N/A	162
APU/GSE Hours	117	117	N/A	N/A	N/A	71	N/A	N/A	N/A	305
Engine Run HRS (Full Pwr)	4	4	3	10	10	0	10	10	0	51
Engine Run HRS (partial Pwr)	4	4	0	3	5	0	2	3	0	21
Engine Run HRS (Idle Pwr)	0	0	0	0	0	0	0	0	0	0
Compressor Rinses	0	0	0	10	10	0	10	10	0	40

Notes:

(1) Only N42RF, N43RF, and N49RF are equipped with APUs or utilize associated GSE.

(2) N45RF, N49RF, and N68RF maintenance and associated engine runs are conducted by contracted maintenance away from AOC.

(3) Due to the difficult nature of operating in KMCF airspace, a large portion of training events are conducted at other local fields. If AOC were based out of a different location, it can safely be assumed the number of Closed Pattern events would increase significantly.

(4) Idle Pwr Engine Runs are conducted in conjunction with normal aircraft starts.

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NEPA Environmental Assessment
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Section Chief

FY 2020 Forecast (with Additional Aircraft)

Sortie Information	N42RF	N43RF	N45RF	N46RF	N48RF	N49RF	N56RF	N57RF	NEW	N68RF	NEW	Total
Takeoffs	100	100	60	56	110	50	10	70	70	48	48	722
Landings	100	100	60	56	110	50	10	70	70	48	48	722
Closed Patterns	65	65	48	40	70	20	0	52	52	36	36	484
Day Sorties	35	35	12	16	40	30	10	18	18	12	12	238
Night Sorties	10	10	4	4	4	6	0	4	4	4	4	54
Total Sorties	45	45	16	20	44	36	10	22	22	16	16	292
Engine Use Information												
APU/GSE Cycles	58	58	N/A	N/A	N/A	46	N/A	N/A	N/A	N/A	N/A	162
APU/GSE Hours	117	117	N/A	N/A	N/A	71	N/A	N/A	N/A	N/A	N/A	305
Eng RUN Full Pwr	4	4	3	10	10	0	10	10	10	0	0	61
Eng Run Partial Pwr	4	4	0	3	5	0	2	3	3	0	0	24
Eng Run Idle Pwr	0	0	0	0	0	0	0	0	0	0	0	0
Compressor Rinses	0	0	0	10	10	0	10	10	10	0	0	50

Notes:

(1) Only N42RF, N43RF, and N49RF are equipped with APUs or utilize associated GSE.

(2) N45RF, N49RF, N68RFand N69RF maintenance and associated engine runs are conducted by contracted maintenance away from AOC.

(3) Due to the difficult nature of operating in KMCF airspace, a large portion of training events are conducted at other local fields. If AOC were based out of a different location, it can safely be assumed the number of Closed Pattern events would increase significantly.

(4) Idle Pwr Engine Runs are conducted in conjunction with normal aircraft starts.

(5) NEW=Additional Twin Otter and King Air