Final Environmental Assessment for Phase II Air Cargo Facility Development

Volume 1: Environmental Assessment

Lakeland Linder International Airport
Polk County, Florida

October 2021

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Department of Transportation

Federal Aviation Administration
Orlando Airports District Office
Orlando, Florida

FINDING OF NO SIGNIFICANT IMPACT
AND
RECORD OF DECISION

Environmental Assessment for
Phase II Air Cargo Facility Development
at
Lakeland Linder International Airport

Lakeland, Florida

October 29, 2021

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BACKGROUND: The Lakeland Linder International Airport is owned and operated by the City of Lakeland (City or Airport Sponsor). The airport supports a wide range of general aviation services and activities. LAL has an operating certificate under Title 14 Code of Federal Regulation (CFR) Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*, which certifies the airport to allow scheduled air carrier service. The airport's tenants provide a wide range of aviation services including on-demand commercial service, air cargo handling, flight training, aircraft maintenance and repair, government and military aviation contracting, and aircraft sales. The Central Florida Aerospace Academy and Polk State College's Aerospace Center also provide aviation education and flight training programs at the airport. The airport also hosts the second largest annual airshow in the world (Sun 'n Fun Aerospace Expo).

The airport serves as a major freight hub in Polk County. Recent development of an air cargo facility at the airport included construction of an air cargo handling facility and associated office building, air cargo apron, and support buildings. This facility, which became operational in 2020, substantially increased the airport's air cargo handling capacity. Based on the needs of the air cargo services provider operating the new air cargo facility, the Airport Sponsor requested Federal Aviation Administration (FAA) approval for the expansion of the air cargo facility and related improvements, which is referred to in the EA as the Proposed Development Project. With respect to the overall Proposed Development Project, the FAA identified the specific project components that require Federal action.[1] These project components, which are collectively referred to in the EA as "FAA Proposed Action", are subject to review under the *National Environmental Policy Act of 1969* (NEPA). Accordingly, an Environmental Assessment (EA) was prepared by the Airport Sponsor for the FAA's use in complying with the requirements of NEPA, Council on Environmental Quality (CEQ) regulations implementing NEPA,[2] FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*. Several Proposed Development Project components do not require Federal action; however, they depend on the portions of the project requiring FAA approval in order to be constructed or operated as planned.

This Finding of No Significant Impact (FONSI) and Record of Decision (ROD) provides the FAA's environmental determination, approval, and conditions for agency actions necessary to implement the FAA Proposed Action. This FONSI/ROD is based on

[1] Section 163 of the *FAA Reauthorization Act of 2018* limits the FAA's statutory authority over certain airport development projects. In this case, FAA reviewed the proposed airfield development projects and determined which project elements are subject to FAA's decision and approval authority, including approval of the Airport Layout Plan under 49 U.S.C. § 47107(a)(16).

[2] The Council on Environmental Quality (CEQ) amended its regulations implementing NEPA, 40 Code of Federal Regulations (CFR) Parts 1500-1508, effective September 14, 2020. Under section 1506.13 of the amended regulations, agencies have discretion to apply the amended regulations to NEPA processes that were begun before September 14, 2020. The FAA initiated its NEPA process for this action in February 2020 and has decided to apply the regulations in effect at that time.

information and analyses contained in the *Environmental Assessment for Phase II Air Cargo Facility Development at Lakeland Linder International Airport*, which is incorporated by reference, and other related documents available to the agency. The ROD is issued in accordance with CEQ regulations at 40 CFR §1505.2.

PROPOSED DEVELOPMENT PROJECT: The Airport Sponsor's Proposed Development Project is an expansion of the air cargo facility (Phase I) at LAL that became operational in 2020.[3] Based on the needs described in the EA, the proposed air cargo facility expansion would take place on a 73-acre site in the northwest quadrant of LAL, immediately west of and adjacent to the new air cargo facility. The major components of the Proposed Development Project[4] are listed below:

- Construct up to 392,200-square foot (SF) expansion of the existing (Phase I) sort facility and office building;
- Construct up to approximately 54,200 square yards (SY) of paved truck court to accommodate up to 370 additional truck bays;
- Construct up to approximately 42,600 SY of paved vehicle parking lot to accommodate up to 1,120 additional parking spaces;
- Construct up to approximately 29,300 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions;
- Construct up to approximately 17,600 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;
- Extend Taxiway A approximately 1,081 linear feet to the west to provide access to proposed new section of aircraft parking apron;
- Construct a new airport access road to access the Phase II facilities from Drane Field Road;
- Site clearing, grading, and landscaping;
- Modifications to the Airport's stormwater management system, including construction of swales and retention ponds;
- Installation of security fencing, gates and security checkpoints;
- Installation of airfield lighting and signage

[3] The initial air cargo facility, which became operational in 2020, is referred to in the Environmental Assessment as the "Phase I" air cargo facility. The FAA was informed of the air cargo operator's need for expanded "Phase II" facilities during construction of the initial air cargo facility.

[4] The size of several Proposed Development Project components described in the Draft EA were slightly adjusted in the Final EA based on current site plan information provided by the air cargo operator. The air cargo operator also proposed a new project element – extending parallel Taxiway A to the proposed new section of aircraft parking apron. These relatively minor changes and amendments did not result in any significant impacts nor did it affect the findings of the EA.

- Install new aboveground fuel storage tanks and fuel farm (approximately 850,000 gallons additional capacity)

Construction activities associated with the Proposed Development Project are anticipated to be completed in 2022.

Similar to the existing (Phase I) air cargo facility, the expanded facility will accommodate Boeing 767 and 737 cargo aircraft. As shown in Table 2.1-1 in the EA, the expanded facility is expected to generate eight additional daily aircraft arrivals and eight additional daily departures (16 total additional operations) during the facility's first year of operation (2022). When added to the anticipated number of cargo aircraft operations generated by the existing facility in 2022, the expanded air cargo facility would generate 36 aircraft operations per day. In 2027, the expanded facility would generate 12 additional daily arrivals and 12 departures (24 total daily operations). When added to the expected number of cargo aircraft operations generated by the existing facility 2027, the expanded air cargo facility would generate 44 aircraft operations per day. The Proposed Development Project is expected to generate approximately 664 additional car and truck trips per day (peak daily) in 2022 and 1,242 additional car and truck trips per day (peak daily) in 2027.

FAA PROPOSED ACTION: The Airport Sponsor's Proposed Development Project described above and in Section 1.2 of the EA represents the Airport Sponsor's intended development at the airport, as proposed by the air cargo services provider. However, only four project components are subject to FAA approval. These components comprise the FAA Proposed Action. The FAA Proposed Action project components are described in Table 1.4-1 in the EA and are listed below. Table 1.4-1 also describes the federal authority being exercised for each component of the FAA Proposed Action.

- Construct up to approximately 29,300 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions;
- Construct up to approximately 17,600 SY of pavement for aircraft GSE staging and periodic aircraft parking;
- Extend Taxiway A approximately 1,081 linear feet to the west to provide access to proposed new section of aircraft parking apron; and
- Modifications to the Airport's stormwater management system, including construction of swales and retention ponds

REQUESTED FEDERAL ACTION: The requested Federal actions associated with the proposed development projects include the following:

1. Unconditional approval of the ALP depicting the FAA Proposed Action.

PURPOSE AND NEED: Chapter 2 of the EA describes the purpose of and need for the Proposed Development Project, as identified by the Airport Sponsor. Although the existing (Phase I) air cargo facility meets current market demand, the air cargo services provider identified the need to expand the existing air cargo facility to meet anticipated increases in market demand and expand its regional hub capabilities at LAL. This includes the need for additional space for air cargo processing and sorting, delivery truck parking and staging, cargo aircraft parking, and aircraft support areas. The City, in meeting its objectives for operating the airport, seeks to provide a suitable site for lease to the air cargo tenant for the expansion.

ALTERNATIVES: Chapter 3 of the EA evaluated a range of reasonable alternatives to the Proposed Development Project, including the No-Action Alternative.[5] Due to the operational needs of an air cargo facility, alternate sites would need suitable airfield access and space for aircraft parking, and suitable landside access and space for employee vehicles and cargo trucks. The evaluation's three-level screening process considered: 1) whether an alternative would meet the purpose of and need for the Proposed Development Project, 2) operational and constructability factors, and 3) environmental resource impacts. The analysis also evaluated alternate site for the proposed additional fuel storages tank (fuel farm). The analysis of alternate Air Cargo Facility Sites is summarized below.

Air Cargo Expansion Alternative 1 – This alternate site is located in the southwest quadrant of the airport, south of Runway 9 and approximately 1,300 feet south of the existing air cargo facility. This site would require acquisition of approximately 40 acres of private property and construction of a new access road from Medulla Road.

Alternative 1 would meet the purpose of and need for the Proposed Development Project by providing space for developing the necessary additional apron, building, and landside parking. However, it would not be co-located with the existing air cargo facility. Operating separate facilities has the potential to cause delays and impose substantial operational inefficiencies. In addition, the need to acquire 40 acres of private property would affect three residential parcels. This alternative would also conflict with the City's plan to reserve land at LAL for a future parallel runway. Finally, this alternative would displace the location of the annual Sun n' Fun Aerospace Expo. For these reasons, Alternative 1 was eliminated from further consideration in the EA.

Air Cargo Expansion Alternative 2 – This alternate site is located in the southeast quadrant of the airport, south of Runway 27 and approximately 7,700 feet southeast of the existing air cargo facility. This site would require acquisition of approximately 41 acres of private property and constructing a new access road from Medulla Road. Similar to Alternative 1, Alternative 2 would require operating separate facilities, which has the potential to cause

[5] The EA evaluated alternatives to the entire Proposed Development Project, which includes project components for which FAA does not have any approval authority. However, FAA will only render environmental determinations and issue a decision on those four components identified in the EA that comprise the FAA Proposed Action.

delays and impose substantial operational inefficiencies. Property acquisition would affect 10 light industrial parcels and 16 residential parcels. It would also be located within the Runway Protection Zone of the future proposed parallel Runway 10-28, which would conflict with the Airport Master Plan's objectives. For these reasons, Alternative 2 was eliminated from further consideration in the EA.

Air Cargo Expansion Alternative 3 – This alternate site is located in the northwest quadrant of the airport, east Kidron Road, north of Taxiway A. Landside facility access would be developed via Kidron Road and Drane Field Road (via new access road). Although the site is adjacent to the existing air cargo facility, it would require acquisition of approximately 34 acres of private property. This alternative would require demolition of 15 light industrial buildings and relocation of industrial and manufacturing businesses. For these reasons, Alternative 3 was eliminated from further consideration in the EA.

Air Cargo Expansion Alternative 4 – This alternate site is located in the northeast quadrant of the airport, north of Runway 27 and Runway 23, approximately 7,000 feet east of the existing air cargo facility. This site would require constructing a new access road from Drane Field Road and removing portions of an airport service road along on the eastern boundary of the airport. This alternative would require the acquisition of approximately seven acres of private property and the relocation of industrial and manufacturing businesses. Alternative 4 would also interfere with the continued operation of Runway 5-23 and would likely affect navigable airspace at the airport (e.g., cause penetrations to the airport's approach and departure airspace surfaces). For these reasons, Alternative 4 was eliminated from further consideration in the EA.

Analysis of Alternate Fuel Storage Sites – Of the alternate sites considered for additional aviation fuel storage, the Proposed Development Project site provides the best operational efficiency due to its location and minimal construction-related environmental impacts. The alternate sites considered would require greater travel distances between the fuel farm and proposed cargo aircraft parking apron. Alternative Site 3 would also involve modification/removal of existing fuel farm facilities near the flight school on the southeast ramp, which could involve additional environmental permitting requirements. For these reasons, each of the alternate fuel storage sites were eliminated from further consideration in the EA.

No-Action Alternative – Under the No-Action Alternative, the Proposed Development Project would not be implemented. The City would continue to maintain and operate the airport in its present state and the environmental effects associated with the Proposed Development Project would not occur. Although the No-Action Alternative would not satisfy the purpose of and need for the Proposed Development Project, it was retained for further detailed evaluation in the EA in accordance with NEPA and CEQ regulations.

ENVIRONMENTAL IMPACTS: The No-Action Alternative and FAA Proposed Action were evaluated for potential impacts on the environmental resource categories identified in FAA Order 1050.1F. The Affected Environment and Environmental Consequences sections of the EA (Chapters 4 and 5, respectively) provide a description of existing conditions and an analysis of direct, indirect, and cumulative impacts.

As noted previously, the environmental effects of the FAA Proposed Action and the dependent project components caused by the Federal action were examined in the EA. Under the No-Action Alternative, the FAA Proposed Action and the overall Proposed Development Project would not be implemented and the environmental impacts associated with the proposed air cargo facility (Phase II) expansion project would not occur. The existing (Phase I) facility would continue to operate and provide air cargo handling services at LAL.

The Proposed Development Project would increase the size and capacity of the existing air cargo facility. The EA provides an estimate of the anticipated additional aircraft operations, vehicle/truck trips, and employees at LAL, if the Proposed Development Project was implemented. When compared to the No-Action Alternative, the Proposed Development Project would generate an additional 5,840 aircraft operations at LAL in 2022 and 8,760 additional operations in 2027. Similarly, the project would increase vehicle and truck trips at the airport by 242,360 in 2022 and 453,330 in 2027. The project is anticipated to employ 280 additional people at the air cargo facility in 2022 and 566 additional people in 2027 (non-peak).

Air Quality – Polk County is located in an attainment area for all National Ambient Air Quality Standards (NAAQS) for criteria air pollutants and is not subject to the requirements of a State Implementation Plan. Construction activities would generate temporary air emissions at LAL from equipment and vehicle exhaust, as well as, fugitive dust during excavation and grading activities. The EA notes typical measures that can be taken by contractors to reduce air emissions during construction.

Operational emissions associated with the No-Action Alternative and the Proposed Development Project were computed for study years 2022 and 2027 using FAA's Aviation Environmental Design Tool (AEDT). The emissions inventories in Section 5.2.1.2 of the EA compares emissions from the No-Action Alternative and Proposed Development Project. The additional aircraft operations and vehicle/truck trips associated with the Proposed Development Project would increase air emissions at LAL; however, the increase in emissions would not constitute a significant impact.

The Proposed Development Project occurs in an area classified as Attainment for all criteria air pollutants, and there is no State Implementation Plain or numeric significance threshold applicable to the Proposed Development Project. However, the EA demonstrated that even if stringent de minimis thresholds were in place for Polk County, the anticipated air emissions would not exceed thresholds indicating a significant impact.

Biological Resources (including Fish, Wildlife, and Plants) – The Proposed Development Project would affect 52.4 acres of upland habitat, 23.9 acres of wetlands, and 0.3 acre of other surface waters (ditches/ponds). These impacts will require the City to obtain necessary State and Federal permits and provide compensatory mitigation. To offset the loss of wetland functions and habitat values, the City will provide compensatory mitigation through the purchase of credits from the Alafia River Mitigation Bank. The mitigation bank is located within the same watershed as the airport.

The types of plant communities and habitats affected are common to the area and region. The project would have a modest potential to displace common species of wildlife. As described below, the Proposed Development Project may affect one federal-listed wildlife species and would not affect state-listed wildlife species.

Federally-Listed Species – A Biological Assessment was prepared to evaluate the effects of the Proposed Development Project on protected species and critical habitat. In accordance with the Section 7 of the *Endangered Species Act*, FAA consulted with the U.S. Fish and Wildlife Service (USFWS) on the effects of the Proposed Development Project on federally-listed species. Based on the research and information in the Biological Assessment and consultation with the USFWS, the FAA determined the project "may affect, but is not likely to adversely affect" the wood stork (*Mycteria americana*). It was also determined the project would have "no effect" on the Eastern indigo snake (*Drymarchon corais couperi*), Florida scrub jay (*Aphelocoma coerulescens*), Audubon's crested caracara (*Polyborus plancus audubonii*), and Everglade snail kite (*Rostrhamus sociabilis plumbeus*). No designated critical habitat would be affected.

State-Listed Species – No effects on state-listed plant and animal species are anticipated.

Conservation Measures – As identified through Agency consultation and the City's preparation of permit applications, the City will be required to implement certain conservation measures. These measures are discussed in Section 5.3.2 of the EA and are summarized below:

1. Prior to and during construction, the City will be required to implement USFWS Standard Protection Measures for the Eastern Indigo Snake.

2. Prior to construction, the City will purchase wetland mitigation credits to offset wetland functions and values used by the wood stork, Everglade snail kite, little blue heron, tricolored heron, and Florida sandhill crane.

3. Prior to construction, the City will re-survey appropriate habitats within the development area to confirm the presence or absence of crested caracara nests, gopher tortoise burrows, Florida burrowing owl burrows, southeastern American kestrel nests, least tern nests, and Florida sandhill crane nests. If any of these species or their nests are present, the City will coordinate with the USFWS and/or FWC to minimize impacts and obtain any necessary permits or approvals.

4. Prior to construction, the City will be required to resurvey appropriate habitats within 1,000 feet of the Proposed Development Project area for bald eagle nests. If bald eagle nests are present, the City will coordinate with appropriate Federal and State agencies to obtain necessary approvals.

5. Contractors will be required to follow best management practices (BMPs) to prevent black bear incursions. This involves keeping construction sites clean with wildlife-resistant containers for refuse attractive to wildlife and frequently remove trash and use proper food storage on work sites.

Hazardous Wildlife Attractants – The FAA's Proposed Action includes modifications to the airport's stormwater drainage system, including the construction of new and modified stormwater drainage ditches and a detention pond. These improvements will be designed in accordance with FAA guidance to minimize wildlife attraction and use. In addition, the City will update its Wildlife Hazard Management Plan for LAL and continue to implement wildlife control measures. FAA notes that the removal of wetland habitat near an operating runway and the proposed off-site mitigation would help reduce hazardous wildlife attractants at the airport.

The EA provides an analysis of anticipated direct and indirect habitat conversion impacts and effects on common species of wildlife and protected species. Consultation with the US Fish and Wildlife Service, the FAA determined the FAA Proposed Action and overall Proposed Development Project would not jeopardize the continued existence of any federally-listed species and would not result in the destruction or adverse modification of federally-designated critical habitat. Mitigation and conservation measures would be implemented to offset impacts on habitat and protected species. Based on the review of the FAA's Proposed Action and overall Proposed Development Project, FAA finds the proposed expansion of the air cargo facility would not have a significant impact on biological resources, including natural habitats, common species of wildlife, and protected species.

Climate – Temporary greenhouse gas (GHG) emissions associated with the construction of the Proposed Development Project in 2022 are expected to be 13,483 metric tons of CO_2e. The increased aircraft operations and vehicle trips associated with the Proposed Development Project would result in an increase in GHG emissions at the airport. The analysis projected an increase of 12,236 metric tons of CO_2e in 2022 and 22,041 metric tons in 2027, when compared to the No-Action Alternative. A range of measures is available to the City and/or air cargo services provider to offset some of the operational GHG emissions generated by the Proposed Development Project. This may include increased use of sustainable aviation fuels, renewable energy, and electric-powered ground service equipment. The EA also notes the air cargo services provider's corporate policy that set a goal of achieving a company-wide net zero carbon status by 2040.

The FAA has not established significance thresholds for aviation GHG emissions, nor has the agency identified specific factors to consider in making a significance determination

for GHG emissions. Consequently, there is currently no quantitative or qualitative basis for comparison for the GHG emissions presented in the EA. Based on the analysis conducted for this EA, GHG emissions associated with the FAA Proposed Action and the overall Proposed Development Project not anticipated to have a significant effect on climate or climate change.

Coastal Resources – Polk County is located within a coastal zone and Federal actions must be consistent with the Florida Coastal Management Program (FCMP). The airport is not located within a designated Coastal Barrier Resources System (CBRS). The Draft EA was submitted to the Florida State Clearinghouse, which coordinates coastal consistency review among state agencies. Through this review, the state had no objection to the Proposed Development Project and found it to be consistent with the FCMP. However, the state's final consistency determination will be made during the project's environmental permitting process. Based on the analyses contained in the EA and the State of Florida's consistency review, the FAA Proposed Action and overall Proposed Development Project would not have a significant impact on coastal resources.

DOT Act, Section 4(f) Resources – The EA notes that publicly owned parks, recreation areas, historic sites, or wildlife and waterfowl refuge of national, state, or local significance would not be affected. Therefore, Section 4(f) resources were not carried forward for detailed analysis in the EA.

Farmlands – The FAA Proposed Action and overall Proposed Development Project would not affect any farmland or soils considered to be prime, unique, or of statewide or local importance. Therefore, farmlands were not carried forward for detailed analysis in the EA.

Hazardous Materials, Solid Waste, and Pollution Prevention – Environmental database searches revealed no known sites or areas with environmental concerns within the areas where construction would occur. No substantial concerns were identified with adjacent parcels. There are no National Priority List (NPL) sites located within 4.5 miles of the proposed development site. A temporary increase in the use of hazardous materials and waste generation would occur during construction. The operation of the expanded air cargo facility is expected to have minimal effect on hazardous waste generation, storage, or transport practices at the airport. However, the increase in flights, cargo, and employees would increase the amount of solid waste generation at LAL. The City provides waste recycling services. In addition, the EA notes that the air cargo services provider implements a number of recycling and solid waste reduction measures. Based on the analysis in the EA, and availability of recycling programs, no significant impacts related to hazardous materials, solid wastes, and pollution are anticipated.

Historical, Architectural, Archeological and Cultural Resources – A review of the Florida Master Site File and prior cultural resource surveys identified recorded historic, architectural, and cultural resources within the Area of Potential Effect (APE) defined for the overall Proposed Development Project. A Cultural Resource Assessment Survey (CRAS) did not identify any archaeological resources within areas subject to land clearing

or construction site disturbance. The historic architectural survey conducted for the CRAS identified eleven potentially historic structures within the portion of the APE subject to indirect effects (e.g., noise, air emissions, etc.). The resources were evaluated, and two residential resources were determined to be potentially eligible for listing in the National Register of Historic Places. The analysis found the indirect effects associated with the Proposed Development Project would have no adverse effect on these two resources.

Pursuant to Section 106 of the *National Historic Preservation Act*, consultation was initiated with the Florida State Historic Preservation Officer (SHPO) and five Native American Indian Tribes. Based on early coordination materials and the findings in the CRAS, the SHPO concurred with FAA's determination the proposed undertaking would have no effect on historic properties.

The Seminole Tribe of Florida and Muscogee (Creek) Nation confirmed that the proposed undertaking falls within their areas of interest and requested a copy of the EA for review. The Seminole Tribe of Florida responded that it has no objections or other comments regarding the Proposed Development Project, provided the Tribal Historic Preservation Office be notified if any archaeological, historical, or burial resources are inadvertently discovered during project implementation. The Muscogee (Creek) Nation concurred that there should be no effects to any known historic properties; however, due to the historic presence of Muscogee people in the project area, inadvertent discoveries of cultural resource may occur. The Muscogee (Creek) Nation requested that, should this happen, all work cease and the Nation and other appropriate agencies be notified immediately.

Based on the research and consultation conducted, the FAA Proposed Action and overall Proposed Development Project would not affect historic architectural, archaeological, and cultural resources.

Land Use – The Proposed Development Project would not conflict with existing or future land use plans and zoning ordinances. The Proposed Development Project would not cause significant off-airport impacts, divide or disrupt communities, or otherwise alter land use patterns or development near the Airport. Based on the analysis in the EA, the FAA Proposed Action and overall Proposed Development Project would not result in a significant impact on land use near the airport.

Natural Resources and Energy Supply – Construction of the FAA Proposed Action and other components of the overall Proposed Development Project would use common materials that are available locally. The operation of the expanded air cargo facility would increase the use of aviation fuel, electricity, natural gas, and potable water at LAL and the Proposed Development Project includes the construction of aboveground fuel tanks to store aviation fuel. It is expected the increased demand for fuel, energy, and natural resources would be provided through existing sources and infrastructure available at LAL. Based on the analysis in the EA, the FAA Proposed Action and overall Proposed Development Project would not have a significant impact on natural resource or energy supplies.

Noise and Noise-Compatible Land Use – Construction-related noise would be temporary and the effects would not be significant. The distance between the Proposed Development Project site and the nearest noise sensitive area is approximately 0.3 mile. Construction traffic would use designated haul routes that avoid residential areas.

As described in Section 2.1.2 and Section 5.1 of the EA, the FAA Proposed Action and overall Proposed Development Project would increase the number of Boeing 737 and Boeing 767 operations at LAL. When compared to the No-Action Alternative, the expanded air cargo facility is expected to generate 16 additional daily aircraft operations in 2022 and 24 additional daily operations in 2027. Similar to the operation of the existing (Phase I) air cargo facility, the additional aircraft operations generated by the expanded air cargo facility would occur during both daytime and nighttime hours. Using FAA's Aviation Environmental Design Tool (AEDT) model, a noise analysis was prepared to provide information on Existing Conditions and to evaluate noise impacts for the No-Action Alternative and the Proposed Development Project in 2022 and 2027.

When compared to the No-Action Alternative in 2022, the additional aircraft operations generated by the Proposed Development Project would increase the amount of noncompatible (residential) land use adjacent to LAL by 2.7 acres. This would involve all or portions of six individual parcels of land. Of the six residences located on the parcels, two would be located within the DNL 65 contour. The parcels and residences located within, or newly within, the 2022 DNL 65 contour would not experience an increase in aircraft noise of 1.5 dB or greater. In 2027, approximately 3.7 additional acres of noncompatible (residential) land use would be located within the DNL 65 contour, when compared to the No-Action Alternative. The number of land parcels within, or newly within, the DNL 65 contour would increase to seven. Of the seven residences located on the parcels, one additional residence would be located within the 2027 DNL 65 contour (total of three). The parcels and residences within, or newly within, the 2027 DNL 65 contour would not experience an increase of 1.5 dB or greater. Other noise sources associated with the Proposed Development Project, including traffic noise, would not generate substantial noise near noise sensitive areas.

In both study years, none of the residences located within, or newly within, the DNL 65 contour would experience a noise increase of DNL 1.5 dB or greater. Based on FAA's guidance for preparing NEPA impact evaluations, significant noise impacts would not occur if the FAA Proposed Action and the overall Proposed Development Project were implemented. Therefore, mitigation is not required for reducing the impact below the threshold indicating a significant impact.

No changes to airport operational conditions or existing flight procedures at LAL were proposed as part of the Proposed Development Project. However, the City has implemented a voluntary runway use program to help address community noise concerns associated with the operation of the existing air cargo facility. The City has also proposed to the FAA new or modified airspace procedures to address community noise concerns.

The FAA will review the proposed procedures. If the procedures are determined by FAA to be feasible, they would undergo additional analysis, including additional environmental review.

Socioeconomics, Environmental Justice, And Children's Environmental Health and Safety Risks – The FAA Proposed Action and overall Proposed Development Project would not affect public service demands and would not require the acquisition of land nor would it displace any residences or businesses. The expanded air cargo facility would increase local employment, but not result in any substantial shift in population or increase in local housing demand. The expanded air cargo facility would not affect any schools, daycare facilities, parks, or children's health clinics. Because the project would not have significant impacts, disproportionately high and adverse environmental effects on minority and low-income populations would not occur. Based on the analysis in the EA, the FAA Proposed Action and overall Proposed Development Project would not result in any significant socioeconomic, Environmental Justice, and children's health and safety risk impacts.

Surface Transportation – The Proposed Development Project would result in a temporary increase in local surface traffic volume during construction. The expanded air cargo facility, when operational, would further increase local surface traffic volumes. The increase would result from additional employee and delivery truck trips. Table 2.1-2 in the EA estimates approximately 664 additional daily trips generated by the Proposed Development Project in 2022 and 1,242 additional daily trips 2027.

A traffic analysis was prepared for the Proposed Development Project. The analysis evaluated Level of Service (LOS) at four roadway intersections near the air cargo facility. In 2022, the additional vehicle and truck trips generated by the Proposed Development Project would not change the LOS at three of the intersections. However, the intersection of Kidron Road and Drane Field Road would decrease from LOS C to E during morning and evening peaks. In 2027, three intersections would experience decreased LOS. Two intersection would have reduced, but acceptable LOS. However, the LOS at the intersection of Kidron Road and Drane Field Road would decrease from LOS D to F. LOS F is considered to be unacceptable.

Based on the traffic analysis prepared for the EA, as well as information from a 2019 major traffic study prepared for the initial construction and operation of the air cargo facility, mitigation was identified to maintain LOS at acceptable levels. Based on these studies, the EA identified mitigation measures for the Kidron Road and Drane Field Road intersection that would maintain acceptable LOS. The mitigation measure involves the construction of dedicated turn lanes). The EA also notes that the proposed turn lanes were recently constructed. Based on the analysis in the EA, the FAA Proposed Action and overall Proposed Development Project would not result in any significant surface traffic impacts.

Visual Effects Including Light Emissions – The proposed air cargo facility expansion and will be similar to existing structures at LAL and nearby properties developed for light industrial use. The project also includes the installation of exterior lighting at the building, parking lots, and aircraft parking apron. The new sections of taxiway and apron would also include pavement edge lighting. These types of lights area common to LAL and the surrounding area. The distance between the project site and the nearest residence is approximately 0.3 mile, and the line of sight is partially obscured by vegetation and other structures. While there would be a change in the visual landscape and light emissions, the change would not be substantial and would not cause annoyance or interfere with normal activities. Based on the analysis in the EA, the FAA Proposed Action and overall Proposed Development Project would not have any significant visual or lighting impacts.

Water Resources (including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

Wetlands – As described in Section 5.13.1 of the EA, the FAA Proposed Action and overall Proposed Development Project would result in approximately 25.2 acres of direct and secondary impacts to wetlands and other surface waters at LAL. This includes direct impacts to 23.9 acres of jurisdictional wetlands and 0.3 acre of other surface waters, as well as, indirect effects on one acre of wetlands. Measures to avoid wetland impacts are not available and measures to minimize impacts were considered. The Proposed Action's unavoidable wetland impacts require Federal and State permit authorization and mitigation.[6] The compensatory mitigation plan described in the EA (purchase of credits from a mitigation bank) would offset the loss of functional value of the affected wetlands. The EA also notes that the City has already reserved and/or purchased wetland credits from a local wetland mitigation bank. Based on the analysis in the EA, agency coordination conducted during the preparation of the EA, and the mitigation measures, wetland impacts would not exceed thresholds indicating a significant impact.

Floodplains – The FAA Proposed Action and overall Proposed Development Project would encroach on 28.4 acres of regulatory 100-year floodplains. An analysis of floodplain impacts and mitigation measures were conducted for the EA. Overall, it was determined that the airport's stormwater management system could be modified to provide compensatory storage of floodwater volumes displaced by the Proposed Development Project. The floodplain impacts and final design of the proposed mitigation would be subject to state and local permit approval.

The floodplain impact analysis conducted for the EA found that the unavoidable impacts would not: 1) have a high probability of loss of human life, 2) have substantial encroachment-related costs or damage and would not cause interruption of aircraft service or loss of a vital transportation facility, and 3) have an adverse impact on natural and

[6] The EA notes that the US Environmental Protection Agency approved the State of Florida's request to assume responsibility of a portion of the Federal wetland permitting responsibilities conducted under Section 404 of the Clean Water Act. The State assumed permitting responsibility on December 22, 2020.

beneficial floodplain values. The proposed expansion of the air cargo facility is not expected to result in notable adverse impacts on natural and beneficial floodplain values. Based on the analysis in the EA and proposed mitigation, the FAA Proposed Action and overall Proposed Development Project would not significantly affect floodplains.

Surface Waters and Groundwater – As noted above, the FAA Proposed Action and overall Proposed Development Project would affect surface waters and wetlands. The expansion of the air cargo facility would increase of impervious surface at LAL by 49.2 acres. Stormwater discharges from the additional impervious surfaces would be collected and treated through a combination of improvements to the airport's stormwater management system. The engineering design and permitting process would identify the specific requirements and stormwater system improvements.

Commonly accepted measures to minimize erosion and sedimentation to maintain water quality during construction are available and would be required in the project's construction plans and specifications. Measures outlined in FAA Advisory Circular 150/5370.10H, *Standards for Specifying the Construction of Airports*, would also be incorporated into the plans to minimize the potential for water quality impacts. National Pollutant Discharge Elimination System (NPDES) permits for stormwater discharges will be required for discharges from construction activities and the new impervious surfaces associated with operation of the expanded air cargo facility. In addition, the fuel farm design will incorporate leak and spill prevention features. Given the measures available to prevent pollutants in stormwater runoff, the construction and operation of the FAA Proposed Action and overall Proposed Development Project is not anticipated to have a significant impact on surface waters or groundwater.

Wild and Scenic Rivers – The FAA Proposed Action and overall Proposed Development Project will not affect Wild and Scenic Rivers or river segments included in the National Rivers Inventory. Therefore, Wild and Scenic Rivers were not carried forward for detailed analysis in the EA.

Cumulative Impacts – The past, present, and future cumulative projects identified in Section 5.16 of the EA have generated, or are anticipated to generate low levels to moderate environmental impacts. The projects are subject to different environmental regulatory programs, some of which may require mitigation to reduce impacts below levels considered significant. The impacts associated with the Proposed Action, when considered in addition to other cumulative projects, are not expected to exceed thresholds that would indicate a significant impact.

OTHER FEDERAL, STATE, AND LOCAL ACTIONS AND PERMITS:

The City of Lakeland is required to obtain all permits and regulatory approvals necessary to implement the FAA Proposed Action and overall Proposed Development Project. The permits identified in the EA are listed below.

- Section 404 permit for unavoidable impacts to Waters of the United States, including wetlands.
- South Florida Water Management District – Environmental Resource Permit modification
- Florida Department of Environmental Protection – NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities and NPDES Stormwater Program and Multi-Sector General Permit
- Polk County – Comprehensive plan consistency and land development approvals
- Local building and construction permits

CONSISTENCY WITH APPROVED PLANS OR LAWS: The FAA Proposed Action and overall Proposed Development Project is consistent with local plans and ordinances, as well as, applicable plans, laws, and administrative environmental determinations of Federal, State, and local agencies. Federal, State, and local agencies (including the area's regional planning agency) were notified of the Proposed Development Project during early agency coordination conducted for the EA. No objections or concerns regarding consistency with plans or laws were raised.

MITIGATION MEASURES: Mitigation for the Proposed Action is summarized in this section and is described more fully in the following sections of the EA: Sections 5.3.1.1 and 5.3.2 for wetland habitat loss, Section 5.11.1.4 and 5.11.2 for traffic impacts, Sections 5.13.1 and 5.13.2 for wetland function loss, and Section 5.14.2 for floodplain encroachment. To offset the loss of wetland functions and wildlife habitat values, the City proposes to acquire forested wetland mitigation credits from the Alafia River Mitigation Bank. This mitigation bank services the Alafia River watershed, which includes LAL. As noted in Section 5.13.2 of the EA, the City has previously reserved and/or purchased approximately 10.1 Federal/State wetland credits from the ARMB for wetland impacts associated with the Proposed Development Project and is coordinating with ARMB to acquire an additional 1.5 wetland credits. Prior to construction, the City will need to obtain approximately 11.6 total credits from the ARMB to offset the loss of wood stork foraging habitat and wetland functions and values.

A recent traffic study and the traffic analysis prepared for the EA identified mitigation measures available to maintain and acceptable level of service (LOS) at the Kidron Road and Drane Field Road intersection. The EA notes that one of the available mitigation measures, construction of turn lanes at the intersection, was recently implemented.

Floodplain impacts would be mitigated through modifications to the airport's existing stormwater management system to provide compensatory storage capacity. This may include, but not be limited to, construction of new or modified stormwater conveyance ditches and detention ponds.

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PUBLIC INVOLVEMENT: At the outset of the environmental study, notification and early coordination letters were sent to select Federal, State, and local agencies to inform them of the proposed air cargo facility expansion and preparation of the EA. This included submitting the proposed project to the Florida State Clearinghouse for coordinated state agency review. In addition to providing notification to the Florida State Historic Preservation Officer, five federally-recognized Native American Indian Tribes were contacted.

The Draft EA was made available for review by the public, government agencies, and interested parties. The Draft EA was available online at the airport's website for viewing and download. Copies of the Draft EA were also available at two local public libraries and the airport's administrative office. A Notice of Availability of the Draft EA and Notice of a Public Hearing was published on the airport's website and in the *Lakeland Ledger* newspaper and website on April 23, 2021 and on April 26, 2021. A Public Information Workshop and Public Hearing on the Draft EA was held on May 27, 2021. Approximately 177 members of the public attended the Public Information Workshop and Public Hearing. The comment period on the Draft EA opened on April 23, 2021, and closed on May 31, 2021.

No comments on the Draft EA were received from Federal, State or local agencies. During the comment period, 192 public comment submittals were received on the Draft EA. Many comments expressed concerns about existing aircraft noise; aircraft overflights; the effects of noise on local businesses, sleep disturbance, speech interference, and quality of life; and surface traffic. The comments noted existing aircraft noise, as well as the proposed increase in activity associated with the operation of the expanded air cargo facility. Many comments also expressed concerns related to air quality, safety, wildlife hazard potential, fuel farm security, and property values. A number of comments supported the proposed air cargo facility expansion and the local jobs generated by the air cargo facility at LAL. Several comments resulted in clarifications to the EA, but no substantive issues affecting the conclusions documented in the EA were raised. The FAA reviewed and considered all comments in the preparation of the Final EA. The comment letters and responses to these comments are provided in Appendix J of the EA.

FEDERAL FINDING OF NO SIGNIFICANT IMPACT: After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101 of NEPA and other applicable environmental requirements and will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(C) of NEPA.

APPROVED: BARTHOLOMEW VERNACE Digitally signed by BARTHOLOMEW VERNACE Date: 2021.10.29 11:33:15 -04'00'

Bart Vernace, Manager, Orlando Airports District Office

DATE: October 29, 2021

DISAPPROVED: _____

DATE: _____

RECORD OF DECISION AND ORDER

I have carefully considered the FAA's statutory mandate to ensure the safe and efficient use of the national airspace system as well as the other aeronautical goals and objectives discussed in the EA. My review of the EA and determination regarding issuance of the FONSI included evaluation of the purpose and need that this proposed action would serve, the alternate means of achieving the purpose and need, the environmental impacts associated with these alternatives, and any mitigation necessary to preserve and enhance the human, cultural, and natural environment.

Under the authority delegated to me by the FAA Administrator, I find the FAA Proposed Action described in the attached EA is reasonably supported. I, therefore, direct that action be taken to carry forward the necessary agency actions discussed in the attached EA and FONSI.

APPROVED: BARTHOLOMEW VERNACE Digitally signed by BARTHOLOMEW VERNACE Date: 2021.10.29 11:33:37 -04'00'

Bart Vernace, Manager, Orlando Airports District Office

DATE: October 29, 2021

DISAPPROVED: _____

DATE: _____

Judicial Review

This Record of Decision (ROD) represents the FAA's final decision and approval for the actions identified in the EA and constitutes a final order of the FAA Administrator subject to review by the Courts of Appeal of the United States in accordance with the provisions of 49 U.S.C. § 46110.

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Final Environmental Assessment
for
Phase II Air Cargo Facility Development at Lakeland Linder International Airport (LAL)

Prepared for:

Federal Aviation Administration

Southern Region
Orlando Airports District Office
8427 SouthPark Circle
Orlando, Florida 32819

Prepared by:

City of Lakeland
3900 Don Emerson Drive, Suite 210
Lakeland, Florida 33811

AECOM
7650 West Courtney Campbell Causeway
Tampa, Florida 33607

October 28, 2021

This Environmental Assessment becomes a Federal document when evaluated, signed and dated by the responsible FAA Official.

BARTHOLOMEW VERNACE

Digitally signed by BARTHOLOMEW VERNACE
Date: 2021.10.29 10:07:44 -04'00'

Responsible FAA Official

October 29, 2021

Date

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CHAPTER 1 INTRODUCTION

The City of Lakeland (the "Airport Sponsor" or "City") proposes the expansion of an air cargo facility at Lakeland Linder International Airport (LAL, or the Airport), referred to as the Airport Sponsor's Proposed Development Project. With respect to the development that comprises the Proposed Development Project, the Federal Aviation Administration's (FAA) federal actions are associated with the specific project elements that require the unconditional approval of portions of the Airport Layout Plan (ALP). Those portions of the Proposed Development Project for which the FAA has an associated federal action comprise the FAA Proposed Action for this Environmental Assessment (EA). The FAA Proposed Action is described in greater detail in both this chapter and **Chapter 2**.

The FAA Proposed Action is subject to environmental review under the National Environmental Policy Act (NEPA) of 1969, as amended. The FAA is the lead federal Agency and this EA was prepared in accordance with NEPA, the President's Council on Environmental Quality (CEQ) regulations[1], FAA Order 1050.1F, *Environmental Impacts, Policies and Procedures*, and FAA Order 5050.4B, *National Environmental Policy Act Implementing Instructions for Airport Actions*. The purpose of the EA is to identify and consider the potential environmental impacts associated with the FAA Proposed Action. This EA supports necessary environmental findings that are a prerequisite to agency decisions for FAA Proposed Action project components. Environmental findings and associated FAA approvals are necessary prior to the construction and operation of the proposed air cargo facility improvements included in the FAA Proposed Action.

1.1. AIRPORT DESCRIPTION AND BACKGROUND

LAL is publicly owned and operated by the City. The Airport is located on approximately 1,710 acres in central Florida's Polk County, less than one mile east of the Hillsborough County Line, and approximately 3.5 miles south of Interstate Highway 4, five miles southwest of the City of Lakeland, and 27 miles east of Tampa International Airport. **Figure 1.1-1** depicts the location of the Airport as it relates to the City of Lakeland and surrounding areas.

LAL has an operating certificate under Title 14 Code of Federal Regulation (CFR) Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*[2], which certifies the Airport to allow scheduled air carrier service. The Airport serves public, private, and corporate clients that operate a mixed fleet of helicopters, single and twin-engine propeller aircraft, turbo-prop aircraft, and corporate jets.

LAL primarily serves as a general aviation (GA) airport, supports education and flight training activities for Central Florida Aerospace Academy and Polk State College's Aerospace Center, and features on-demand commercial service activities. The Airport has approximately 45 aviation-related tenants whose services and activities include aircraft maintenance, aircraft exporting and ferrying, aircraft painting and refurbishing, aircraft parts and sales, and government and military aviation contracting. LAL hosts the annual Sun 'n Fun Aerospace Expo, the second largest airshow in the world. Sun 'n Fun features fly-in aircraft exhibits and attracts more than 200,000 annual visitors.

The recent air cargo facility development (presently referred to as Phase I) included construction of an air cargo and office building, air cargo apron, and aircraft maintenance, repair, and overhaul hangars, which increased LAL's air cargo handling capacity and related air cargo large aircraft activity.

[1] The Council on Environmental Quality (CEQ) amended its regulations implementing NEPA effective September 14, 2020. Under section 1506.13 of the amended regulations, agencies have discretion to apply the amended regulations to NEPA processes that were begun before September 14, 2020. The FAA initiated its NEPA process for this action in February 2020 and has decided to apply the regulations in effect at that time.

[2] CFR Part 139 requires airports that serve scheduled and unscheduled air carrier aircraft with more than 30 seats to obtain an operating permit from FAA. LAL meets this requirement. To maintain this certificate, LAL must meet certain operational and safety standards.

The Phase I air cargo facility became operational in 2020. Primary airside and landside facilities supporting operations at LAL are shown on **Figure 1.1-2** and described in forthcoming sections.

1.1.1. AIRSIDE FACILITIES AT LAL

Airside facilities include the system of runways, taxiways, navigational aids, and air traffic control facilities that support aircraft operations. There are three runways at the Airport, two of which intersect each other. The primary runway, Runway 9-27, is 8,499 feet long by 150 feet wide oriented in an east/west direction. The secondary Runway 5-23 is 5,005 feet long by 150 feet wide oriented in a northeast/southwest direction. Runway 8-26 is a turf surface runway and is approximately 2,205 feet long by 60 feet wide oriented in an east/west direction. Runways 9-27 and 5-23 are served by full-length parallel Taxiways A and B. Additional taxiways give access to both primary runways and all airside facilities, with the exception of turf Runway 8-26 which is not served by any taxiways.

1.1.2. LANDSIDE FACILITIES AT LAL

Primary landside facilities at LAL include the passenger terminal, parking facilities, Fixed Base Operator (FBO) facility, hangar areas, fuel farms, fuel storage, Aircraft Rescue and Firefighting, United States (U.S.) Customs and Border Protection facility, and Lakeland Police Department facility. A total of 34 conventional hangars and five rows of T-hangar buildings (totaling 74 units) offer storage space on the north and south sides of the Airport. All hangars are currently occupied. The City owns two self-serve fuel farms that are leased and operated by the FBO.

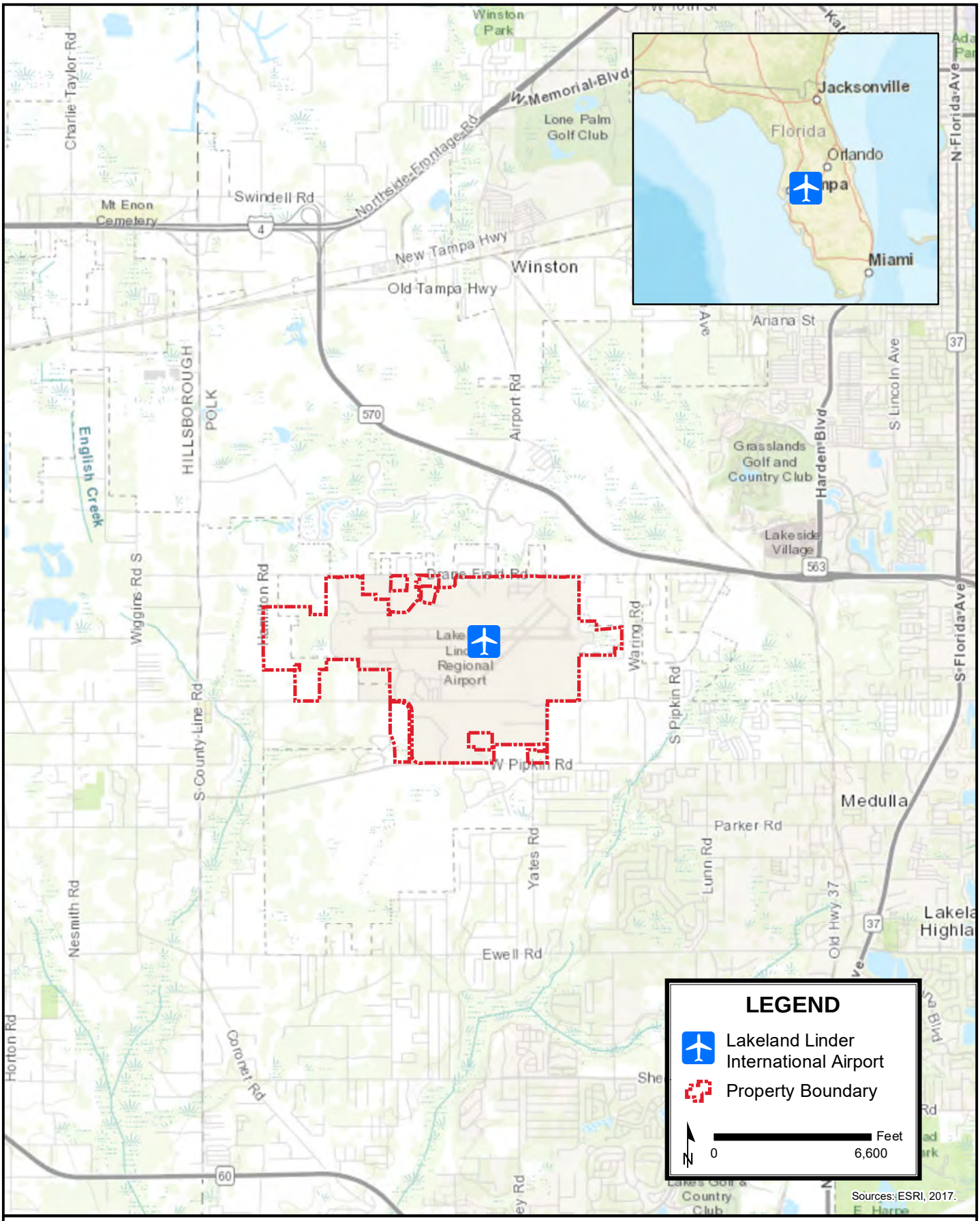
The ground transportation system includes on-airport roadways, terminal curbside lanes, and passenger parking facilities, rental cars, taxis, and public transportation services. Access to the passenger terminal building is from Don Emerson Drive, which is accessed from Drane Field Road and Airport Road.

1.2. DESCRIPTION OF THE PROPOSED DEVELOPMENT PROJECT

The Proposed Development Project is an expansion of the Phase I air cargo facility that became operational at LAL in 2020. The Phase II expansion is being considered to accommodate expanded future operations, given the potential for network and customer demand to increase in the near future. A conceptual layout for the Proposed Development Project, as shown on **Figure 1.2-1a**, is based on facility sizing needs identified by the air cargo services provider. The Proposed Development Project would be developed on an approximate 73-acre site in the northwest quadrant of LAL, immediately west of, and adjacent to the completed Phase I development. All project components would be constructed on Airport property. Specific construction and operational activities included in the Proposed Development Project are listed below:

- Construct up to 392,200-square foot (SF) expansion of the Phase I sort and office building;[3]
- Construct up to approximately 54,200 square yards (SY) of paved truck court to accommodate up to 370 additional truck bays;
- Construct up to approximately 42,600 SY of paved vehicle parking lot to accommodate up to 1,120 additional parking spaces;
- Construct up to approximately 29,300 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions;
- Construct up to approximately 17,600 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;

[3] Based on updated site plan information prepared by the air cargo services provider, the size and area estimates in the Draft EA were updated for this Final EA. The updated information primarily resulted from the final location selected for the proposed stormwater retention pond. The updated size and area estimates reflect only minor changes within the Proposed Development Project site.



Path: C:\Users\tia.norman\Desktop\LAL P2 EA\GIS\mxd\Draft EA\Figure 1-1-1 Project Location_rev0.mxd, Date Saved: 7/2/2020 9:58:51 AM

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVLEOPMENT ENVIRONMENTAL ASSESSMENT

AIRPORT LOCATION

FIGURE 1.1-1

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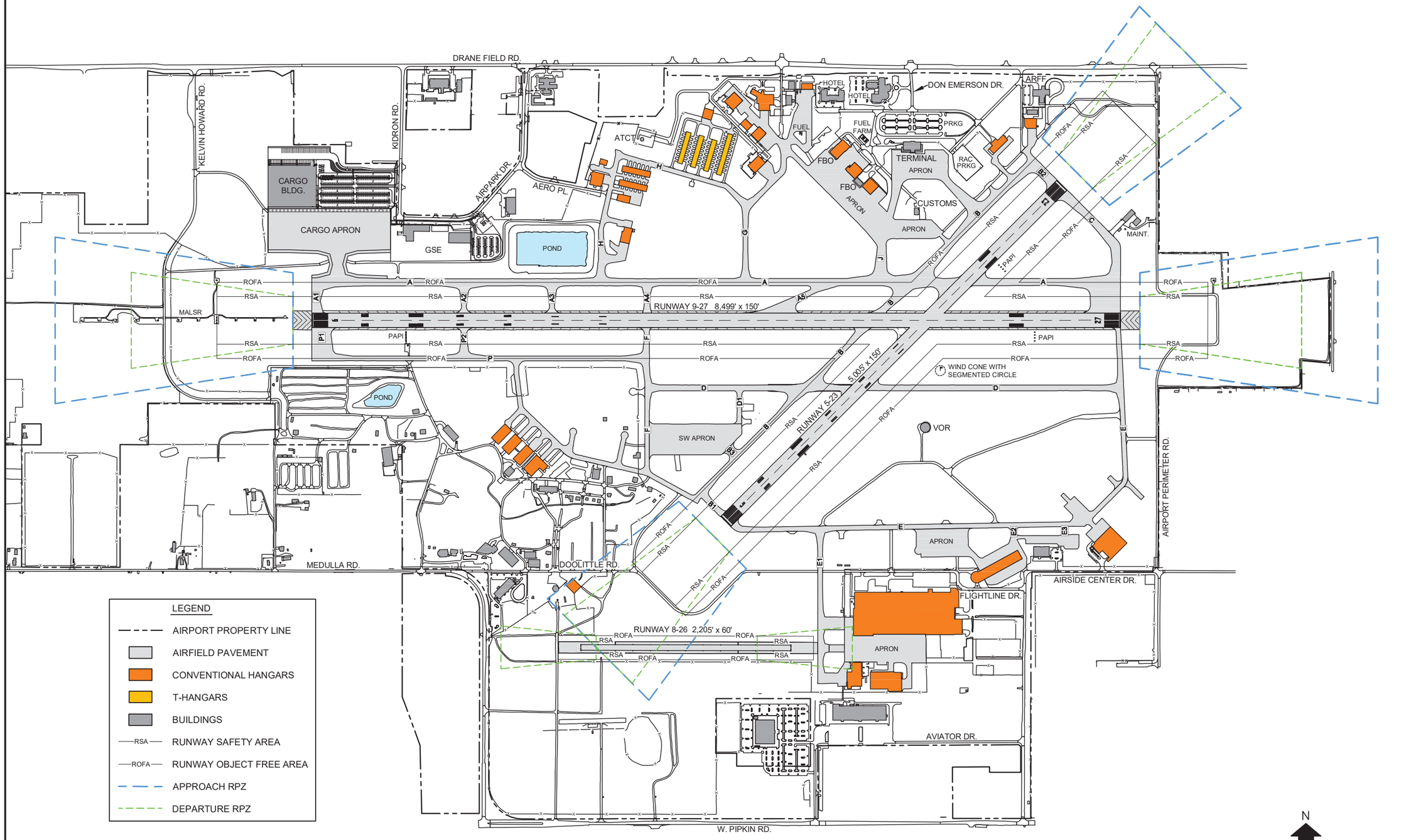
LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT
ENVIRONMENTAL ASSESSMENT

EXISTING AIRPORT FACILITIES



SOURCES: AECOM, 2020; LAL, 2020.

FIGURE
1.1-2

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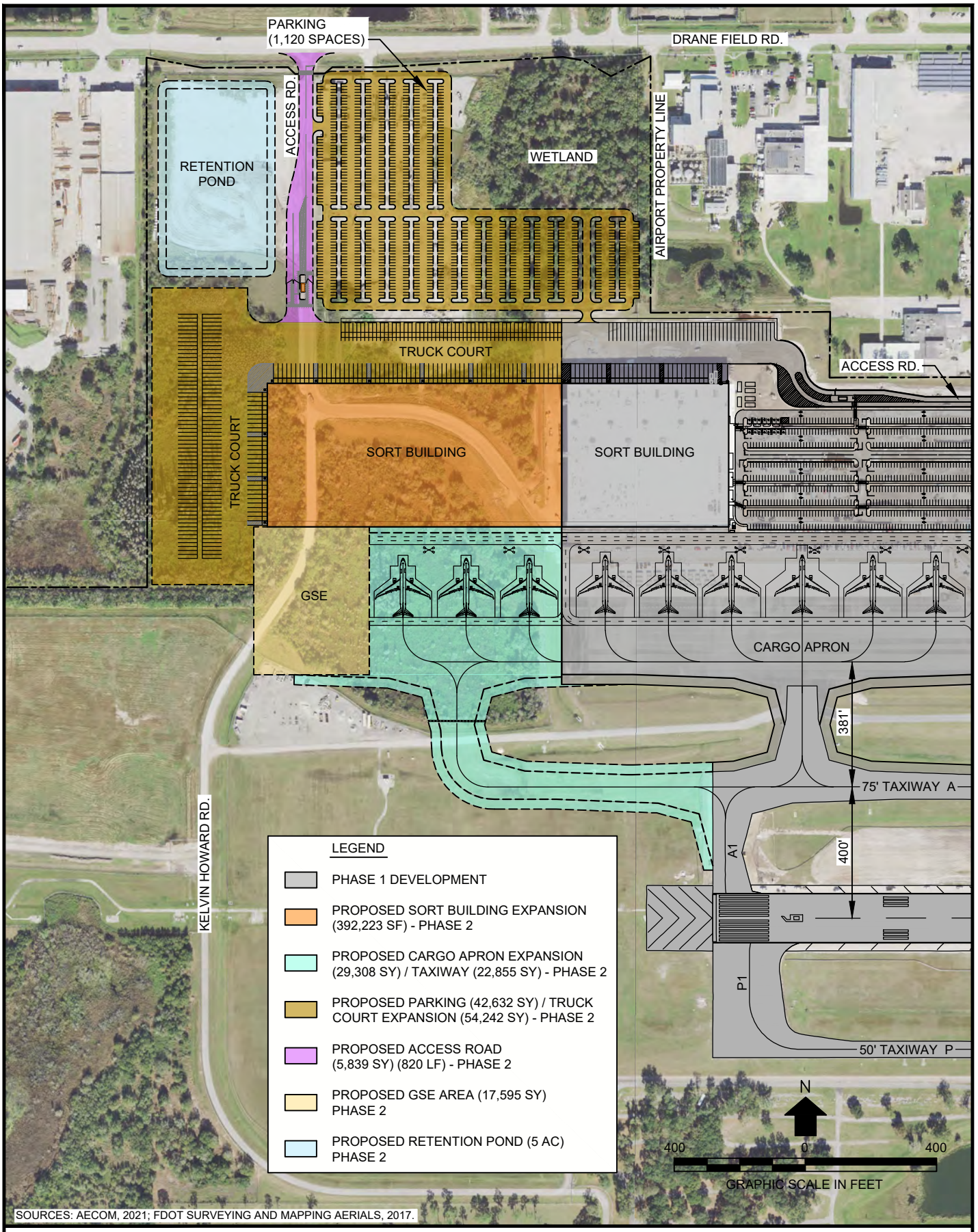

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

PROPOSED DEVELOPMENT PROJECT

FIGURE 1.2-1a

Note: The initial size estimates for the Draft EA were modified for the Final EA to reflect updated facility design. Size quantities changed mainly due to the ability to site the proposed stormwater retention pond further away from Runway 9/27.

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- Extend parallel Taxiway A approximately 1,081 linear feet (LF) to the west to provide aircraft access to proposed new section of aircraft parking apron;
- Construct a new airport access road to access the Phase II facilities from Drane Field Road;
- Site clearing, grading, and landscaping;
- Modifications to the Airport's stormwater management system, including construction of swales and retention ponds;
- Installation of security fencing, gates, and security checkpoints;
- Installation of airfield lighting and signage

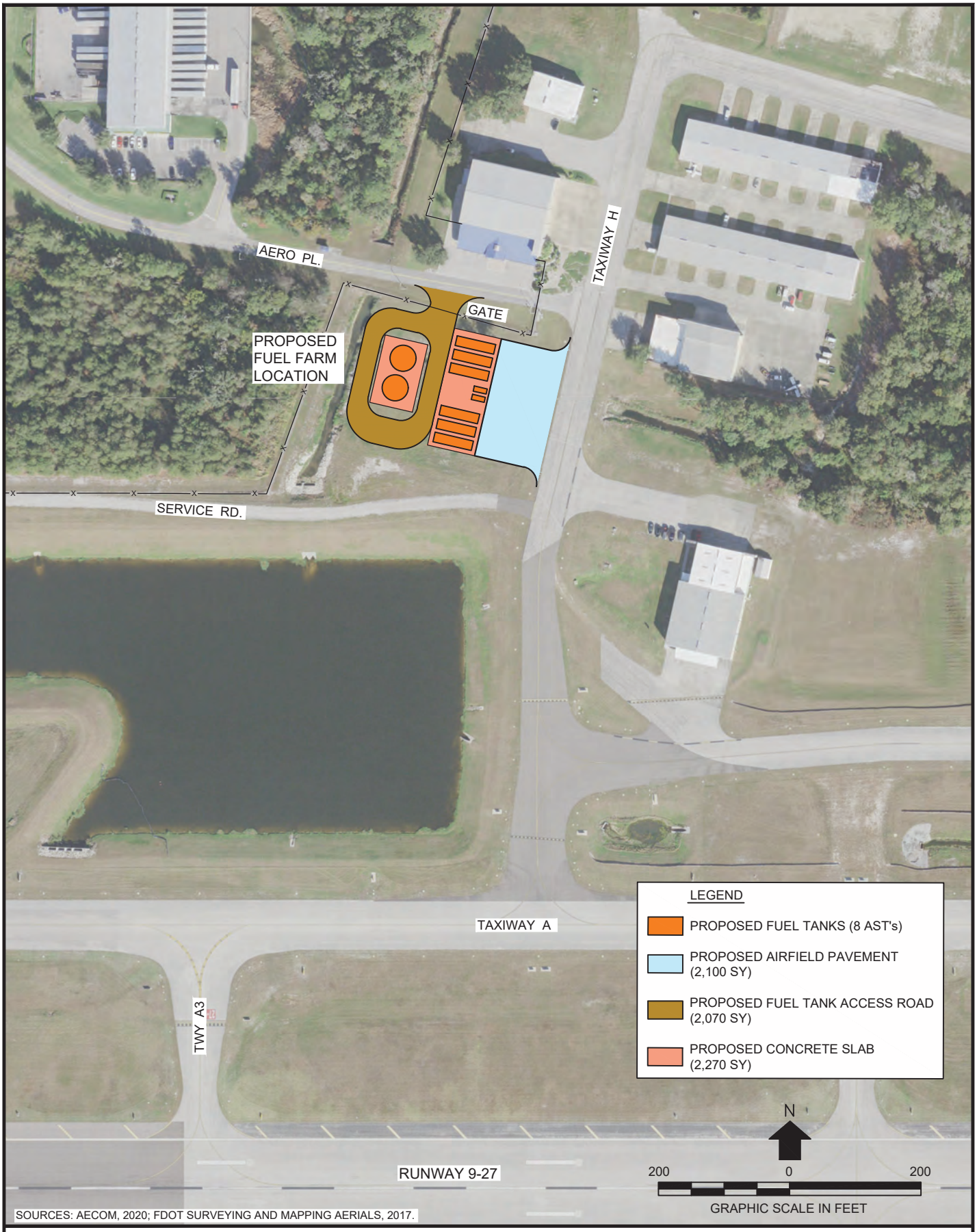
As noted above and shown on **Figure 1.2-1a**, the Proposed Development Project includes an approximate 1,081-foot extension of Taxiway A requested by the air cargo services provider to provide improved access to the proposed expanded aircraft parking apron. The need for additional taxiway access was identified subsequent to the Draft EA's publication and is incorporated into this Final EA. Depictions and discussions of the Proposed Development Project throughout this chapter, Chapter 2 (Purpose and Need), and Chapter 3 (Alternatives) reflect this update. For environmental evaluation, study areas that were based on the construction footprint in the Draft EA were expanded to include the additional area to be disturbed and impacted due to the proposed taxiway construction, and all maps and figures depicting these study areas throughout the EA have been updated. Quantifications of environmental resources within these study areas were amended as needed (e.g., additional vegetative cover in **Section 4.3**, additional land uses in **Section 4.8**) to reflect the expanded area encompassing the taxiway extension. Any additional impacts to environmental resources due to the expanded construction area were identified, disclosed ,and evaluated in this EA, particularly in the areas of air quality (**Section 5.2**), Biological Resources (**Section 5.3**), Climate (**Section 5.4**), Cultural Resources (**Section 5.7**), Natural Resources/Energy Supply (**Section 5.9**), and Water Resources (**Section 5.15**). The proposed taxiway extension was not a substantial change to the Proposed Development Project. The impacts of the Proposed Development Project, with the proposed taxiway extension, did not result in any significant environmental impact and did not change the findings presented in the Draft EA.

In addition, the location of the proposed conceptual 5-acre stormwater retention pond shown in the Draft EA was previously noted as "Subject to Change" pending ongoing design. The pond location has been revised and the proposed location shown on **Figure 1.2-1a** of this Final EA has been updated compared to the Draft EA. The siting of the pond was changed to the northwestern corner of the Proposed Development Project footprint based on project design considerations as well as to maximize distance from Runway 9-27 operations. The proposed revised pond location was evaluated in the Final EA, and information was updated as necessary in **Section 5.3.2.1**. The proposed pond relocation would not impact other environmental resource categories compared to the Draft EA.

Based on current site design, the Proposed Development Project modifications included in the Final EA (Taxiway A extension and stormwater retention pond relocation) were relatively minor and did not result in any changes to environmental analysis findings or in any significant impacts.

The facility will be designed to accommodate Boeing 767 and 737 cargo aircraft. If approved, Phase II is expected to generate eight additional arrivals and eight additional departures (16 total operations) per day at LAL during the facility's first year of operation (2022). It would generate a total of 12 additional daily arrivals and departures (24 total daily operations) operations in 2027. The project is expected to generate approximately 664 additional car and truck trips per day in 2022 (peak daily) and 1,242 additional car and truck trips per day in 2027.

Also, a new fuel farm is being proposed to accommodate the potential need for additional aviation fueling at LAL. It would be located separately from the Proposed Development Project footprint, at the intersection of Aero Place and Taxiway H (**Figure 1.2-1b**).



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

PROPOSED DEVELOPMENT PROJECT FUEL FARM

FIGURE 1.2-1b

Current projections indicate a need for additional aboveground storage tanks (ASTs) providing a total of 850,000 gallons of Jet-A fuel storage capacity. A small portion of this facility may also provide fuel storage for off-road equipment (e.g., gasoline, diesel, or hydrogen).

1.3. TIMEFRAME FOR PROPOSED DEVELOPMENT PROJECT

Construction activities associated with the Proposed Development Project are anticipated to be completed in 2022 and the Proposed Development Project would become immediately operational. Therefore, the first year for environmental analysis of the Proposed Development Project's operational impacts is 2022. For disclosure of potential additional operational impacts due to the Proposed Development Project, the forecast year 2027 is also studied in the EA.

1.4. FAA PROPOSED ACTION

The Proposed Development Project described in **Section 1.2** of this EA represents the City's intended development at its airport. However, a limited number of these development components are subject to federal approval. The components of the Proposed Development Project which are the subject of FAA approval on the ALP are described throughout this EA as the FAA Proposed Action.[4] FAA is prohibited from directly or indirectly regulating the remaining components of the Proposed Development Project, and therefore, those development items are excluded from the FAA Proposed Action.

The FAA Proposed Action project components are described in **Table 1.4-1** below. The table also describes the federal authority being exercised, resulting in the development component's inclusion in the FAA Proposed Action.

Table 1.4-1 LAL's Proposed Development Project and Identification of Associated Federal Action*

LAL's Proposed Development Project Component	Identification of FAA ALP Approval?	Eligibility Determination Requested for Federal Funding? (i.e., AIP or PFC)	Included in FAA Proposed Action?
Construct up to approximately 29,300 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions	Yes	No	Yes
Construct up to approximately 17,600 SY of pavement for aircraft GSE staging and periodic aircraft parking	Yes	No	Yes
Extend Taxiway A 1,081 feet to provide improved aircraft access to proposed aircraft parking apron	Yes	No	Yes

[4] Congress limited the FAA's statutory authority over airport development projects in Section 163 of the FAA Reauthorization Act of 2018, H. R. 302, (P.L. 115-254). In the statute, Congress limited FAA's approval authority to portions of ALPs that meet certain statutorily defined criteria, and further, prohibited the FAA from directly or indirectly regulating airport land use unless certain exceptions for continued "direct or indirect" regulation exist. Any project components identified in the LAL's Proposed Development Project that are not included in the FAA Proposed Action are the type of airport development that the FAA is statutorily prohibited from directly or indirectly regulating. Therefore, those project elements are not part of the FAA Proposed Action.

LAL's Proposed Development Project Component	Identification of FAA ALP Approval?	Eligibility Determination Requested for Federal Funding? (i.e., AIP or PFC)	Included in FAA Proposed Action?
Modifications to the Airport's stormwater management system, including construction of swales and retention ponds	Yes	No	Yes
Construct up to 392,200 SF expansion of the Phase I sort and office building	No	No	No
Construct new airport access road to give access to the Phase II facilities via Drane Field Road	No	No	No
Construct up to approximately 42,600 SY of paved vehicle parking lot to accommodate up to 1,120 additional parking spaces	No	No	No
Construct up to approximately 54,200 SY of paved truck court to accommodate up to 370 additional truck bays	No	No	No
Fuel farm expansion	No	No	No
Installation of security fencing, gates, and security checkpoints	No	No	No
Installation of airfield lighting and signage	No	No	No

* The FAA concluded in its determination of approval authorities for this Proposed Development Project that some components trigger ALP approval, but no component triggers FAA land use approval requirements.

Notes: AIP = Airport Improvement Program; PFC = Passenger Facility Charge

CHAPTER 2 PURPOSE AND NEED

This Chapter presents the Purpose and Need as identified by the Airport Sponsor to be consistent with the goals for the Proposed Development Project. In addition, this chapter identifies the federal actions the City is requesting. These requests are the basis for the Federal Aviation Administration (FAA) Proposed Action. FAA facilitates airport development by providing federal financial assistance, and reviews and approves or disapproves certain revisions to Airport Layout Plans (ALPs) at federally funded airports. Since the FAA does not determine how to develop civilian airports, the FAA's review must consider the goals and objectives of the owner/operator of the airport.

2.1. PURPOSE AND NEED

The FAA is responsible for complying with National Environmental Policy Act (NEPA) because it has the authority to approve those portions of the Airport Layout Plan (ALP) that depict the components of the Proposed Development Project, which are identified in this Environmental Assessment (EA) as the FAA Proposed Action. FAA's approvals and NEPA compliance are a prerequisite to construction for those project components (see **Chapter 1** of this EA). This chapter bases the Purpose and Need on the City's entire Proposed Development Project.[5] This ensures that the purpose and need, and the alternatives examined in the next chapter of this EA, are consistent with the City's goals and objectives for its Proposed Development Project. Additionally, this ensures that the FAA's decision on the FAA Proposed Action would not be at odds with the City's decisions for airport land uses for which the City is not required to obtain FAA approval.

2.1.1. PURPOSE

The City seeks to provide a suitable site for the proposed expansion of air cargo facilities, services, and operations at the Airport. This proposed "Phase II" development would complement and integrate with the Phase I air cargo handling facilities recently constructed at the Airport. The Proposed Development Project would develop additional air cargo processing and sorting facilities, delivery truck parking and staging areas, ground support equipment (GSE) parking and operation areas, and aircraft parking, processing, and maintenance areas. The Proposed Development Project would allow the tenant air cargo services provider to expand its regional hub capabilities at Lakeland Linder International Airport (LAL).

A separate EA and permitting process was completed in 2016 for a large, multi-hangar Maintenance, Repair, and Overhaul facility with a modestly-sized air cargo facility at LAL. The City proposed development of a larger air cargo facility at the site in 2018, and FAA subsequently reevaluated the 2016 EA in light of the revised project. The City has engaged in an ongoing airport development planning process related to air cargo expansion since 2012, eight years prior to air cargo tenants initiating operations at LAL in 2020. A timeline of milestones in this process is as follows:

- 2012 – Air Cargo Development first represented on ALP and included in LAL Master Plan. Development of the LAL Master Plan included public meetings and comment opportunities.
- 2013 – During the Fiscal Year 2014 strategic planning process and to be congruent with the Southwest Lakeland Sector Plan, the Airport identified a 106 acre development area in the northwest quadrant of LAL with a 650,000 square foot warehouse and two 747's.

[5] The Airport Sponsor has taken primary responsibility for the drafting of this EA, and the FAA has independently evaluated the EA to determine the accuracy as well as take responsibility for the scope and content that addresses FAA actions (40 CFR § 1506.5(b), CEQ regulations). This chapter discusses the purpose and need for the Proposed Development Project, which incorporates a variety of project components that the FAA has determined are outside of its approval authority under Section 163 of the FAA Reauthorization Act of 2018. The FAA adopts the content of the purpose and need chapter to the extent appropriate and necessary to support a decision on the FAA Proposed Action only. Upon completion of the NEPA process, FAA will only render environmental determinations and issue a decision as to the FAA Proposed Action.

- 2015 – Airport partners with Florida Department of Transportation (FDOT) to develop Intermodal Feasibility Study for airport identifying numerous development initiatives including the aircraft Maintenance, Repair, and Overhaul/Air Cargo Facility Development.[6]
- 2016 – Maintenance, Repair, and Overhaul/Air Cargo EA prepared including public notice and opportunity for public comment. FAA issued Finding of No Significant Impact (FONSI) in August of 2016.
- 2018 – Based on updated project development needs identified by the City, FAA revalidated the 2016 Maintenance, Repair, and Overhaul/Air Cargo EA and FONSI in September of 2018.
- 2020 – Airport Master Plan update process completed with public participation and comment opportunities. New Master Plan approved by the City in September 2020 showing air cargo facility expansion.

2.1.2. NEED

Table 2.1-1 projects additional air cargo aircraft operations at LAL that would occur if the Proposed Development Project was constructed. The operations would be conducted by Boeing 767-300 and 737-800 aircraft. The No-Action Alternative is inclusive of Phase I operations, which average ten daily arrivals/departures. The Proposed Development Project does not include any additional commercial cargo aircraft engine runup activity for aircraft using the air cargo facility above and beyond what already occurs under existing conditions at LAL. **Table 2.1-2** presents the estimated number of vehicle trips (including cargo truck trips) per day that would be added for Phase II. Again, the No-Action Alternative is inclusive of Phase I operations.

Expand Air Cargo Sort Building

Although the Phase I air cargo building meets existing market demand, the tenant air cargo services provider determined that it lacks the space and cargo volume capacity to handle future expansions of air cargo demand in the market. Such requirements include an air cargo sorting and office building adequately sized to meet regional demand volume. Technological and logistics features to support hub operations are also needed, as is adequate developable land surrounding the air cargo facilities. Demand for air cargo facilities in central Florida continues to increase with the growth of e-commerce. Advances in technology, facility design, and network service capabilities result in a market need for large, centralized, multi-functional air and ground sorting facilities. The tenant has identified the need for expanding the air cargo processing capacity and facilities at LAL, which would allow expansion of current regional air cargo hub capabilities at LAL. The City, in meeting their objectives for operating the Airport, seeks to provide a suitable site for lease to the air cargo tenant for the expansion.

A 223,000-square foot (SF) cargo processing building was recently constructed as part of the Phase I air cargo development at the Airport. This facility accommodates current demand associated with the regional air cargo hub. To accommodate future demand increases, it is estimated that up to 392,200 additional SF of building is necessary, including additional sorting, processing, logistical, and technological features.

[6] Intermodal Feasibility Study for Lakeland Linder Regional Airport, Final Technical Report. Prepared by Atkins in association with R.A. Wiedemann and Associates, Inc. July 2015

Table 2.1-1 Additional Aircraft Operations (Daily)

Year	Time	No-Action Departures	No-Action Arrivals	No-Action Total	Proposed Development Project Departures	Proposed Development Project Arrivals	Proposed Development Project Total	Additional Departures	Additional Arrivals	Total
2022	Day	7	6	13	10	9	19	3	3	6
	Night	3	4	7	8	9	17	5	5	10
	Total	**10**	**10**	**20**	**18**	**18**	**36**	**8**	**8**	**16**
2027	Day	7	6	13	12	11	23	5	5	10
	Night	3	4	7	10	11	21	7	7	14
	Total	**10**	**10**	**20**	**22**	**22**	**44**	**12**	**12**	**24**

Source: AECOM, 2019.

Table 2.1-2 Additional Vehicular Traffic Operations (Peak Daily)

Category	2022 No-Action	2022 Proposed Project	2022 Additional	2027 No-Action	2027 Proposed Development Project	2027 Additional
Employee/Visitor	1,500	2,000	500	1,500	2,510	1,010
Trucks	125	289	164	125	357	232
Total	**1,625**	**2,289**	**664**	**1,625**	**2,867**	**1,242**

Source: AECOM, 2019.

Expand Air Cargo Aircraft Ramp, GSE Ramp, and Taxilane

With an expanded regional air cargo hub processing facility, the tenant also identified the need to expand the air cargo ramp, GSE ramp, and air cargo taxilane. The current Phase I facilities meet existing demand but lack the space and cargo capacity needed to meet anticipated future increases in market demand. Contracted third-party air carriers servicing facility would be anticipated to conduct scheduled air freighter operations to the Airport. These flights will support ground operations delivering goods to and from other in-network distribution facilities within the region.

The Phase I facility offers aircraft parking spaces sized for either six Boeing-767 aircraft or eight Boeing-737 aircraft. The Phase I facility offers enough aircraft parking to accommodate ten flights per day, with limited capacity to accommodate additional daily flights. The forecasted demand would require additional aircraft parking and processing space, as well as additional ramp areas for GSE parking and operations and an extended taxiway to access the area.

The Phase II expansion is expected to generate eight additional daily arrivals and departures (16 total) to meet near-term demand, and 12 additional daily arrivals and departures (24 total) to meet the demand projected by 2027. The Proposed Development Project would construct three additional aircraft parking spaces sized to accommodate Boeing-737 to Boeing-767 jets, covering a total of approximately 29,300 SY. Two of the proposed spaces are intended for currently planned aircraft, and the third would make space for an additional aircraft in times of high demand. An expanded GSE area would make space for additional GSE parking and operations, as well as give additional space for aircraft parking if needed. The Proposed Development Project would construct approximately 17,600 SY of ramp primarily for GSE parking and operations.

Cargo aircraft servicing the air cargo facilities require a safe and efficient means of travel between parking spaces on the proposed ramp and the Airport's taxiway and runway system. To give access to all portions of the proposed ramp expansion, an extended taxilane would be needed to support multiple aircraft, ranging from Boeing-737 to Boeing-767 aircraft. As discussed in **Section 1.2**, the need to extend Taxiway A in order to provide a secondary access point to the proposed aircraft ramp was identified in this Final EA as being necessary to improve the efficiency of aircraft ground movements and reduce ramp congestion.

Expand Employee Parking

The Phase II expansion would require additional facility staffing. Employee parking facilities constructed under Phase I would not be large enough to handle the increased staff parking demand. Phase I constructed 627 employee parking spaces to meet current demand. Forecasted cargo processing at LAL would require an additional 732 parking spaces to provide a total of 1,359 total employee parking spaces during the busiest activity periods.

Expand Truck Yard

The purpose of expanding the truck yard is to develop truck staging, loading, and unloading space that is sufficient for projected air cargo demand, as well as the distribution truck volumes that would be needed to deliver goods to and from other distribution facilities within the region. The Phase I truck yard is approximately 12,400 square yards (SY) and offers enough space to handle existing peak volumes. However, an additional 54,200 SY of truck parking, staging and processing area is needed to handle peak volume and accommodate near-term and forecasted demand.

2.2. FUEL FARM

The purpose of the proposed fuel farm is to accommodate the need for additional aviation fueling capacity at LAL based on the development of the expanded air cargo facility, in a location that will offer convenience and efficiency for LAL users.

The current fuel farms can store up to 24,000 gallons of aviation gasoline (AvGas) 100 octane low lead (100LL) and 72,000 gallons of Jet-A fuel, and are currently leased to Sheltair to maintain and operate. Current projections of cargo operations indicate the need for additional aboveground storage tanks (AST)s providing a total of 850,000 gallons of Jet-A fuel capacity. As previously mentioned, there is potential for a small portion of this capacity to be dedicated to off-road equipment fuel (e.g., gasoline, diesel, or hydrogen) if usage needs dictate. The expansion of Phase I of the air cargo facility and addition of users at LAL increases the demand for an additional fuel farm.

The airport will apply the same measures to secure and safeguard the proposed ASTs that are in place for its existing ASTs. Priority is given to installing ASTs rather than underground storage tanks to reduce environmental liability. Leaking underground tanks pose a significant threat to the environment that can be better managed using aboveground storage, especially in areas such as Lakeland where depth to water table may be shallow in areas. Installation of aboveground tanks must also comply with National Fire Protection Association Code (NFPA) 30 - Flammable and Combustible Liquids Code and NFPA 70 - National Electrical Code. In implementing AC 150/5230-4B, FAA also requires compliance with NFPA Standard 407 - Standard for Aircraft Fuel Servicing, which provides further guidance on safe siting, construction, operation, and dispensing.

2.3. REQUESTED FEDERAL ACTIONS

The federal actions and approvals considered in this EA include:

- Unconditional approval of the ALP depicting those portions of the Proposed Development Project subject to FAA review and approval pursuant to 47107(a)(16)(B) (the FAA Proposed Action).

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CHAPTER 3 ALTERNATIVES

This chapter summarizes the process used to identify, compare, and evaluate a range of technically and economically feasible alternatives to the Proposed Development Project.[7] It provides an overview of the alternatives evaluation process, describes technically and economically feasible alternatives to the Proposed Development Project, including the No-Action Alternative, and explains reasonable alternatives retained for further evaluation in the Environmental Assessment (EA) compared to those dismissed. As required by the Council on Environmental Quality regulations, the No-Action Alternative is retained through the alternatives analysis for comparison purposes throughout this EA.

3.1. ALTERNATIVES EVALUATION PROCESS

The alternatives evaluation process for the Proposed Development Project consists of three components. First, alternatives are evaluated against whether or not they would meet the specified purpose of and need for the Proposed Development Project, which is to provide additional facilities to meet the projected air cargo needs.

Second, alternatives fully achieving the purpose and need are then evaluated with respect to the following operational and constructability factors.

- Accessibility and Operational Considerations: Considers the ability of aircraft and vehicles to efficiently access the proposed and existing air cargo facilities. Operational efficiency of having facilities immediately adjacent to Phase I is considered. Ease of motor vehicle access on- and off-airport is also considered. Alternatives should not deteriorate or impede airport or tenant facilities or operations.
- Constructability: assesses whether alternatives require a disproportionate amount of land clearing, earthwork, site preparation, utility relocations or other factors. An alternative must also comply with all Federal Aviation Administration (FAA) design and safety standards and regulations.
- Land Acquisition Requirements: addresses the need to acquire land for the development of each alternative, both in terms of the total amount of land to be acquired and the number of business structures and residential structures to be acquired.
- Land Use Compatibility: alternatives must already be compatible with airport use, must be able to maintain its current use, or can otherwise be rezoned or repurposed to become compatible. Roadway and right-of-way access must also be maintained.
- Potential Interference with Existing/Planned Operations and Development: evaluates the potential for each alternative to directly conflict with existing airport operations, tenant operations, or planned development at the airport. It also considers an alternative's potential to reduce the efficient future use of airport lands for aviation-related use.

Alternatives that are found to not be reasonable or not technically and economically feasible per the factors listed above are not considered further. For any remaining alternatives, potential impacts on environmental resources, such as streams and floodplains, wetlands, historic and archaeological resources, recreational resources known as "Section 4(f) resources", and biological resources are compared.

[7] The Airport Sponsor has taken primary responsibility for the drafting of this EA, including the development and presentation of alternatives. The FAA has independently evaluated the EA to determine its accuracy and scope. Because the Airport Sponsor has decided to include alternatives to the entire Proposed Development Project, the alternatives analysis contained in this EA exceeds the minimum requirements of the CEQ regulations, and includes project components for which FAA does not have any approval authority. However, upon completion of the NEPA process, FAA will only render environmental determinations and issue a decision as to those portions of the Proposed Development Project that are included in the FAA Proposed Action subject to NEPA.

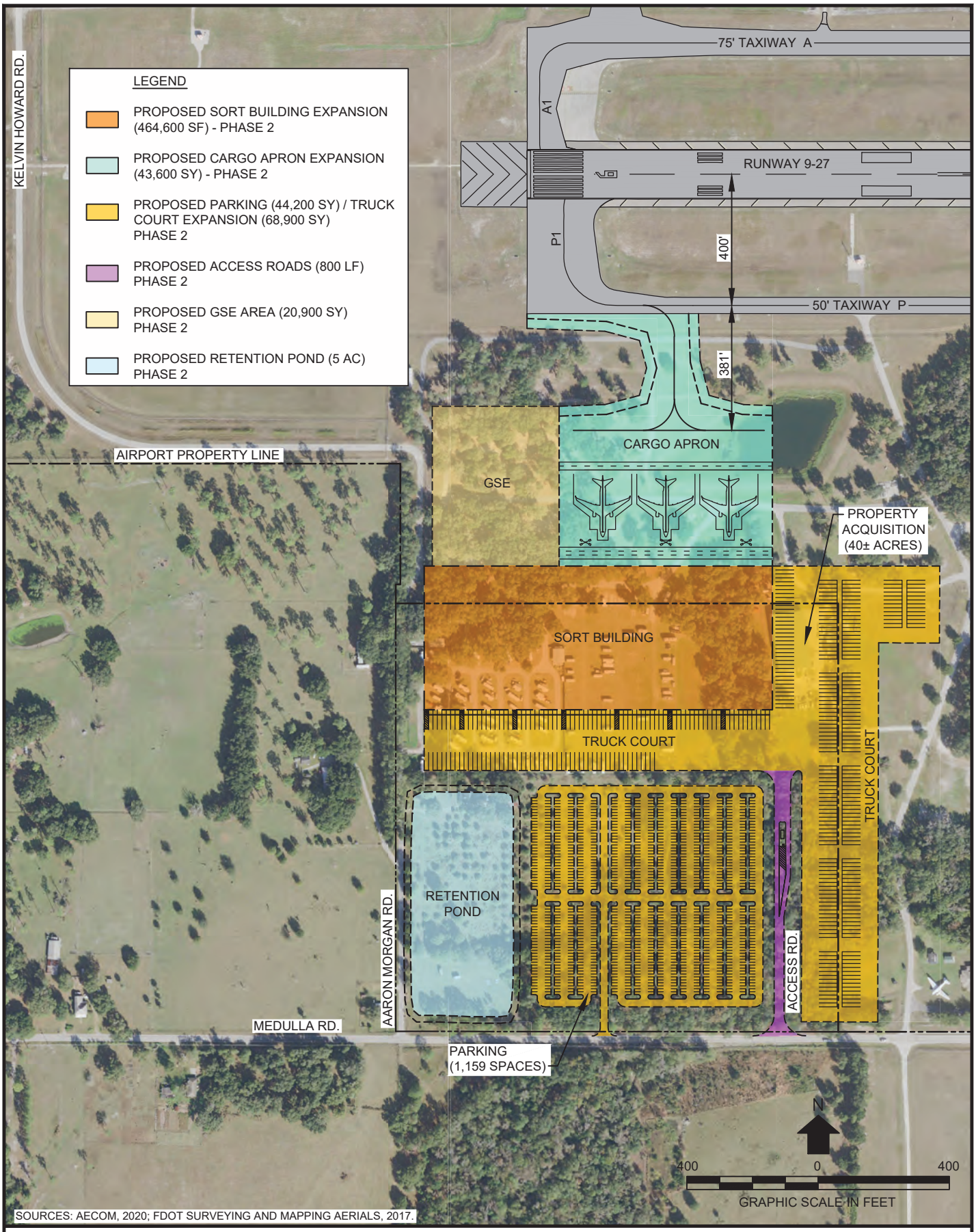
3.2. ALTERNATIVES CONSIDERED

The evaluation process described in **Section 3.1** was applied to the alternatives on **Table 3.2-1**.

Table 3.2-1 EA Alternatives Summary

Project Component	Alternative	Description
Air Cargo Facility	Proposed Development Project **Figure 1.2-1a**	Construct Phase II facilities in the northwest quadrant of the Airport, north of Runway 9 and west of and immediately adjacent to the Phase I facilities. Extend Taxiway A to include an additional aircraft access point to the proposed air cargo apron. Includes a new airport access road to give access to Phase II facilities via Drane Field Road.
	Alternative 1 **Figure 3.2-1**	Construct Phase II facilities in the southwest quadrant of the Airport, south of Runway 9 and approximately 1,300 linear feet (LF) south of Phase I facilities. Construct a new airport access road to give access to Phase II facilities via Medulla Road. Develop taxiway connection to Taxiway P for cargo aircraft facility access. Acquire approximately 40 acres of non-airport land.
	Alternative 2 **Figure 3.2-2**	Construct Phase II facilities in the southeast quadrant of the Airport, south of Runway 27 and approximately 7,700 LF southeast of Phase I facilities. Construct a new access road to give access to Phase II facilities via Medulla Road. Widen Taxiway E to accommodate facility access for cargo aircraft. Acquire approximately 41 acres of non-airport land.
	Alternative 3 **Figure 3.2-3**	Construct Phase II facilities in the northwest quadrant of the Airport, east of Kidron Road and north of Taxiway A. Landside facility access would be developed via Kidron Road and Drane Field Road (via new access road). Acquire approximately 34 acres of non-airport land.
	Alternative 4 **Figure 3.2-4**	Construct Phase II facilities in the northeast quadrant of the Airport, north of Runway 27 and Runway 23, approximately 7,000 LF east of Phase I facilities. Construct a new access road to give access to Phase II facilities via Drane Field Road. Remove portions of Airport Service Road on the eastern boundary of LAL. Acquire approximately 7 acres of non-airport land.
	No-Action Alternative	Phase II development would not be constructed and the tenant air cargo services provider would be constrained only to operational levels supported by Phase I facilities alone.
Fuel Farm	Proposed Development Project **Figure 1.2-1b**	Construct fuel farm facilities in the northwest quadrant of the Airport, at intersection of Taxiway H and Aero Place, approximately 1,700 LF east of the air cargo facilities. Connected to Taxiway H.
	Alternative 1 **Figure 3.2-5**	Construct fuel farm facilities indirectly west of the main terminal at northwest terminus of Airfield Drive West, approximately 4,700 LF east of the air cargo facilities. Connected to Airfield Drive West and the existing General Aviation (GA) apron.
	Alternative 2 **Figure 3.2-6**	Construct fuel farm facilities in the northeast quadrant of the Airport, southeast of Runway 23 endpoint, approximately 7,200 LF east of the air cargo facilities. Connected to Taxiway C.
	Alternative 3 **Figure 3.2-7**	Construct fuel farm facilities in the southeast quadrant of the Airport, south of Runway 27 endpoint, approximately 7,200 LF southeast of the air cargo facilities. Connected to the existing flight school apron.
	No-Action Alternative	Phase II development, including the new fuel farm, would not be constructed and the tenant air cargo services provider would be constrained only to operational levels supported by Phase I facilities alone.

Sources: AECOM, 2020.



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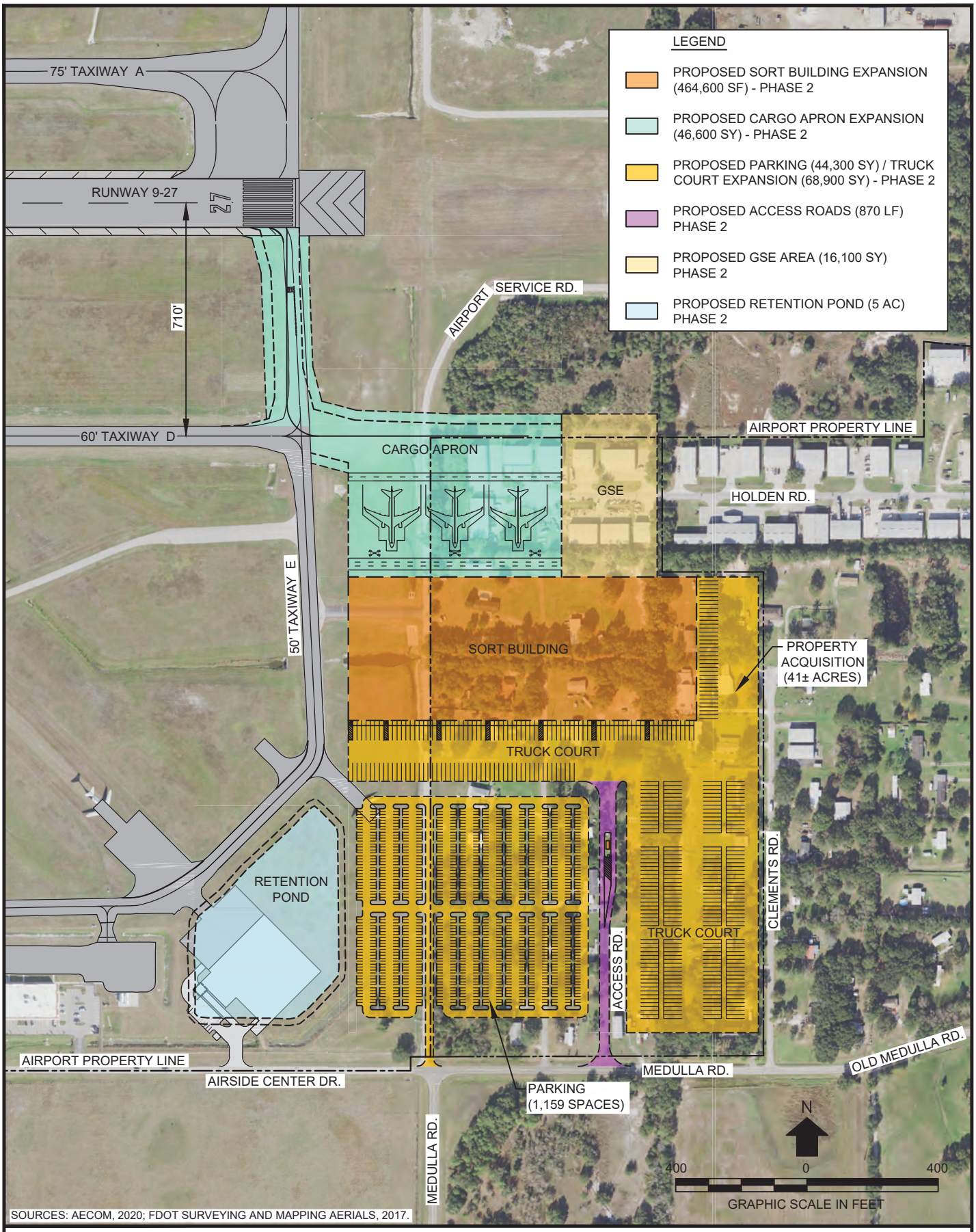
PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

PHASE 2 DEVELOPMENT (ALTERNATIVE 1)

FIGURE 3.2-1



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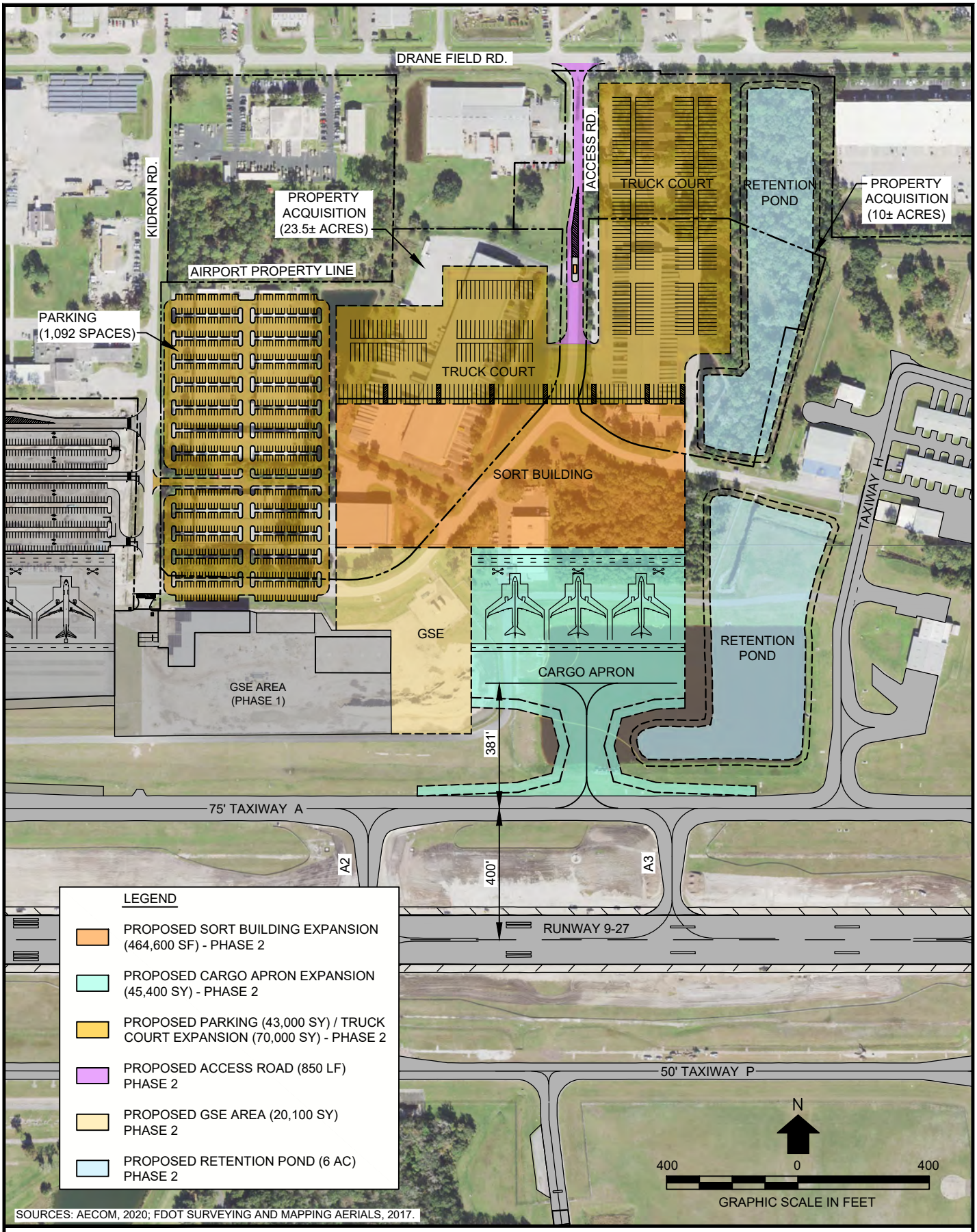
PHASE 2 DEVELOPMENT (ALTERNATIVE 2)

FIGURE 3.2-2



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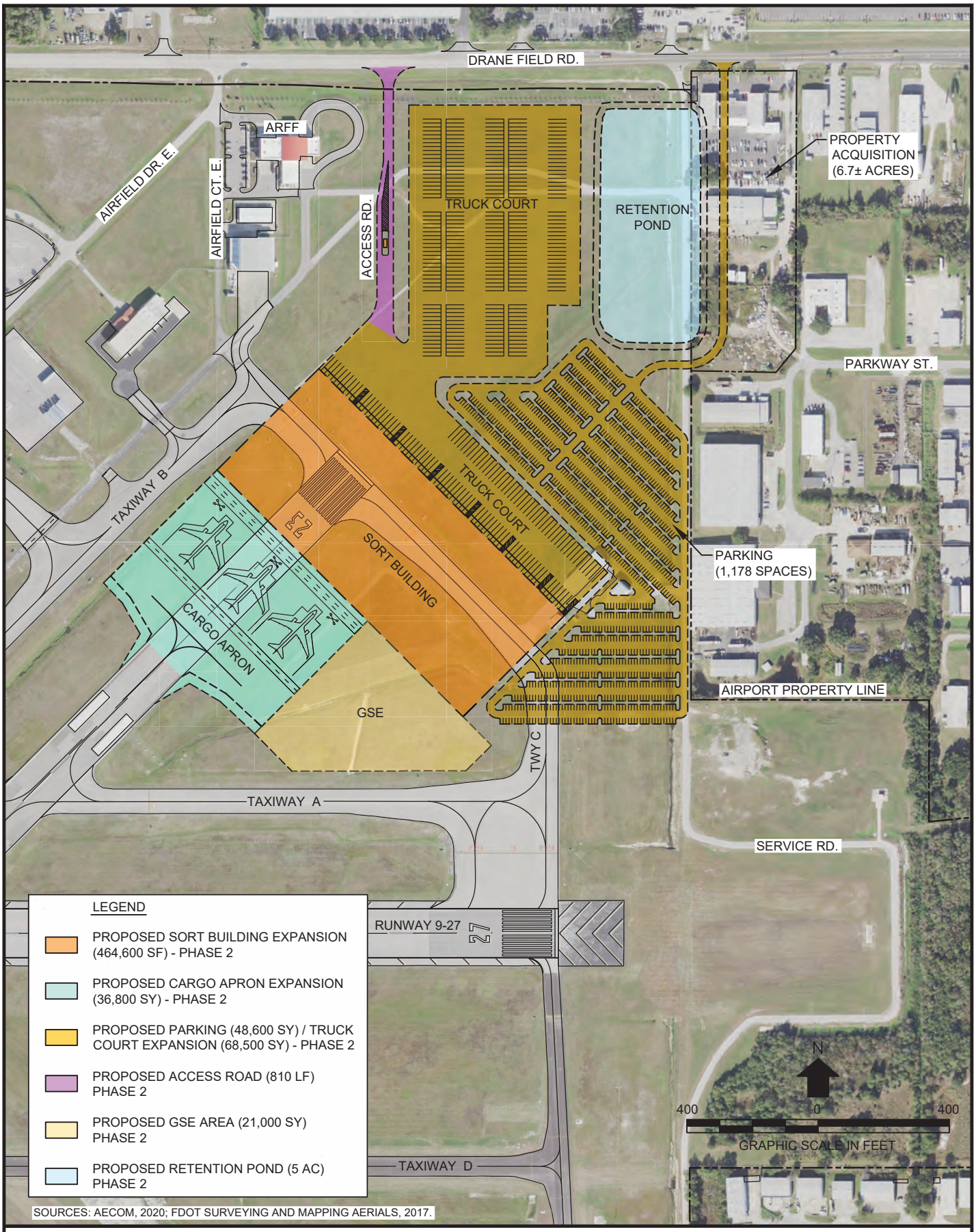
PHASE 2 DEVELOPMENT (ALTERNATIVE 3)

FIGURE 3.2-3



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PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

PHASE 2 DEVELOPMENT (ALTERNATIVE 4)

FIGURE 3.2-4

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PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

FUEL FARM ALTERNATIVE 1

FIGURE 3.2-5

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PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

FUEL FARM ALTERNATIVE 2

FIGURE 3.2-6

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PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

FUEL FARM ALTERNATIVE 3

FIGURE 3.2-7

3.3. ALTERNATIVES EVALUATION RESULTS

3.3.1. AIR CARGO FACILITY DEVELOPMENT ALTERNATIVES

3.3.1.1. PROPOSED DEVELOPMENT PROJECT

The Proposed Development Project meets the stated purpose and need by satisfying all facility sizing and operational requirements (**Table 3.3-1**). There are no airfield accessibility issues, and it would not interfere with existing or planned operations and development at Lakeland Linder International Airport (LAL). Immediate adjacency to the current Phase I air cargo facility offers the best accessibility, which would not impede operational activities at LAL or for surrounding tenants and businesses. Construction activities would involve land clearing and site grading, and the demolition of about 11,000 square yards (SY) of existing roadway pavement in the area. The Proposed Development Project minimizes airfield/vehicular pavement demolition requirements compared to other alternatives.

The Proposed Development Project would modify habitats potentially suitable for threatened and/or endangered species. Approximately 24 acres of wetlands would be impacted by the Proposed Development Project. In addition, roughly 26 acres of 100-year floodplain occur within the footprint of the Proposed Development Project. There are no documented Section 4(f) or historical/cultural resources within the footprint of the Proposed Development Project. Based on this analysis, the Proposed Development Project is carried forward for detailed environmental impact analysis in this EA.

3.3.1.2. ALTERNATIVE 1

Alternative 1 meets the stated purpose and need by satisfying all facility sizing and operational requirements (**Table 3.3-1**). Alternative 1 is geographically separated from Phase I and has the potential to cause delays and operational inefficiencies. Equipment and vehicle movements may be needed to convey cargo between Phase I and Phase II, increasing vehicle and equipment traffic both on airport as well as on public roadways surrounding LAL. Construction activities would involve land clearing and site grading, demolishing about 17,100 SY of existing roadway pavement, and demolishing 13 buildings totaling 23,700 square feet (SF). Property acquisition would total about 40 acres, impacting three residential parcels.

Alternative 1 would prevent the development of second parallel Runway 10-28 at LAL, which has been identified in the current Airport Master Plan as a future facility requirement. Alternative 1 also displaces the location of the Sun n' Fun Aerospace Expo. The Expo is an annual event attended by approximately 200,000 guests, exhibitors, volunteers, sponsors and performers to raise money for the Aerospace Center for Excellence. The Center is a non-profit organization that supports science, technology, engineering and mathematics-related aerospace education.

For these reasons, Alternative 1 was not evaluated further in this EA.

3.3.1.3. ALTERNATIVE 2

Alternative 2 meets the stated purpose and need by meeting all facility sizing and operational requirements (**Table 3.3-1**). Like Alternative 1, it is geographically separated from Phase I and has the potential to cause delays, operational inefficiencies and increased vehicular traffic between Phase I and Phase II facilities.

Construction activities would involve land clearing and site grading. Alternative 2 would also require demolishing about 4,800 SY airfield pavement, 16,900 SY of vehicle pavement, and 32 buildings totaling 175,620 SF. Property acquisition would total about 41 acres, impacting 10 warehousing parcels and 16 residential parcels. Also, it is located within the runway protection zone of future proposed Runway 10R-28L, which would be incompatible with Master Plan objectives. The proposed retention pond displaces a newly constructed KTTW hangar and apron area. For these reasons, Alternative 2 was not evaluated further in this EA.

Table 3.3-1 Air Cargo Facility Sizing Summary

Metric	Proposed Development Project	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Phase I Only (No-Action)
Sortation and Office Building Space (SF)	615,200	687,600	687,600	687,600	687,600	223,000
Truck Yard Size (SY)	66,600	81,300	81,300	82,400	80,900	12,400
Number of Truck Spaces	445	445	445	444	445	75
Aircraft Parking Positions	9	9	9	9	9	6
Ground Support Equipment (GSE) Staging (SY)	40,600	43,900	39,100	43,100	44,000	23,000
Employee Parking Lot Size (SY)	68,800	70,400	70,500	69,200	74,800	26,200
Number of Employee Spaces	1,747	1,786	1,786	1,719	1,805	627

Source: AECOM, 2020. Sizes shown are total of Phase I and Phase II unless otherwise indicated.

3.3.1.4. ALTERNATIVE 3

Alternative 3 meets the stated purpose and need by satisfying all facility sizing and operational requirements (**Table 3.3-1**). Like the Proposed Development Project, Alternative 3 offers immediate adjacency to the current Phase I air cargo facility, promoting operational efficiency. Construction activities would involve site grading, demolishing about 84,000 SY of vehicle pavement, and demolishing 15 buildings totaling 259,800 SF. Property acquisition would total about 34 acres, displacing numerous industrial and manufacturing businesses.

For these reasons, Alternative 3 was not evaluated further in this EA.

3.3.1.5. ALTERNATIVE 4

Alternative 4 meets the stated purpose and need by satisfying all facility sizing and operational requirements (**Table 3.3-1**). Construction activities would involve land clearing and site grading. Alternative 4 would also require demolishing about 28,000 SY vehicle pavement, 21,600 SY of airfield pavement, and three buildings totaling 50,000 SF. Property acquisition would total seven acres, displacing numerous industrial and manufacturing businesses.

Proposed drainage and employee parking and access features of Alternative 4 would also remove portions of the existing Airport Service Road on the eastern edge of LAL, cutting off the north-south connection that this road currently offers. Also, Alternative 4 would interfere with the continued operation of Runway 5-23 and would require the Runway's demolition to be constructed.

Alternative 4 is also not in full compliance with regulations designed to prevent and control obstructions to navigable airspace at airports.[8] The southern corner of the proposed air cargo sortation building would be 200 feet above mean sea level (msl) (**Figure 3.3-1**). Anything over 164 feet msl in this area is

[8] Regulations codified at 14 CFR Part 77 (or "Part 77") are designed to promote the safe and efficient use of navigable airspace. Specifically, they prevent the persistence or placement of objects within the takeoff and/or landing area of an airport. They also protect areas, called "surfaces", which extend outward from a runway across the ground, and upward into the air. Any objects in these areas or surfaces have potential to obstruct or interfere with safe aircraft landing and takeoff activities.

considered a vertical obstruction to aircraft using Runway 9-27 to land and take-off. Also, the southernmost aircraft parking position shown on the diagram is intended for a Boeing 767 aircraft. The tail of the aircraft parked in this location would be considered an obstruction by about three feet. In certain cases, FAA considers and allows mitigations for obstructions, such as lighting and marking. When compared to the other alternatives, Alternative 4 would penetrate approach and departure surfaces. Therefore, it was eliminated from further consideration.

3.3.1.6. NO-ACTION ALTERNATIVE

The No-Action would not develop additional air cargo facilities and therefore does not meet the purpose and need. It was not evaluated further for operational, constructability, and environmental considerations. However, it is retained in this EA for comparison purposes to comply with CEQ regulations.

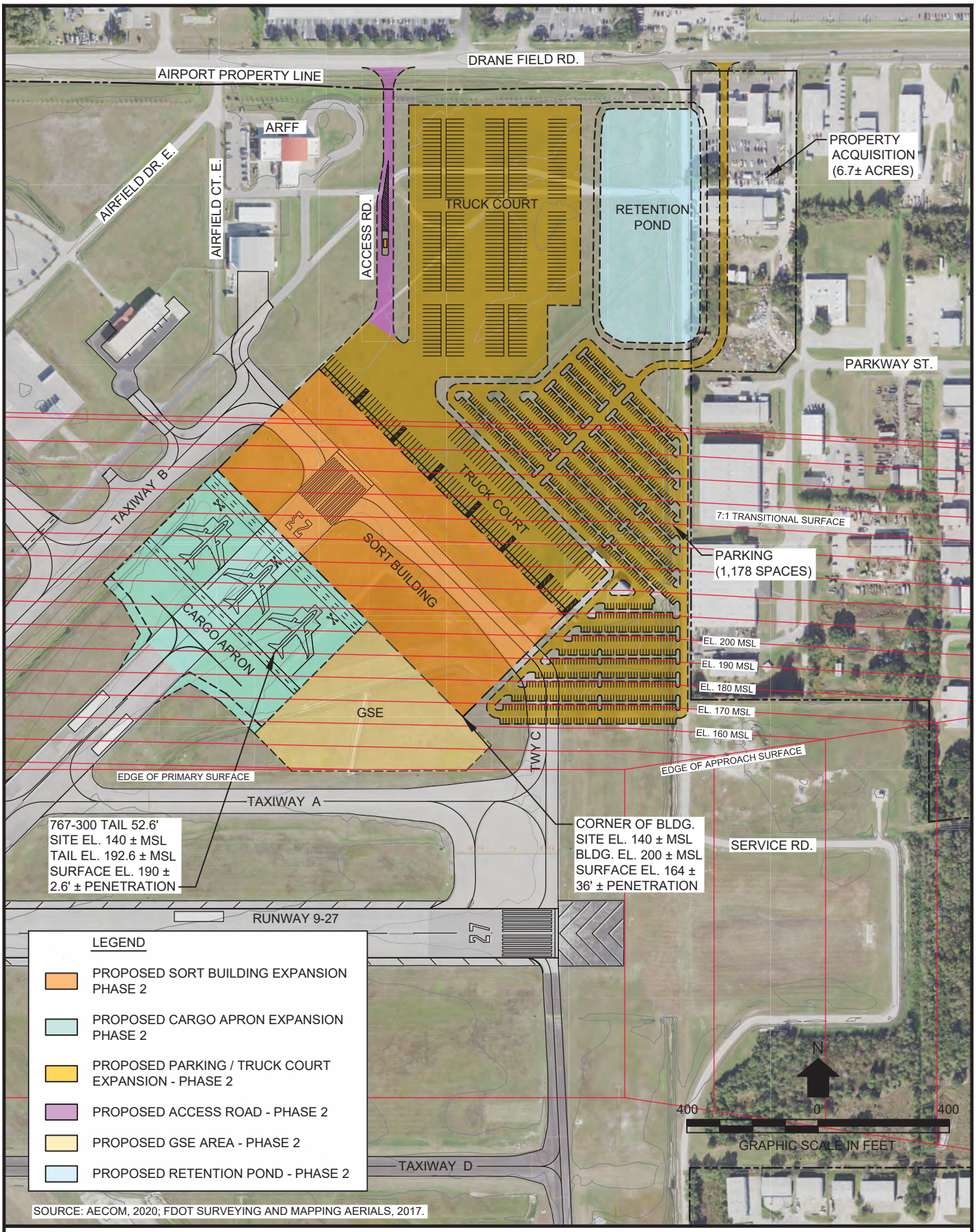
3.3.1.7. AIR CARGO FACILITY ALTERNATIVES SUMMARY

The results of the alternatives analysis are summarized on **Table 3.3-2** and show that only the Proposed Development Project and the No-Action Alternatives are retained for further analysis in the EA.

3.3.2. FUEL FARM DEVELOPMENT ALTERNATIVES

The fuel farms currently at LAL can store up to 24,000 gallons of aviation gasoline (AvGas) and 72,000 gallons of Jet-A fuel for current airport users. The air cargo facility demands an additional capacity of 850,000 gallons of Jet-A fuel. With the exception of the No-Action Alternative, all three fuel farm alternatives, including the Proposed Development Project, meet the purpose and need to offer this volume.

Siting fuel storage facilities near major airside and landside development is conducive to operating efficiently, reduces the number of runway/airfield crossings by fuel trucks, and increases the overall capacity. The Proposed Development Project is most efficient because it minimizes distance between the fuel farm and air cargo aircraft operations areas, remains close to the existing passenger terminal aprons, and minimizes fuel truck travel times compared to the other alternatives considered. In comparison, the other Alternatives would cause inefficient fueling operations for the air cargo facilities due to greater distances away. Alternative 3 would also involve modification/removal of existing fuel farm facilities near the flight school on the southeast ramp, which could involve environmental permitting and monitoring to minimize the risk of spilling hazardous material.



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PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

PART 77 SURFACES (ALTERNATIVE 4)

FIGURE 3.3-1

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Table 3.3-2 Air Cargo Facility Alternatives Summary

Screening Level	Factor	Proposed Development Project	Alternative 1	Alternative 2	Alternative 3	Alternative 4	No-Action
1	Purpose and Need	Meets purpose and need by fulfilling all facility sizing and operational requirements specified by the tenant air cargo service provider (**Table 3.3-1**)	Meets purpose and need by fulfilling all facility sizing and operational requirements specified by the tenant air cargo service provider (**Table 3.3-1**)	Meets purpose and need by fulfilling all facility sizing and operational requirements specified by the tenant air cargo service provider (**Table 3.3-1**)	Meets purpose and need by fulfilling all facility sizing and operational requirements specified by the tenant air cargo service provider (**Table 3.3-1**)	Meets purpose and need by fulfilling all facility sizing and operational requirements specified by the tenant air cargo service provider (**Table 3.3-1**)	Does not fulfill sizing and operational requirements (**Table 3.3-1**)
Retained for Further Analysis?		**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
2	Accessibility/Operational Considerations	Immediately adjacent to Phase I	Geographically separated from Phase I and has the potential to cause delays and operational inefficiencies	Geographically separated from Phase I and has the potential to cause delays and operational inefficiencies	Immediately adjacent to Phase I	Geographically separated from Phase I and has the potential to cause delays and operational inefficiencies. Removes portions of the existing Airport Service Road, cutting off the north-south connection that this road currently offers	Cargo operations become constrained due to facility size and capacity limits
	Constructability	Requires land clearing and site grading. Demolishes about **11,000 SY** of existing roadway pavement in the area.	Requires land clearing and site grading. Demolishes about **17,100 SY** of existing roadway pavement, and 13 buildings totaling **23,700 SF**	Requires land clearing and site grading. Demolishes about **21,000 SY** of vehicle and airfield pavement, and 32 buildings totaling **175,620 SF**	Requires site grading. Demolishes about **84,000 SY** of vehicle pavement, and 15 buildings totaling **259,800 SF**	Requires land clearing and site grading. Demolishes nearly **50,000 SY** of vehicle and airfield pavement, and 3 buildings totaling **50,000 SF** Facilities in this location would be vertical obstructions to aircraft using Runway 9-27 to land and take-off	No construction would occur
	Land Acquisition	None	40 acres, impacting three residential parcels	41 acres, impacting 10 warehousing parcels and 16 residential parcels	34 acres, displacing numerous industrial and manufacturing businesses.	7 acres, displacing numerous industrial and manufacturing businesses	None
	Land Use Compatibility	Compatible	Off-airport residential land uses would be acquired but could be re-zoned/converted to airport use	Off-airport residential land uses would be acquired but could be re-zoned/converted to airport use	Compatible	Compatible	Compatible
	Interference with Existing/Planned Operations and Development	None	Displaces Sun n' Fun Aerospace Expo	Located within the runway protection zone of future proposed Runway 10-28. The proposed retention pond displaces a newly constructed KTTW hangar and apron area	None	Requires demolition of Runway 5-23	None
Retained for Further Analysis?		**Yes**	**No**	**No**	**No**	**No**	**Yes**
3	Potential Environmental Impacts	24 acres of wetlands and 26 acres of 100-year floodplain located within the footprint	Not applicable	Not applicable	Not applicable	Not applicable	None
Analyzed in EA?		**Yes**	**No**	**No**	**No**	**No**	**Yes**

Source: AECOM, 2020

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CHAPTER 4 AFFECTED ENVIRONMENT

4.1. INTRODUCTION

This chapter gives a description of the relevant existing human, physical, and natural environment that may be affected by the Proposed Development Project and its alternatives. The amount of information on each resource is based on the extent of potential impact and is in line with the impact's relevance to the Proposed Development Project. The potential environmental impacts of the alternatives retained for detailed evaluation are discussed in **Chapter 5** of this Environmental Assessment (EA).

4.1.1. STUDY AREAS

Based on the EA Proposed Development Project identified in **Section 1.2**, a Direct Study Area (DSA) was created within which direct physical impacts of the Proposed Development Project (i.e., construction footprint) will be characterized and disclosed. The DSA also coincides with the proposed Biological Study Area (BSA) and Direct Effects Area of Potential Effect (APE) for the Proposed Development Project, which will be used for Endangered Species Act of 1973 (ESA) coordination and Section 106 National Historic Preservation Act (NHPA) coordination, respectively. Where appropriate, potential indirect impacts to biological resources which may occur outside of the DSA/BSA are identified and disclosed. For the Final EA, the DSA, BSA, and Direct Effects APE were expanded to include areas potentially affected by the recent inclusion of the proposed Taxiway A extension and updated location of the proposed stormwater detention pond. The following discussions of Affected Environment and Environmental Consequences, as well as associated tables and figures were amended to include theses expanded study areas for description and further analysis where warranted. The addition of the proposed Taxiway A extension and new pond location resulted in no material change to the EA's analyses, findings, or conclusions.

An Indirect Study Area (ISA) was also created to assess potential secondary impacts outside of the construction footprint of the Proposed Development Project. It corresponds to the area within the composite 65 decibel (dB) day-night average sound level (DNL 65 dB) and higher noise contour of the Proposed Development Project and retained alternatives. The ISA also serves as the Indirect Effects APE and will also be used to identify, disclose and evaluate potential impacts on eligible historic architectural resources protected by the NHPA, Department of Transportation (DOT) Section 4(f) resources and other potentially incompatible land uses.

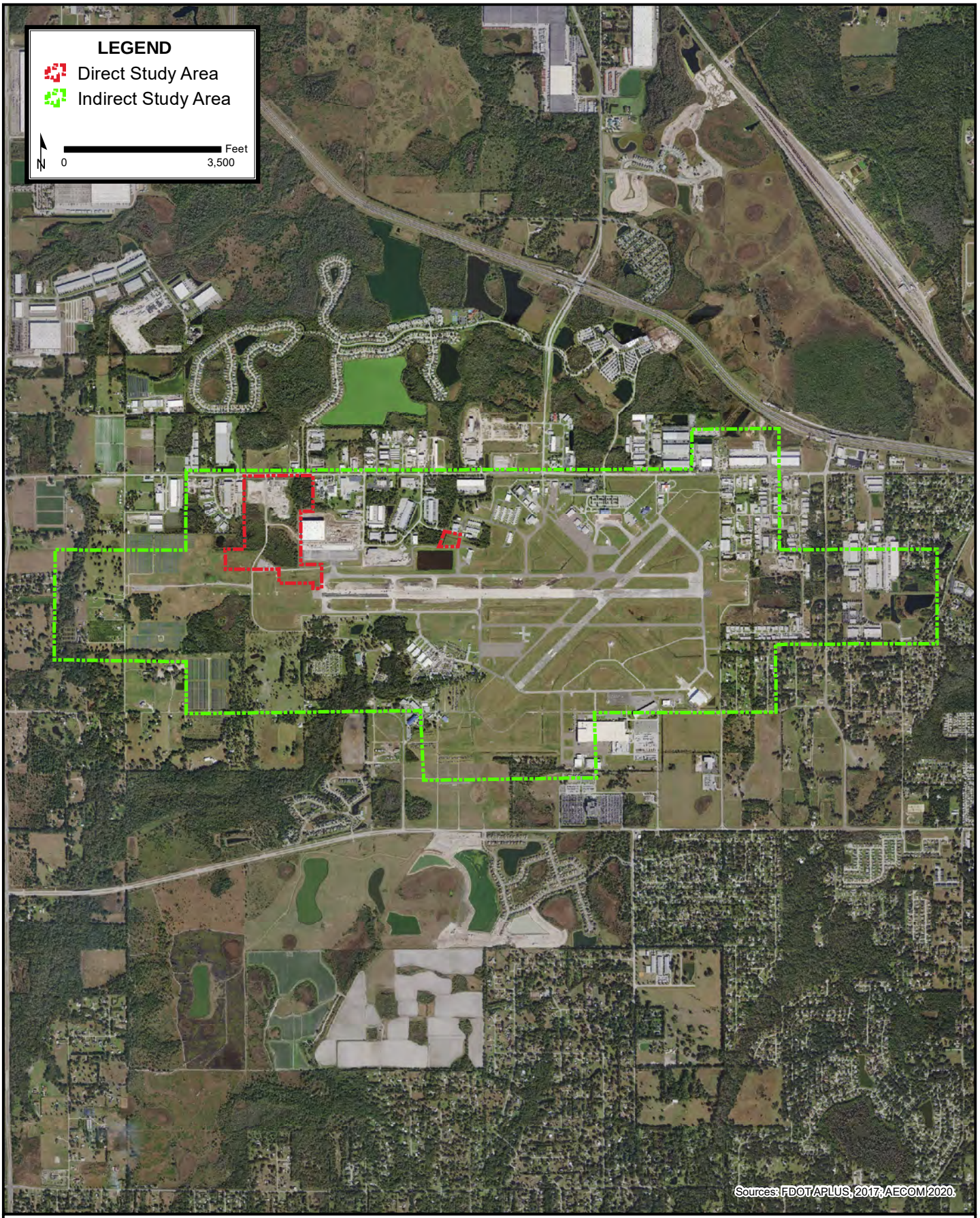
Finally, a Socioeconomic Study Area (SSA) was established to broadly characterize relevant socioeconomic and environmental justice conditions around the Airport. The SSA is comprised of United States (U.S.) Census Block Groups that comprise and bound the Airport property boundary.[9]

Refer to **Figure 4.1-1** for a graphical depiction of the DSA and ISA delineated for the EA. The SSA is shown on **Figure 4.1-2**.

4.1.1.1. ENVIRONMENTAL RESOURCE EVALUATION

Table 4.1-1 identifies the environmental resource categories that were considered for defining the affected environment, as well as evaluating the potential environmental consequences of the Proposed Development Project as detailed in **Chapter 5**. **Table 4.1-1** also explains which EA study areas described in **Section 4.1.1** apply to each category. For any resource categories eliminated from further analysis, **Table 4.1-1** states the reasons for being eliminated.

[9] Block Groups 120570130012, 121050120041, 121050120031, 120570130022, 121050119021, 121050119022, 121050119111, 121050119091.



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

DIRECT AND INDIRECT STUDY AREAS

FIGURE 4.1-1

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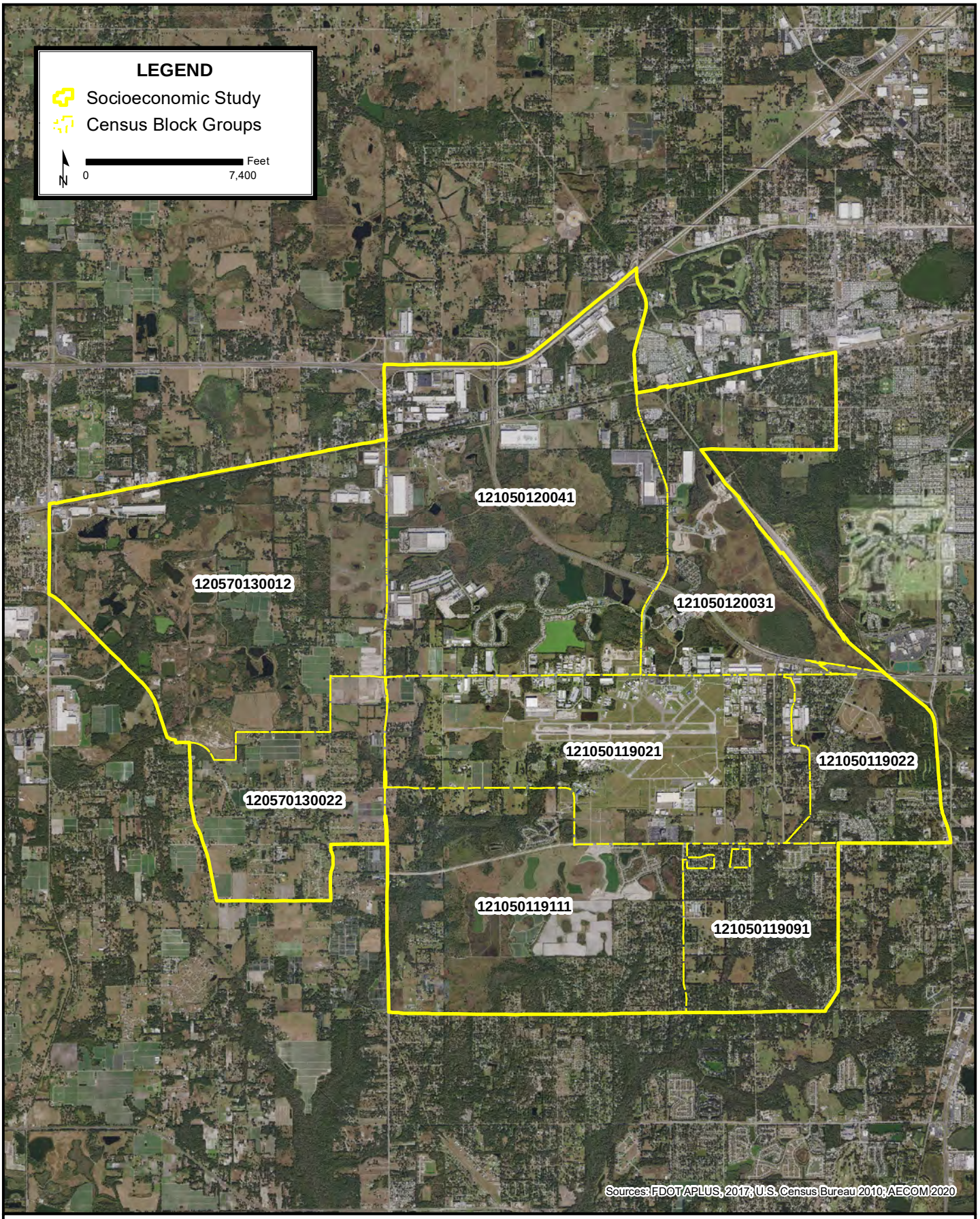

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

SOCIOECONOMIC STUDY AREA

FIGURE 4.1-2

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Table 4.1-1 Environmental Resources Evaluated

Category	APE	BSA	DSA	ISA	SSA
Air Quality	No	No	Yes	Yes	No
Biological Resources	No	Yes	No	No	No
Climate	No	No	Yes	Yes	No
Coastal Resources	No	No	Yes	No	No
Hazardous Materials, Pollution Prevention, and Solid Waste	No	No	Yes	No	No
Historical, Architectural, Archaeological, and Cultural Resources	Yes	No	Yes	No	No
Land Use	No	No	Yes	Yes	No
Natural Resources and Energy Supply	No	No	Yes	No	No
Noise and Noise Compatible Land Use	Yes	No	Yes	Yes	No
Socioeconomics, Environmental Justice, Children's Health and Safety Risks	No	No	No	No	Yes
Light Emissions and Visual Effects	No	No	Yes	No	No
Wetlands	No	Yes	No	No	No
Floodplains	No	No	Yes	No	No
Surface/Groundwater Resources	No	No	Yes	No	No
Category	**Resources Eliminated from Further Consideration**				
DOT Section 4(f)	*The nearest eligible property is Springhead Park located approximately 3 miles southwest of LAL. Direct and indirect impacts, including constructive use would not occur.*				
Farmlands	*No "prime farmland" and/or "farmlands of statewide/unique importance" are located in the DSA.*				
Wild and Scenic Rivers	*The nearest water body included in the Nationwide Rivers Inventory, Alafia River, is located approximately 12 miles southwest of LAL.*				

Sources: Federal Aviation Administration (FAA) Order 1050.1F, Exhibit 4-1, July, 2015.
APE = Area of Potential Effect; BSA = Biological Study Area; DSA= Direct Study Area; ISA = Indirect Study Area; SSA = Socioeconomic Study Area; LAL = Lakeland Linder International Airport

4.1.2. STUDY YEARS

2019 will be studied to establish an environmental and operational baseline at Lakeland Linder International Airport (LAL). Construction activities associated with the Proposed Development Project are anticipated to occur in 2022. Therefore, the first year for environmental analysis of Proposed Development Project operational impacts is 2022. For disclosure of potential additional operational impacts due to the Proposed Development Project, the forecast year 2027 is also studied in this EA.

4.2. AIR QUALITY

To enforce the federal Clean Air Act, the U.S. Environmental Protection Agency (EPA) identifies air pollutants that cause or contribute to the endangerment of human health and/or environmental welfare. From this, the EPA establishes air quality "criteria" that guide the establishment of air quality standards to regulate these pollutants (42 U.S. Code [U.S.C.] Sections (§§) 7408 - 7409). To date, EPA has established such criteria for six air pollutants: carbon monoxide (CO), lead, nitrogen dioxide, 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).[10]

[10] EPA. National Ambient Air Quality Standards as of January 28, 2020.

EPA delegates authority to enforce the NAAQS with individual states. In the state of Florida, the Florida Department of Environmental Protection (FDEP) is the state agency charged with demonstrating compliance with the NAAQS.

4.2.1. RESOURCE CHARACTERIZATION

4.2.1.1. AIR QUALITY MONITORING

EPA evaluates outdoor air monitoring data on a geographic basis. Areas where monitored air concentrations 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 air concentrations exceed the NAAQS are designated by EPA as *nonattainment* areas. Lastly, areas that have historically exceeded the NAAQS, but have since remedied these violations, are known as *maintenance* areas. According to the EPA's Green Book listing of nonattainment areas, the area of Polk County in which LAL is located is listed as attainment/unclassifiable for all current NAAQS.[11]

Two monitoring sites, located approximately 3.2 and 3.3 miles from LAL, monitor for O_3, $PM_{2.5}$, and SO_2. The three next-closest monitoring sites are located approximately 12 to 26 miles from LAL and monitor for the remaining criteria pollutants. Available data indicate no current violations of the NAAQS for any criteria pollutants at the available monitoring sites. Additional information on the NAAQS and air monitoring in Polk County is summarized in **Appendix C**.

4.2.1.2. EXISTING CONDITIONS AIR EMISSIONS INVENTORY

Sources of air emissions in the LAL area include a variety of mobile and stationary combustion sources, including aircraft, aircraft Auxiliary Power Units (APU) to deliver comfort air and power to instrumentation, ground support equipment (GSE) to service arriving and departing aircraft, and motor vehicle traffic on airport roadways

To describe existing airport air quality conditions, annual emissions from aircraft, GSE and APU emissions at LAL are shown on **Table 4.2-1**, and show that aircraft emissions are the bulk of the "offroad" emissions generated at the airport**.** Emissions of greenhouse gases (GHGs) are also disclosed on **Table 4.2-1**. Because the bulk of air emissions from motor vehicles in the vicinity of LAL occur off-airport on surrounding public roadways, these are accounted for separately on **Table 4.2.-2** below. See **Sections 4.4** and **5.4** of this EA for further discussion of GHG emissions.

Table 4.2-1 Existing Conditions Airport Emissions Inventory (2019)

Source	CO (tons)	NO_x (tons)[1]	$PM_{2.5}$ (tons)	PM_{10} (tons)	SO_x (tons)	VOC (tons)[1]	CO_2e (metric tons)
Aircraft	683.8	9.7	0.8	0.8	2.2	23.2	5,331
APU	1.4	0.3	<0.1	<0.1	0.1	0.0	148
GSE	6.6	1.4	0.1	0.1	0.8	0.3	818

CO_2e = carbon dioxide equivalent; GHG = greenhouse gases; CO = Carbon Monoxide; NO_x = nitrogen oxides; $PM_{2.5}$ = particulate matter equal to or less than 2.5 micrometers in diameter; PM_{10} = particulate matter equal to or less than 10 micrometers in diameter; SO_x = sulfur oxides; VOC = volatile organic compounds.

[1] NO_x and VOC are considered precursors to criteria pollutant formation (O_3 and $PM_{2.5}$)

Sources: Aviation Environmental Design Tool (AEDT) 3c, 2020.

[11] EPA. Nonattainment Areas of for Criteria Pollutants (Green Book). https://www.epa.gov/green-book. Accessed January 28, 2020

Table 4.2-2 Existing Conditions Motor Vehicle Emissions Inventory (2019)

Source	CO (tons)	NO_x (tons)[1]	$PM_{2.5}$ (tons)	PM_{10} (tons)	SO_x (tons)	VOC (tons)[1]	CO_2e (metric tons)
Motor Vehicles	1,079.55	77.15	1.71	5.02	1.87	55.26	86,162

[1] NO_x and VOC are considered precursors to criteria pollutant formation (O_3 and $PM_{2.5}$)
Sources: EPA Motor Vehicle Emissions Simulator, 2020.

4.3. BIOLOGICAL RESOURCES

The Airport and surrounding areas evaluated for potential presence of plant and animal species listed as endangered or threatened at the federal and state levels (i.e., "listed species"). The ESA requires that all federal agencies conserve endangered and threatened species where possible and prohibits federal agencies from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its critical habitat. Projects that would jeopardize a federally listed species or impact its critical habitat must contain conservation measures or habitat mitigation that removes the jeopardy.

4.3.1. RESOURCE CHARACTERIZATION

An Advance Notification of the Proposed Development Project was sent to the FDEP State Clearinghouse requesting comments on the Proposed Development Project. Through this process, the Clearinghouse requested comments from the Florida Fish and Wildlife Conservation Commission (FWC) on potential effects of the Proposed Development Project on listed species and potential permit requirements (see **Appendix A**). Also, an official species list was requested from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database (consultation code 04EF2000-2020-SLI-0368), and is given in **Appendix A.**

A biological assessment (BA) was performed for this EA due to the potential for listed species to occur within the BSA and the potential impacts of the Proposed Development Project on these species. A copy of the BA is contained in **Appendix D**. The BA describes the habitats and listed species potentially present within the BSA and the effects that the Proposed Development Project could have on those species and critical habitat.

4.3.1.1. EXISTING LAND AND VEGETATIVE COVER

Five upland community types, three wetland community types, and one surface water community type are present within the BSA (**Table 4.3-1** and **Figure 4.3-1**). The individual wetlands are depicted on **Figure 4.11-1** and further discussed in **Section 4.11-1**. All vegetative habitats and land cover types within the BSA were classified using Florida Land Use, Cover and Forms Classification System (FLUCFCS). Wetland habitats were also classified using the USFWS' *Classification of Wetlands and Deepwater Habitats of the United States*. **Table 4.3-1** summarizes the acreage of each land use/vegetative cover type within the BSA.[12] A summary description of each land use/vegetative cover type is given in the BA (**Appendix D**).

[12] The 81 acres of land cover within the BSA includes 8.5 acres of additional Transportation land cover associated with the inclusion of the extension of Parallel Taxiway A in the Proposed Development Project in the Final EA.

Table 4.3-1 Existing Land and Vegetative Communities within the BSA

Classification	Vegetative Community/ Land Cover	FLUCFCS[1] Code	USFWS Classification[2]	Acres in BSA
Uplands	Industrial	150	N/A	0.6
	Open Land	190	N/A	28.2
	Hardwood-Conifer Mixed	434	N/A	0.9
	Disturbed	740	N/A	8.3
	Transportation	810	N/A	14.4
			Subtotal Uplands	***52.4***
Wetlands	Cypress	621	PFO2C	1.4
	Wetland Forested Mixed	630	PFO1/3C	5.6
	Wetland Scrub	631	PFO1/2C	21.3
			Subtotal Wetlands	***28.3***
Other Surface Waters	Streams and Waterways	510	PUBx	0.3
			Subtotal Other Surface Waters	***0.3***
			TOTAL[1]	**81.0**

Notes: N/A = Not applicable; PFO2C = palustrine, forested, needle-leaved deciduous, seasonally flooded; PFO1/3C = palustrine, forested, broad-leaved deciduous/needle-leaved evergreen, seasonally flooded; PFO1/2C = palustrine, forested, needle-leaved/broad-leaved deciduous, seasonally flooded; PUBx = palustrine, unconsolidated bottom, excavated

[1] Includes 8.5 acres of Transportation land use to reflect the addition of the proposed Taxiway A extension to the Proposed Development Project.

[2] Florida Department of Transportation (FDOT), *Florida Land Use, Cover and Forms Classification System (FLUCFCS) Handbook*, 1999.

[3] Cowardin, Lewis M., *et.al. U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States.* 1979. Sources: as above; also, Southwest Florida Water Management District (SWFWMD) 2017 Land Use and Cover Geographic Information System (GIS) Database; AECOM, 2020.

4.3.1.2. WILDLIFE

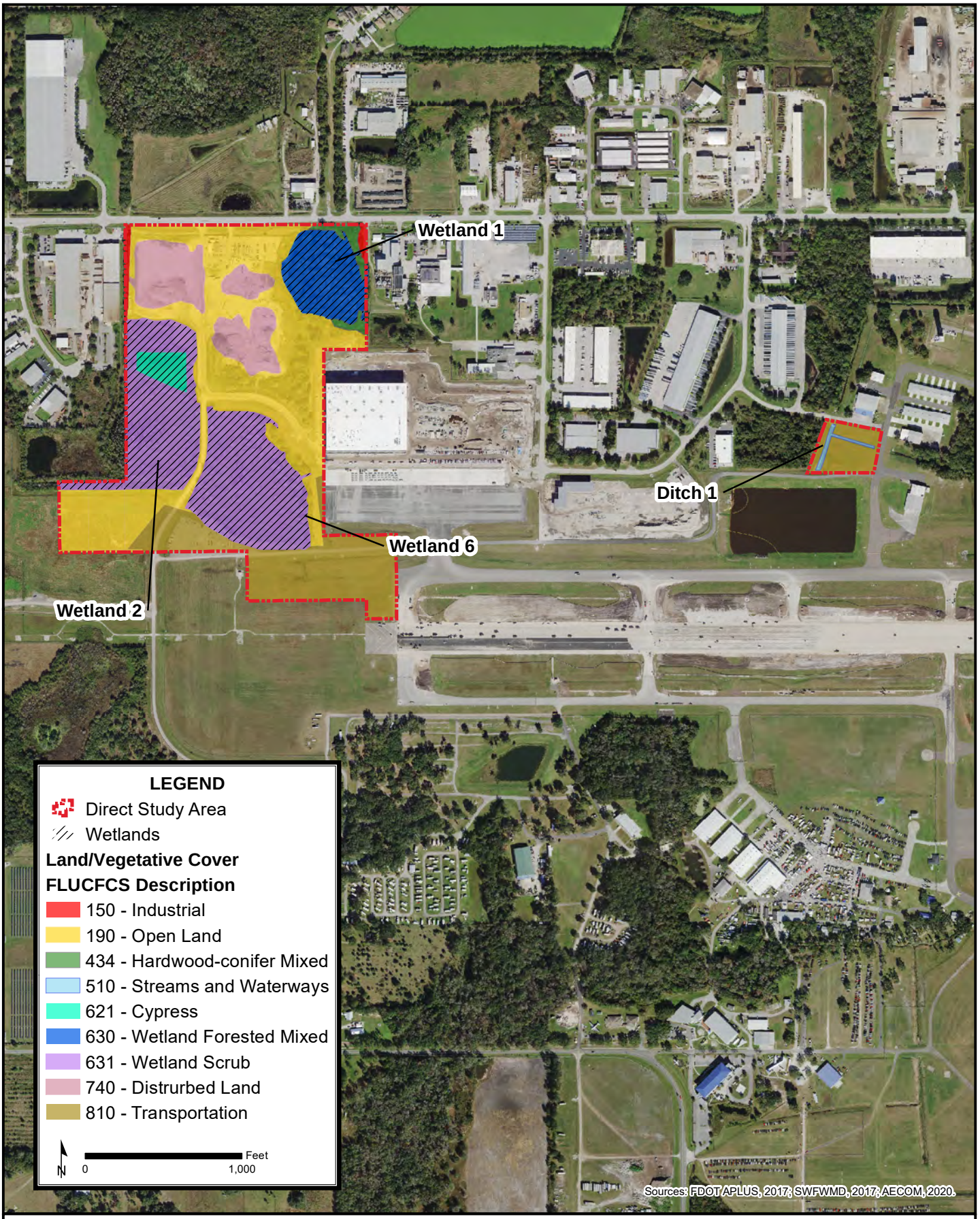
The open areas within the BSA offer potential habitat for lizards, snakes, field birds, turkeys, shrews, rats, rabbits, skunks, coyotes, and bobcats. However, these areas are regularly mowed which limits the amount of sufficient cover. The forested and scrub wetlands in the BSA offer potential habitat for songbirds, snakes, wading birds, and small mammals. An upland-cut drainage ditch offers potential habitat for freshwater turtles, wading birds, fish, and frogs.

Habitat use by large-bodied mammals (i.e., deer, feral pigs, coyotes, etc.) on the Airport property is limited due to existing security fencing around the Airport property, ongoing construction activities, and roadways. During field review, red-winged blackbirds (*Agelaius phoeniceus*) were observed within the forested wetlands and various fish were observed within the drainage ditch.

A Federal Aviation Administration (FAA)-approved Wildlife Hazard Management Plan (WHMP) is used at LAL. As part of the WHMP, the City, as the Airport Sponsor, is responsible for carrying out measures that will minimize and/or eliminate hazardous wildlife on Airport property. Five wildlife groups were identified as having the most significant potential threat to air operations at LAL:

- Large wading birds such as Florida sandhill cranes, wood storks, and great egrets.
- Medium-sized wading birds that forage or fly in groups such as cattle egrets and white ibis;
- Large raptors such as bald eagles, hawks, osprey, and vultures;
- Small birds that fly in flocks or groups such as red-winged blackbirds and swallows;
- Large/medium-sized mammals such as coyotes, feral hogs, bobcats, and raccoons.

In July 2013, USFWS granted a Depredation permit that is renewed annually and authorizes the City to legally remove, using methods specified by USFWS, listed species and migratory bird species that pose a threat to human safety.



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EXISTING LAND AND VEGETATIVE COVER

FIGURE 4.3-1

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4.3.1.3. LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

The BSA was assessed for the presence of, or potential use by, federally and state listed plant and animal species. No designated critical habitat for any federally listed species is located within the BSA. **Table 4.3-2** gives a summary of the listed and protected species potentially located within the BSA. Further discussion of the listed species in **Table 4.3-2** is given in the BA (**Appendix D**).

Table 4.3-2 Listed Species[1] Potentially Located within BSA

Category	Scientific Name	Common Name	Federal Status[2]	State Status[3]
Plants	*Agrimonia incisa*	Incised groove-bur	NL	T
	Ophioglossum palmatum	Hand fern	NL	E
	Pecluma ptilota var. bourgeauana	Comb (swamp) polypody	NL	E
	Platanthera integra	Yellow fringeless orchid	NL	E
	Salix floridana	Florida willow	NL	E
	Thelypteris serrata	Toothed maiden fern	NL	E
Reptiles	*Drymarchon corais couperi*	Eastern indigo snake	T	T
	Gopherus polyphemus	Gopher tortoise	C	T
Birds	*Antigone canadensis pratensis*	Florida sandhill crane	NL	T
	Aphelocoma coerulescens	Florida scrub jay	T	T
	Athene cunicularia floridana	Florida burrowing owl	NL	T
	Egretta caerulea	Little blue heron	NL	T
	Egretta tricolor	Tricolored heron	NL	T
	Falco sparverius Paulus	Southeastern American kestrel	NL	T
	Mycteria americana	Wood stork	T	T
	Polyborus plancus audubonii	Audubon's crested caracara	T	T
	Rostrhamus sociabilis plumbeus	Everglade snail kite	E	E
	Sternula antillarum	Least Tern	NL	T
Other Species of Concern	*Haliaeetus leucocephalus*	Bald eagle	NL[4]	NL[4]
	Ursus americanus floridanus	Florida black bear	NL[5]	NL[5]

Note:
T = Threatened; E = Endangered; NL = Not Listed; C = Candidate

[1] As reported by the "Florida Natural Areas Inventory Tracking List, Polk County" http://www.fnai.org and the USFWS IPaC "Official Species List".

[2] As listed by the USFWS in 50 Code of Federal Regulations (CFR) 17 (http://www.fws.gov/endangered/), updated April 2019.

[3] Plant species listed by the Florida Department of Agriculture and Consumer Services pursuant to Chapter 5B-40, Florida Administrative Code (F.A.C,) updated 2010. Animal species listed by the FWC pursuant to Rules 68A-27.003 through 68A-27.005, Florida Administrative Code (F.A.C.) (http://myfwc.com/wildlifehabitats/imperiled/), updated December 2018.

[4] The bald eagle is neither state nor federally listed; however, this species is federally protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The bald eagle is also managed in Florida by the FWC's bald eagle rule (Chapter 68A-16.002, F.A.C).

[5] The Florida black bear is no longer state-listed; however, this species is managed in Florida by the FWC's Florida Black Bear Conservation rule (68A-4.009, F.A.C.).

4.4. CLIMATE

4.4.1. RESOURCE CHARACTERIZATION

Florida's climate is classified as humid subtropical. Seasonal weather patterns are controlled by the interaction of the subtropical jet stream with a semi-permanent high pressure system situated off the Atlantic Coast known as the Bermuda High. Lakeland currently experiences an annual average maximum temperature of 85.5 degrees Fahrenheit and an annual average minimum temperature of 63 degrees, with summer maxima averaging 95 degrees in July and winter minima averaging 51 degrees in January. Annual average precipitation totals 49.15 inches. The area experiences roughly 117 days per year with measurable precipitation. Currently, neither Polk County nor the City has identified climate change mitigation goals or strategies.

As indicated on **Tables 4.2-1** and **4.2-2**, existing emissions at LAL are an estimated at 91,493 metric tons of carbon dioxide equivalent (CO_2e) annually.

4.5. COASTAL RESOURCES

4.5.1. RESOURCE CHARACTERIZATION

Coastal resources comprise any natural resources or natural environments occurring in coastal waters or adjoining shorelines, and are primarily protected by the Coastal Zone Management Act, as well as the Coastal Barrier Resources Act, which governs development within the Coastal Barrier Resources System (CBRS). The Florida Coastal Management Program (FCMP) implements these regulations within the state of Florida and encompasses the state's 67 counties and territorial seas. The FCMP is administered by eight state agencies and five water management districts. The FDEP Office of Intergovernmental Programs Florida State Clearinghouse is the entity charged with coordinating review of projects and activities in the state of Florida for consistency with the FCMP. Because the Proposed Development Project is not located within one of Florida's 35 coastal counties or associated territorial seas, no federal consistency review is required and only a state review is necessary. The closest CBRS units to LAL are between 34 and 46 miles southwest of LAL in Tampa Bay adjacent to the Gulf of Mexico, comprising the Cockroach Bay (FL-83), Bishop Harbor (FL-82), The Reefs (P24P), and Rattlesnake Key (FL-78) units.

4.6. HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

Available environmental records from federal and state environmental databases were researched to identify potential contamination or hazardous materials presence at LAL (**Appendix E**). Of the databases searched, records located on or surrounding LAL property were uncovered within 21 state and federal databases. Available historical aerial photographs were also collected and evaluated. The results of the evaluation are presented in the following sections.

4.6.1. RESOURCE CHARACTERIZATION

The results of the environmental records searches described above are depicted graphically on **Figure 4.6-1**. Results are also described in detail **in Appendix E** for those records that likely occur on existing and proposed Airport property based on best available geographic data. One record occurs within or immediately adjacent to the DSA for this EA (i.e., within 150 feet). Brandis Aircraft Tom Miller Interior is adjacent to the proposed fuel farm site, and is registered as a non-generator of hazardous waste under the Resource Conservation and Recovery Act (RCRA) beginning December 23, 1999. Minor violations received at this facility during the 1990s have been resolved. The nearest site on the EPA's National Priority List for cleanup activities is located 4.5 miles away from the Proposed Development Project site.

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PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL RECORDS

FIGURE 4.6-1

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4.7. HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

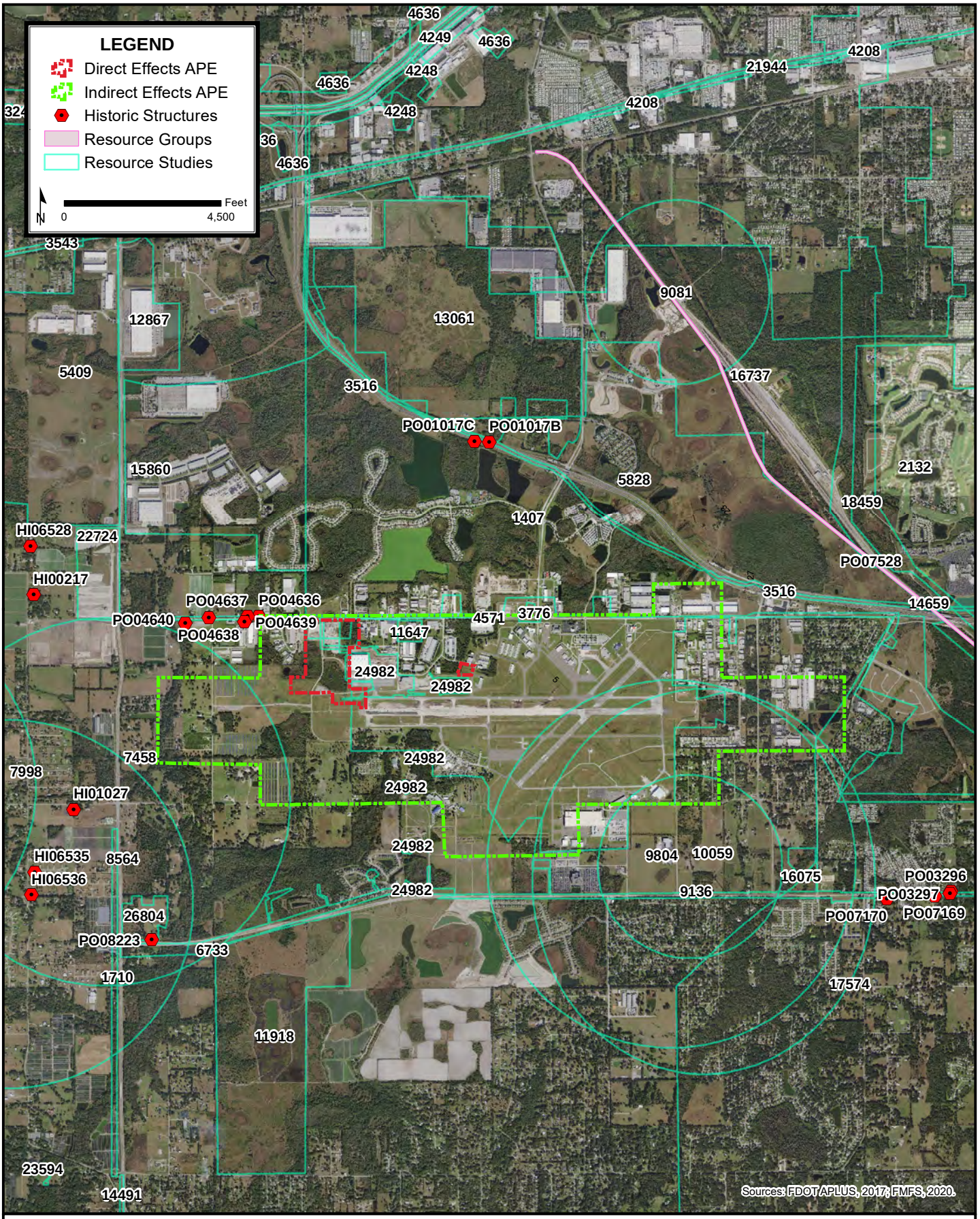
Section 106 of the NHPA of 1966 (16 U.S.C. 470f) requires that federal agencies take into account the effect of their undertakings on any site that is included in or eligible for inclusion in the National Register of Historic Places (NRHP). Regulations published at 36 Code of Federal Regulations (CFR) 800 define the measures to be used to identify and mitigate impacts to such historic or culturally significant properties.

4.7.1. RESOURCE CHARACTERIZATION

Examination of the Florida Master Site File (FMSF) indicated that no National Register-listed sites are present within the Airport property, or within a one-mile radius of the APE. The FMSF documents that there are 14 historic structures, six archaeological sites, 26 cultural resource studies, and one resource group present within one mile of the Indirect Effects APE (**Figure 4.7-1** and **Table 4.7-1**).

A Cultural Resources Assessment Survey (CRAS) was conducted for the Proposed Development Project to identify historic and cultural resources within the APE established for this EA (**Appendix F**). The archaeological study in the CRAS included 12 excavated shovel test pits in the APE. No archaeological sites were identified within the APE based on this testing.

An architectural historic survey was also conducted for the CRAS, as detailed in **Appendix F**. Ten houses located within the APE, or upon parcels partially located within the APE, were identified and assessed for National Register eligibility due to available building age information, as well as an 11th resource – LAL (former Lakeland Army Air Base/Drane Field/Lakeland Municipal Airport) (see **Tables 4.7-2** and **Figure 4.7-2**).All structures were appraised against NRHP Criteria A through D to recommend whether or not each location was potentially eligible for listing to the National Register. The results indicate that the Aaron E. and Maude Morgan House **(Figure 4.7-2, Map ID #2**) and the English Family House (**Figure 4.7-2, Map ID #5**) are each potentially eligible for listing to the National Register under Criterion C. These results are discussed further in **Section 5.7**.



Path: D:\LAL EA\900_CAD_GIS\900_CAD_GIS\GIS\mxd\Final EA\Figure 4-7-1 Previously Recorded Cultural Resources_with Studies_rev3.mxd, Date Saved: 9/23/2021 12:49:00 AM

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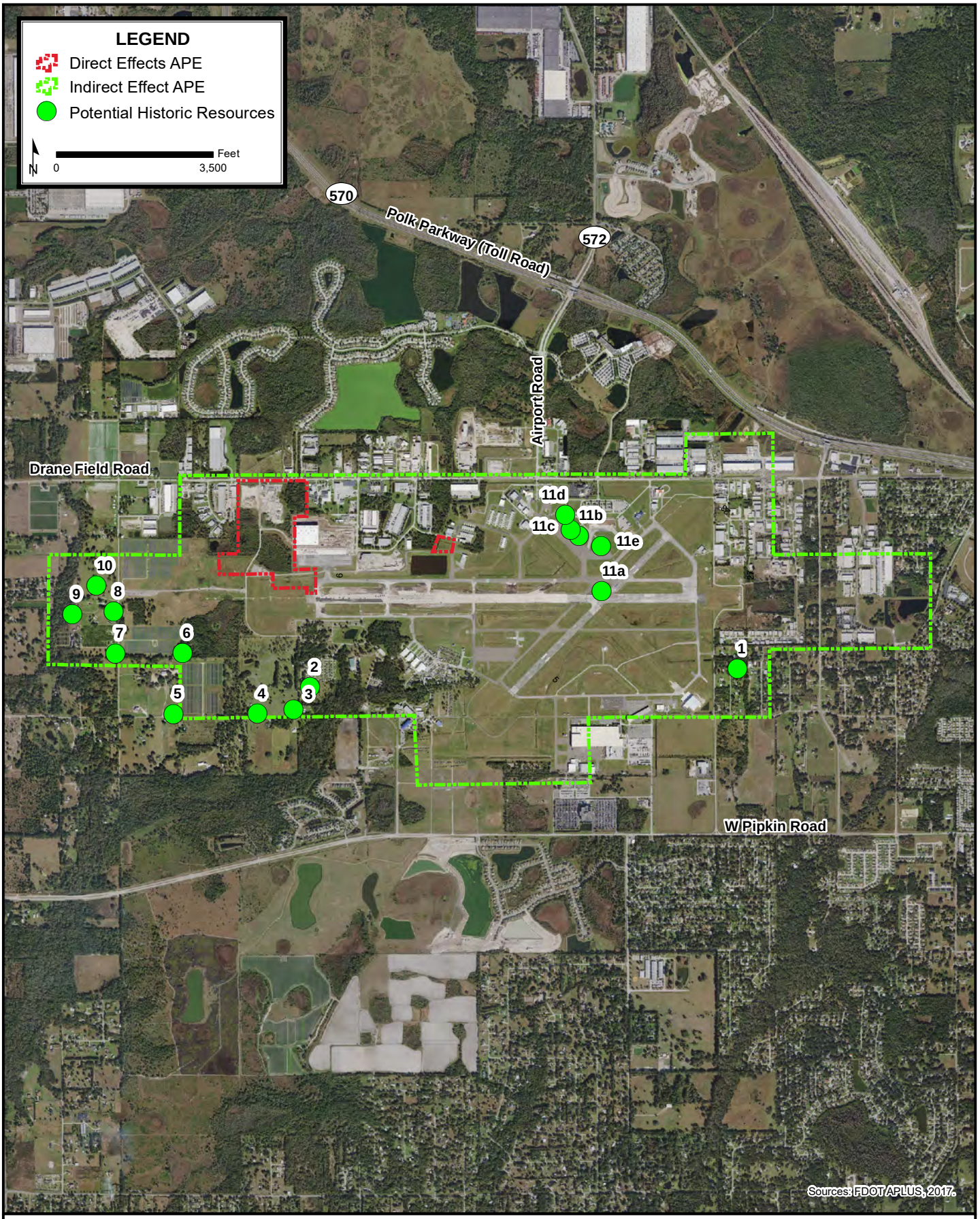
PREVIOUSLY RECORDED CULTURAL RESOURCES

FIGURE 4.7-1



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POTENTIAL HISTORIC RESOURCES LOCATION MAP

FIGURE 4.7-2

Table 4.7-1 Previously Recorded Cultural Resources

Category	FMSF Site ID	Name	Description	Temporal Affiliation	NRHP Status
Archaeological Sites	PO01014	Early	Campsite	Prehistoric lacking pottery	Ineligible for NRHP
	PO01015	Hamilton Branch	Lithic scatter/quarry	Prehistoric lacking pottery	Not Evaluated by SHPO
	PO01016	Poley Creek	Lithic scatter/quarry	Prehistoric lacking pottery	Not Evaluated by SHPO
	PO03156	Bay Ridge	Campsite	Prehistoric lacking pottery	Ineligible for NRHP
	PO03858	Airport Road Foundation	Building remains	Twentieth century American, 1900-present	Ineligible for NRHP
	PO03859	Drane Field Road Foundation	Building remains	Twentieth century American, 1900-present	Not Evaluated by SHPO
Historic Structures	HI00217	Chumney House	Private residence (destroyed)	circa 1910	Ineligible for NRHP
	HI01027	Phagen-Getty-West House	Private residence (destroyed)	circa 1913	Ineligible for NRHP
	HI06528	1312 Lindsey Road	Frame vernacular	circa 1946	Ineligible for NRHP
	HI06535	3010 Wiggins Road	Bungalow	circa 1924	Ineligible for NRHP
	HI06536	3120 Wiggins Road	Frame vernacular	circa 1920	Ineligible for NRHP
	PO01017B	Drane Field Building 2	Military warehouse	1942	Ineligible for NRHP
	PO01017C	Drane Field Building 3	Military warehouse (destroyed)	1942	Ineligible for NRHP
	PO04636	4755 Drane Field Road	Frame vernacular	circa 1940	Ineligible for NRHP
	PO04637	4815 Drane Field Road	Frame vernacular	circa 1930	Ineligible for NRHP
	PO04638	5005 Drane Field Road	Frame vernacular	1955	Ineligible for NRHP
	PO04639	4830 Drane Field Road	Frame vernacular	circa 1940	Ineligible for NRHP
	PO04640	5110 Drane Field Road	Frame vernacular	circa 1940	Ineligible for NRHP
	PO07170	1610 West Pipkin Road	Frame vernacular	1955	Ineligible for NRHP
	PO08223	5140 County Line Road	Frame vernacular	circa 1968	Ineligible for NRHP
Resource Groups	PO07528	Winston & Bone Valley RR	Linear resource	American 1892-present	Eligible for NRHP
Resource Studies	1407	CRAS of the Proposed West Lakeland Development site			
	1710	An Archaeological Survey of Segment 3, County Line Road, Polk/Hillsborough counties, Florida			
	2132	CRAS for the Oakbridge DRI, Drummond Properties, Lakeland, Polk County, Florida			

Category	FMSF Site ID	Name	Description	Temporal Affiliation	NRHP Status
	3516	Archaeological / Historical Resource Evaluation for Polk Parkway (West Leg), Hillsborough and Polk Counties, Florida			
	3776	A CRAS of the Drane Field Road/State Road 572 (Airport Road) Interchange Improvements Project, Polk County, Florida			
	4571	Drane Field Road Cultural Resources Survey and Assessment, Polk County, Florida			
	5409	Hillsborough County Historic Resources Survey Report			
	5828	Archaeological Site Location Predictive Model for the City of Lakeland			
	6733	CRAS of The Realignment of Medulla Road Between County Line Road and Existing Medulla Road Polk County, Florida			
	7998	An Archaeological and Historical Survey of the Plant City/ Griffis Tower Site in Hillsborough County, Florida			
	7458	An Archaeological and Historical Survey of the Proposed Medulla and Drainfield Tower Location in Hillsborough County, Florida			
	8564	An Archaeological and Historical Survey of the Proposed Medulla & Drainfield Tower (Revised) Location in Hillsborough County, Florida			
	9136	AT&T Cellular Tower, French River Site, Polk County, Florida			
	9804	Identification and Evaluation of Historic Properties Within the One Mile Area of Potential Effects of the Proposed Lakeland Electric Wireless Telecommunications Tower (Verizon Wireless 088096-6), Polk County, Florida (DEA Project Number 20401014)			
	10059	Assessment of Potential Effects Upon Historic Properties: Proposed 150-foot Old Medulla Road Wireless Telecommunications Tower (Verizon Wireless 088096-5), Polk County Florida			
	11647	An Inventory and Evaluation of the Lakeland National Guard Armory (Lakeland Armory), Polk County, Florida			
	11918	An Archaeological and Historical Survey of the English Creek Project Area in Polk County, Florida			
	13061	A Phase 1 Cultural Resource Survey of the Lakeland Central Park DRI, Polk County, Florida			
	14659	FCC Form 620: CSX Parkway Frontage Road Telecommunications Tower Site (Verizon Wireless Personal Communications LP 088307-1) Polk County, Florida			
	15860	An Archaeological and Historical Survey of the 10080881 - Scott Lake Tower in Polk County, Florida FCC Form 620			
	16075	A Phase I CRAS Report West Pipkin Road Widening Project from Medulla Road to Old Highway 37			
	17574	Administrative Action Environmental Assessment: State Road 563 (North/South Route) from State Road 37 (South Florida Avenue) to Drane Field Road, Polk County, Florida			
	18459	CRAS Wabash Avenue Extension PD&E Study Polk County, Florida			
	22724	CRAS of the Rice Road Commerce Center Property, Hillsborough County, Florida			
	24982	CRAS of the Lakeland-Linder Regional Airport Properties, Polk County, Florida			
	26804	A CRAS of the Publix Supermarket Development Project Parcel, 5140 County Line Road, Lakeland, Polk County, Florida			

Notes: SHPO = State Historic Preservation Officer
Source: FMSF, 2020.

Table 4.7-2 Additional Structures Assessed for NRHP Eligibility

Map ID (Figure 4.7-2)	Name	NRHP Criterion A	NRHP Criterion B	NRHP Criterion C	NRHP Criterion D
1	Robberson House	N	N	N	N
2	Aaron E. and Maude Morgan House	N	N	Y	N
3	Morgan Family House 1	N	N	N	N
4	Morgan Family House 2	N	N	N	N
5	English Family House	N	N	Y	N
6	House – 4404 Hamilton Road	N	N	N	N
7	House – 4333 Hamilton Road	N	N	N	N
8	Futch-Dawson House	N	N	N	N
9	Dawson House	N	N	N	N
10	Opal and Oliver Phillips House	N	N	N	N
11a	Aeromech Maintenance Hangar	N	N	N	N
11b	Lakeland Linder International Airport	N	N	N	N
11c	Sheltair Maintenance Hangar	N	N	N	N
11d	Double M Maintenance Hangar	N	N	N	N
11e	Former Lakeland Municipal Airport Terminal	N	N	N	N

A= Properties associated with associated with one or more events important in the defined historic context; B = Properties associated with individuals whose specific contributions to history can be identified and documented; C = Properties significant for their physical design or construction; D = Properties that have the potential to answer, in whole or in part, research questions about human history.

Y = Recommended eligible under given criterion; N = Recommended ineligible under given criterion

Source: AECOM, 2020.

4.8. LAND USE

4.8.1. RESOURCE CHARACTERIZATION

A review of existing and future land use within the EA study areas was conducted using parcel data available from Polk County, the results of which are summarized in the following sections.

4.8.1.1. EXISTING LAND USE

As shown in **Table 4.8-1** and **Figure 4.8-1**, land use within the DSA is entirely on Airport property which is largely classified by Polk County Property Appraiser as Vacant Governmental (79.2 acres of the 80.9 acre total), although 1.4 acres of unspecified land use (mostly paved roadways and drives) is also documented. Of note, the 79.2 acres of Vacant Governmental land use and the 80.9-acre DSA include an additional 8.5 acres of Vacant Governmental land use to reflect the proposed Taxiway A extension in the Final EA. The expanded DSA is further reflected in **Table 4.8-1** and **Figure 4.8-1**. There is also a substantial amount of land use classified by the Polk County Property Appraiser as Governmental and Vacant Governmental land uses within the ISA (1,474.2 acres of the 2,150.8-acre area) which is largely comprised of Airport property. The Airport is zoned Industrial and Planned Unit Development – Industrial (PUD). PUD zoning is intended to facilitate flexibility to respond to special circumstances and to promote design innovation that provides qualitative improvement over normal design standards. Roughly 224.9 acres of Industrial and 135.1 acres of Agricultural land use are also documented. Residential land uses total approximately 115.9 total acres of the ISA. Refer to **Section 4.9** for further details on noise compatible land uses within these areas.

Existing regulations at the City level (land development regulations) and County level (Joint Airport Zoning Board/Board of Appeals) continue to ensure compatibility between adjacent proposed land uses and LAL. The Polk County Land Development Code states the following land uses may be established around the Airport only after compliance with the specific conditions and procedures: institutional, phosphate mining, industrial, business park and rural land uses. Chapter 14 of the City of

Lakeland Code of Ordinances further outlines regulations and prohibitions on use of aviation property at LAL.

Table 4.8-1 Existing Land Use

Category	DSA (acres)	ISA (acres)
Agricultural	0.0	135.1
Commercial	0.0	31.8
Governmental, Institutional	0.3	952.6
Industrial	0.1	224.9
Miscellaneous, Unspecified	1.4	103.8
Mobile Homes	0.0	35.5
Multi-Family Residential	0.0	2.3
Single-Family Residential	0.0	76.3
Vacant Commercial	0.0	25.3
Vacant Governmental[1]	79.2	521.6
Vacant Industrial	0.0	39.8
Vacant Residential	0.0	1.8
Grand Total[1]	**80.9**	**2,150.8**

DSA = Direct Study Area; ISA = Indirect Study Area

[1] Values include 8.5 additional acres of Vacant Governmental use to reflect the proposed Taxiway A extension in the Final EA.

Source: Polk County Property Appraiser GIS data accessed from https://www.polkpa.org/FTPPage/ftpdefault.aspx?url=\GISData April 2020.

4.8.1.2. FUTURE LAND USE

The Proposed Development Project would be located entirely on City property. According to the LAL 2015 Business Plan, mixed use development in the areas surrounding the Airport is key in terms of further developing the landside industrial aspect for LAL alongside with aviation-related development.

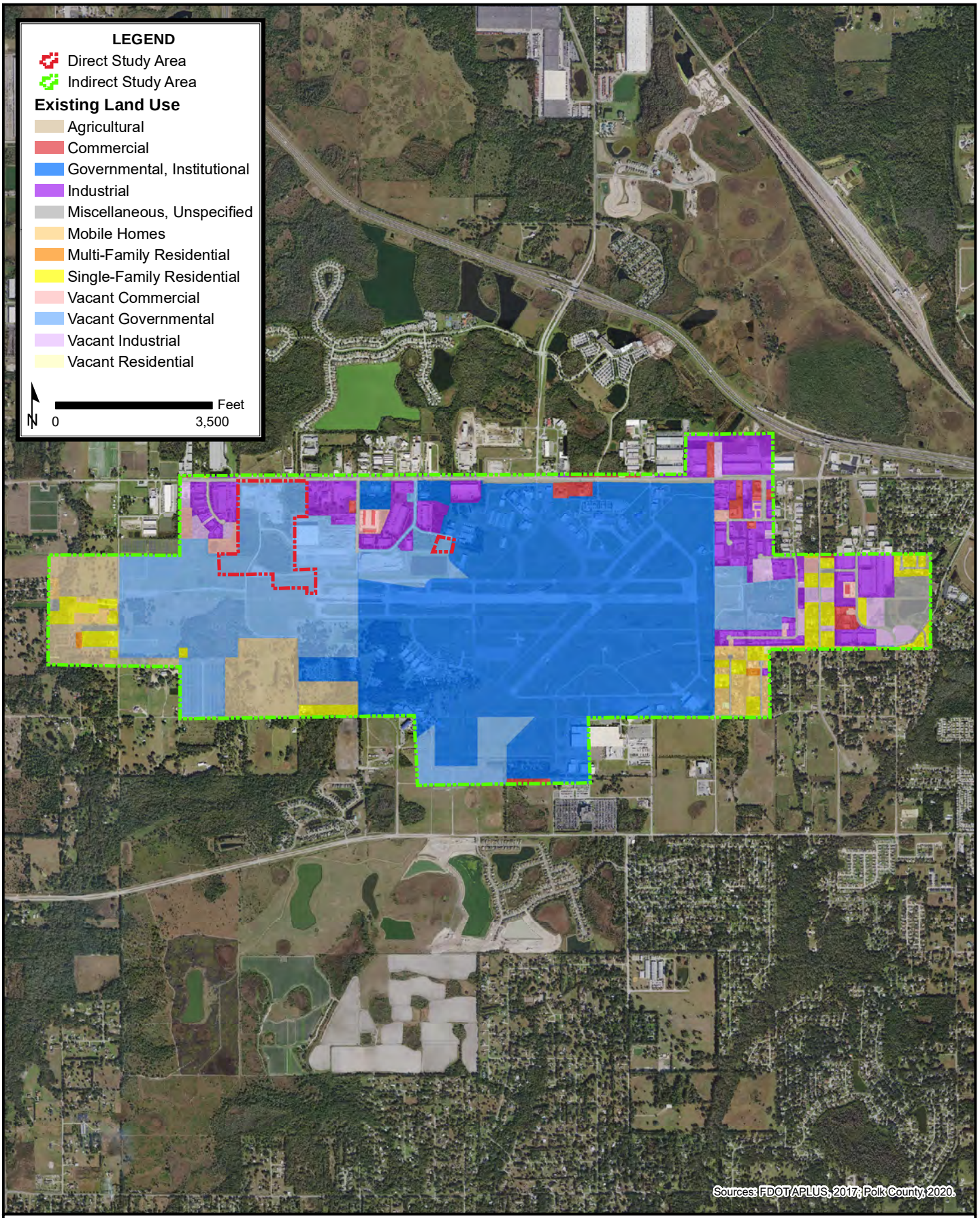
Polk County and the City each publish a Comprehensive Plan for land use to help organize and coordinate the complex relationships between different land uses. The Polk County Comprehensive Plan[13] contains a Future Land Use Element[14] to guide regional development and designate future land use patterns as reflected in the goals, objectives, and policies of the local government comprehensive plan elements. Aviation-related objectives and policies have been included in the Transportation Element of the Comprehensive Plan to safeguard the existing and future viability of Polk County's public use airports, including LAL. An Airport Impact District (AID) overlay is established to ensure that the operation of public use airports is compatible with surrounding land uses with minimal conflicts between the two. The County has further established development criteria for providing aviation-compatible land uses and activities in the AID.

Through preparing future land use maps, the City has identified and mapped Development Control Zones, including the Airport Clear Zone at LAL which encompasses the areas of the runways and their approaches. The City's Comprehensive Plan[15] gives a ten-year blueprint for future growth of the City. The Future Land Use element of the Plan has been established to define areas within the City that are suitable for various land use activities, and establishes types and locations of land uses allowed in the County and the policies designed to guide those land uses. The City is developing an updated Comprehensive Plan that extends through 2030.

[13] Polk County. Polk County Comprehensive Plan. November 18, 1992, with multiple section updates.

[14] Polk County. Polk County Comprehensive Plan, Chapter 2 – Future Land Use Element Update. Updated July 2019.

[15] City of Lakeland. Lakeland, FL Comprehensive Plan 2010 – 2020. August 16, 2010. Updated December 31, 2018.



LAKELAND LINDER INTERNATIONAL AIRPORT

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EXISTING LAND USE

FIGURE 4.8-1

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Future land use information from Polk County's Comprehensive Plan is summarized on **Figure 4.8-2** and **Table 4.8-2** for the EA study areas. As shown, the entirety of the DSA and a majority of the ISA are designated within the City-owned category (80.9 acres for the DSA and 1,743.3 acres for the ISA). The 80.9 acres of City-owned future land use in the DSA includes 8.5 additional acres of land to reflect the proposed Taxiway A extension included in the Final EA. Additional future land use within the ISA is designated for 233.1 acres of Business Park Center, 94.4 acres of Agricultural/Residential Rural, 55.4 acres of Residential Low Density, and 24.6 acres of Residential Suburban areas. All property within LAL's boundaries is and will continue to be zoned as Industrial and classified as City-owned land uses of Industrial and Business park categories, consistent with the Polk County Land Development Code. The development of the Proposed Development Project would continue to be subject to all applicable local zoning ordinances and land development codes described in **Section 4.8.1.1**, including the City's Land Development Code.

Table 4.8-2 Future Land Use

Category	DSA (acres)	ISA (acres)
Agricultural/Res-Rural	0.0	94.4
Business Park Center	0.0	233.1
City[1]	80.9	1,743.3
Residential-Low	0.0	55.4
Residential-Suburban	0.0	24.6
Grand Total[1]	**80.9**	**2,150.8**

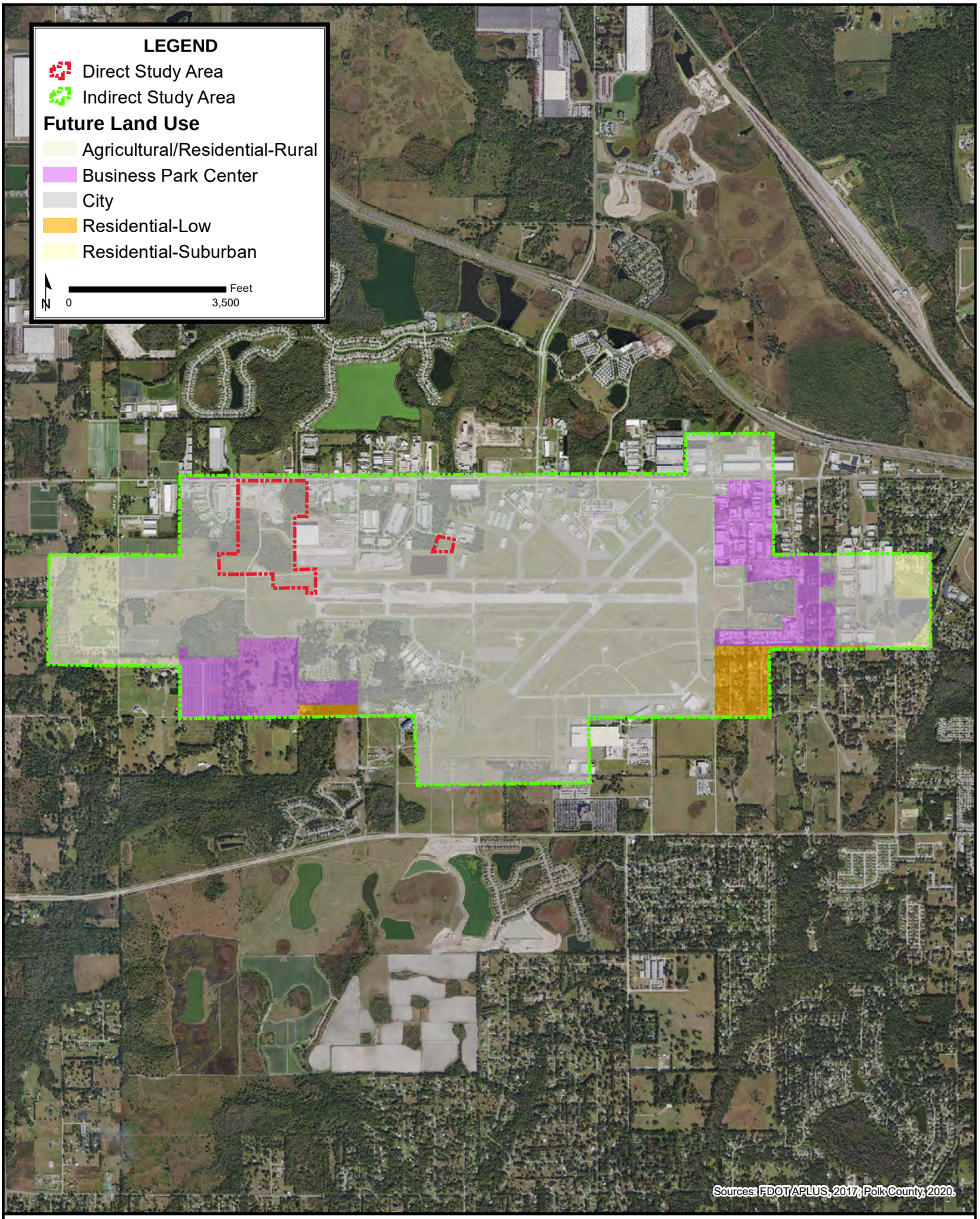
Direct Study Area; ISA = Indirect Study Area
[1] Includes 8.5 additional acres to reflect the proposed Taxiway A extension included in the Final EA
Source: GIS data received from Polk County Records Management Section in April 2020.

4.9. NOISE AND NOISE COMPATIBLE LAND USE

For aviation noise analysis, the FAA has determined that the noise exposure from aviation activities must be established in terms of yearly DNL, which is used as FAA's primary metric. DNL is a 24-hour time-weighted-average noise metric expressed in A-weighted decibels (dBA). DNL accounts for the noise levels of all individual aircraft events, the number of times those events occur, and the time of day which they occur. It is important to note that the DNL metric represents a daily average (annual aircraft operations averaged over 365 day period). Sound levels from individual aircraft overflights can be quieter or louder at a given location and noise can be experienced further away from the Airport.

DNL has two time periods: daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.). To represent the added intrusiveness of sounds occurring during nighttime hours, DNL weights events occurring during the nighttime periods by a factor of 10.

Title 14 CFR Part 150, Appendix A, Table 1 provides federal land use compatibility guidelines for aircraft noise exposure. Compatible or non-compatible land use is determined by comparing the predicted or measured DNL values at a site to the values listed in the table (see **Appendix G** of this EA). However, Title 14 CFR Part 150 land use compatibility guidelines are not a federal determination that a specific land use is acceptable or unacceptable under federal, state, or local laws. The responsibility for determining acceptable land uses rests with the local authorities through its zoning laws and ordinances.



LAKELAND LINDER INTERNATIONAL AIRPORT

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FUTURE LAND USE

FIGURE 4.8-2

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4.9.1. RESOURCE CHARACTERIZATION

4.9.1.1. EXISTING CONDITION AIRCRAFT NOISE EXPOSURE AND LAND USE COMPATIBILITY

The Aviation Environmental Design Tool (AEDT) (version 3c) is FAA's standard tool for predicting noise impacts in the vicinity of airports. AEDT uses the number of annual average daily daytime and nighttime flight operations, flight paths, locations, and flight profiles of the aircraft along with its extensive internal database of aircraft noise and performance information. Using this information, it calculates the DNL at many points on the ground around an airport.

Using land use information from the Polk County Property Appraiser (see **Section 4.8-1** for details), noise exposure was evaluated within DNL 65, 70, and 75 dB contours, the results of which are shown on **Figure 4.9-1** and quantified on **Table 4.9-1**. The existing condition (i.e., 2019) noise contour for operations at LAL is also shown on **Figure 4.9-1**.

Further detail on the noise modeling data is given in **Appendix G.**

Table 4.9-1 Existing Conditions Noise Exposure Estimate to Existing Land Use

Land Use Type	DNL 65+ dB (acres)	DNL 70+ dB (acres)	DNL 75+ dB (acres)
Governmental, Institutional	488.0	300.4	149.3
Industrial	0.9	0.0	0.0
Vacant Governmental	120.7	42.7	18.6
TOTAL	**609.6**	**343.1**	**167.9**

Sources: AEDT 3c, 2020; Polk County Property Appraiser GIS data accessed from https://www.polkpa.org/FTPPage/ftpdefault.aspx?url=\GISData April 2020.

FAA defines DNL 65 as the threshold of noise compatibility for residential land uses. DNL 60 is considered a compatible sound level for all land uses defined at Title 14 CFR Part 150 (see **Appendix G**). As shown on **Figure 4.9-1**, the DNL 65 and higher contour does not leave Airport property with the exception of approximately 0.9 acre of Industrial land use within the east portion of the contour. There are no residential land uses within the DNL 65 and higher noise contours.

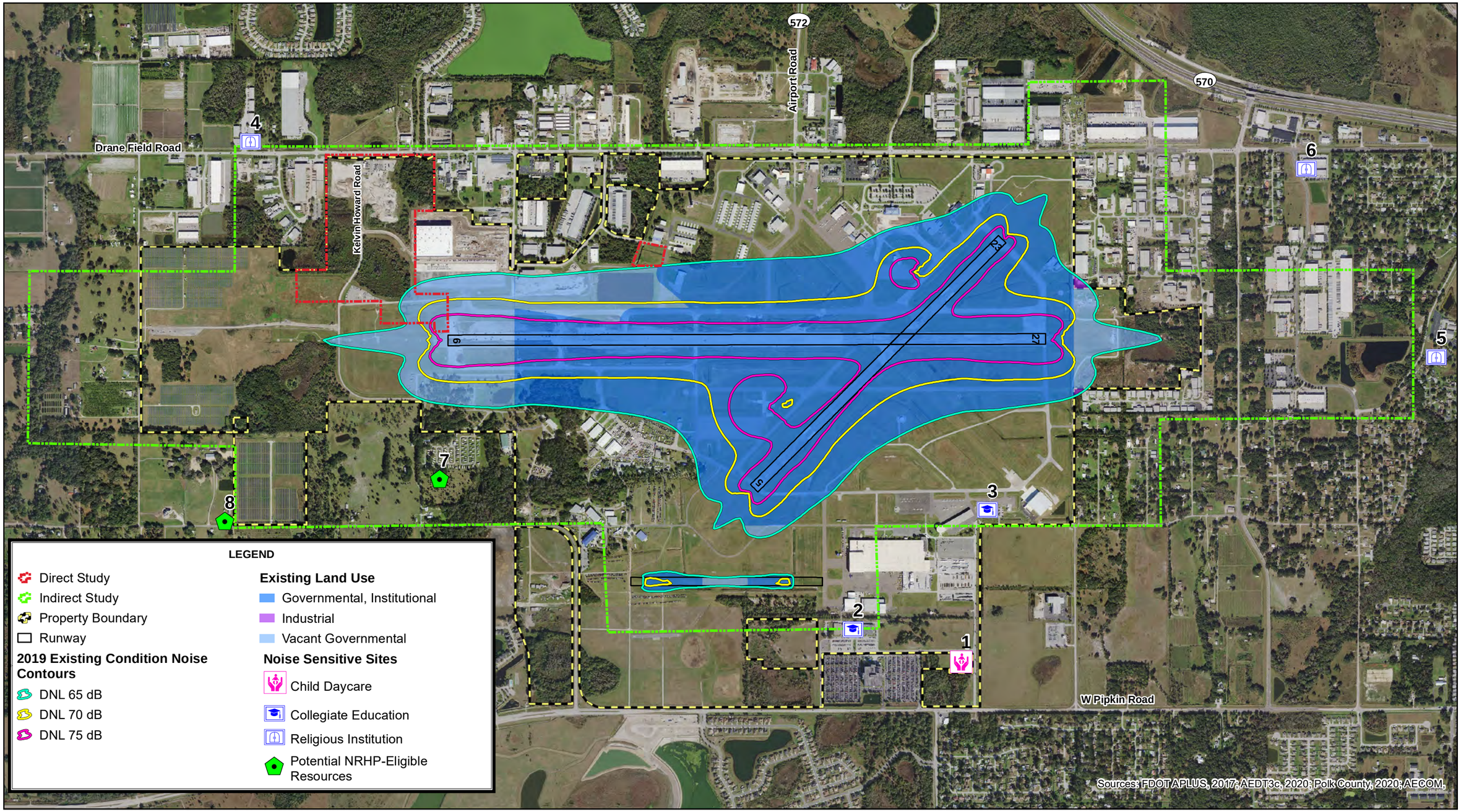
4.9.1.2. NOISE SENSITIVE SITES

To characterize the existing affected environment for noise-sensitive resources (schools, churches, parks, recreational areas, historic sites), noise sensitive sites (NSS) within the vicinity of or within the ISA established for this EA were identified. Each of the sites are listed in **Table 4.9-2** and shown on **Figure 4.9-1**. AEDT-modeled noise levels at each of the sites are also shown in **Table 4.9-2**. The data reveal that existing noise levels at the selected NSS are predicted to be well below DNL 65 dB.

Table 4.9-2 Noise Sensitive Sites

NSS ID	Name	Type	DNL (dB)
1	Early Childhood Learning Center	Child Daycare	53.0
2	Polk State College Airside Center	Collegiate Education	55.4
3	Polk State Aerospace Flight School	Collegiate Education	57.0
4	Faith Celebration Church	Religious Institution	51.3
5	Bethany Christian Church	Religious Institution	57.7
6	Life Church Lakeland	Religious Institution	54.0
7	Aaron E. and Maude Morgan House	Potential NRHP-Eligible Resources[1]	57.3
8	English Family House	Potential NRHP-Eligible Resources[1]	52.8

Source: AEDT 3c, 2020; AECOM, 2020; FMSF, 2020.
[1] See Section 4.7 and 5.7 for discussion on potential NRHP-eligible resources.



NORTH

0 Feet 1,600

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2019 EXISTING CONDITIONS NOISE CONTOURS

FIGURE 4.9-1

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4.10. SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S HEALTH AND SAFETY RISKS

4.10.1. RESOURCE CHARACTERIZATION

An SSA was established to support the analysis of social and economic conditions in the area of the Proposed Development Project. The SSA encompasses the U.S. Census Block Groups encompassing and bounding the Airport property boundary and includes portions of Polk and Hillsborough counties (Block Groups 120570130012, 121050120041, 121050120031, 120570130022, 121050119021, 121050119022, 121050119111, 121050119091). The SSA serves as the focus of the evaluation of direct, indirect, and secondary and cumulative socioeconomic effects. Refer back to **Figure 4.1-2** for a depiction of the U.S. Census Block Groups in Polk and Hillsborough counties that combine to form the SSA.

Information about the existing social and economic characteristics of the SSA was gathered from data published by the U.S. Census Bureau. Specifically, 2015-2019 American Community Survey (ACS) Five-Year Estimates were used to identify the income/poverty and racial/ethnic characteristics of the population within the SSA and serve as the basis for the assessment of economic activity and employment.

4.10.1.1. POPULATION

Table 4.10-1 describes the population present within the SSA, Polk and Hillsborough counties, and the state of Florida. In 2019, the combined population of Polk and Hillsborough counties was estimated at 2,108,496 residents. The SSA was estimated to contain 17,161 residents. U.S. Census data shows that the population density within the SSA (526.8 people per square-mile) is somewhat higher than that generally seen in the state (317.9 people per square-mile).[16]

Additionally, ACS estimates show that approximately 84 percent of the adult population within the SSA and 87 percent of the adult population within Polk and Hillsborough counties attained a high school diploma or higher level of education. Approximately 22 percent of the population within the SSA and 29 percent of the population of Polk and Hillsborough counties holds a bachelor's or higher degree.[17]

4.10.1.2. RACE AND ETHNICITY

The racial and ethnic composition of the population present within the SSA, Polk and Hillsborough counties, and the state of Florida are shown in **Table 4.10-1.** Data from the ACS reveals that the white population comprises approximately 84 percent of the SSA's total population compared to 73 percent in Polk and Hillsborough counties and 75 percent in the state of Florida.

Table 4.10-1 Community Characteristics

Subject	SSA Total	SSA Percent	Counties Total	Counties Percent	Florida Total	Florida Percent
Total Population	17,161	100.0	2,108,496	100.0	20,901,636	100.0
White	14,384	83.8	1,530,962	72.6	15,702,256	75.1
Black or African American	715	4.2	343,795	16.3	3,359,031	16.1
American Indian and Alaska Native	9	0.01	6,415	0.3	59,320	0.3
Asian	158	0.9	69,899	3.3	571,276	2.7

[16] U.S. Census Bureau, 2015-2019 ACS, B01003
[17] U.S. Census Bureau, 2015-2019 ACS, B15003

Subject	SSA Total	SSA Percent	Counties Total	Counties Percent	Florida Total	Florida Percent
Native Hawaiian and Other Pacific Islander	0	0	1,331	0.1	12,653	0.1
Some other race	1,581	9.2	85,869	4.1	625,079	3.0
Two or more races	314	1.8	70,225	3.3	572,021	2.7
Hispanic	4,280	24.9	562,364	26.7	5,346,684	25.6
Average Household Size	3.06	Not applicable	2.71	Not applicable	2.65	Not applicable

SSA = Socioeconomic Study Area. County data is Polk County and Hillsborough County combined
Source: U.S. Census Bureau, 2015-2019 ACS, B02001, B03003, B25010

4.10.1.3. HOUSING CHARACTERISTICS

Within the SSA, there are approximately 6,282 residential parcels on 20,864 acres of land. On a parcel basis, residential areas make up 70 percent of the SSA. Of the residential parcels present, approximately 70 percent support single family homes, seven percent support multi-family homes, and 23 percent support mobile homes.

4.10.1.4. ECONOMY AND EMPLOYMENT

Estimates from the U.S. Bureau of Labor Statistics indicate that there are approximately 234,600 non-farm jobs within the Lakeland-Winter Haven Metropolitan Statistical Area (MSA). The most common industries are based in the Trade, Transportation, and Utilities (25.7 percent); Education and Health Services (15.0 percent); and Professional and Business Services (13.6 percent) sectors. Between 2014 and 2018, the average annual unemployment rate in the Lakeland-Winter Haven MSA fluctuated between 6.5 percent and 3.7 percent.[18]

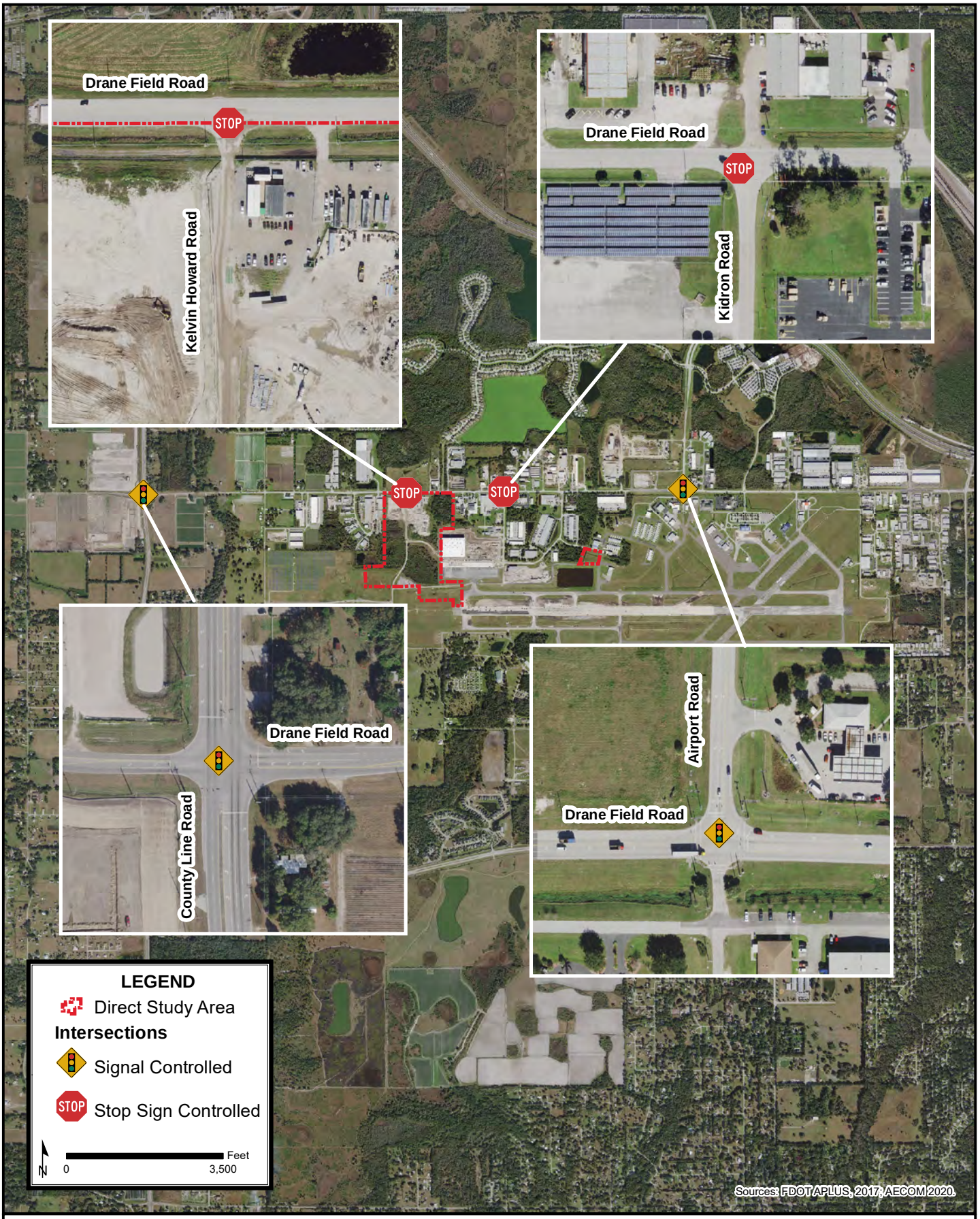
4.10.1.5. HOUSEHOLD INCOME AND POVERTY

The 2019 ACS reported the median household income in Polk and Hillsborough counties at $44,543 and $73,910, respectively.[19] Also, in 2019, the per capita income was estimated at $24,864 and $32,343 in Polk and Hillsborough counties, respectively.[20] Based on the ACS income estimates, approximately 14.6 percent of the residents in the Lakeland-Winter Haven MSA fell below the poverty level in 2019.[21]

4.10.1.6. SURFACE TRANSPORTATION

There are four main roadways on or surrounding LAL that would service the Proposed Development Project. Measures of effectiveness at select intersections along these roadways describe how each roadway is functioning under traffic conditions. Included in these measures is level of service (LOS), which is a letter grade assigned to each intersection for the peak hour of traffic based on the number of lanes, traffic volumes, and traffic existing controls. Light traffic flow (free flow conditions) is classified as LOS A and heavy traffic flow (over capacity conditions) is classified as LOS F. Annual traffic volumes, average delay (seconds per vehicle), and LOS for the existing peak hours are shown in **Table 4.10-2.** Based on the information shown in **Table 4.10-2,** all study intersections currently operate acceptably at LOS B or better during both AM and PM peak hours. The existing roadway configurations are shown in **Figure 4.10-1**. Further detail on the methodology used for this analysis is given in **Appendix H**.

[18] Bureau of Labor Statistics Occupational Employment Statistics online search (https://www.bls.gov/oes/home.htm), accessed January 27, 2020
[19] U.S. Census Bureau, 2015-2019 ACS, S1903
[20] U.S. Census Bureau, 2015-2019 ACS, B19301
[21] U.S. Census Bureau, 2015-2019 ACS, S1701



Path: D:\LAL EA\900_CAD_GIS\900_CAD_GIS\GIS\mxd\Final EA\Figure 4-10-1 Traffic Configurations_rev1.mxd, Date Saved: 9/23/2021 11:14:53 AM

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EXISTING ROADWAY CONFIGURATIONS

FIGURE 4.10-1

Table 4.10-2 Existing Conditions (2019) Traffic Volumes and Level of Service

Intersections	Control/Signal Type	Signal Type	Annual Volumes	AM LOS	AM Delay (Seconds / Vehicle)	PM LOS	PM Delay (Seconds / Vehicle)
County Line Road at Drane Field Road	Signal Controlled	Signal	9,033,800	B	16.3	B	17.2
Airport Road at Drane Field Road*	Signal controlled	Signal	6,233,400	B	24.5	B	17.1
Kelvin Howard Road at Drane Field Road	Stop sign controlled/ Unsignalized	Unsignalized	2,883,500	A	0.0	A	0.0
Kidron Road at Drane Field Road	Stop sign controlled/ Unsignalized	Unsignalized	3,029,500	B	13.0	B	12.7

Sources: AECOM, 2020; Transportation Research Board. Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis (HCM). 2016; except as noted with "*"* Denotes calculations performed with Synchro software.

4.11. WETLANDS

The U.S. Army Corps of Engineers (USACE) uses three characteristics when making wetland determinations; vegetation, soil, and hydrology. Unless an area has been altered or is a rare natural situation, wetland indicators of all three characteristics must be present during some portion of the growing season for an area to be defined as a wetland.

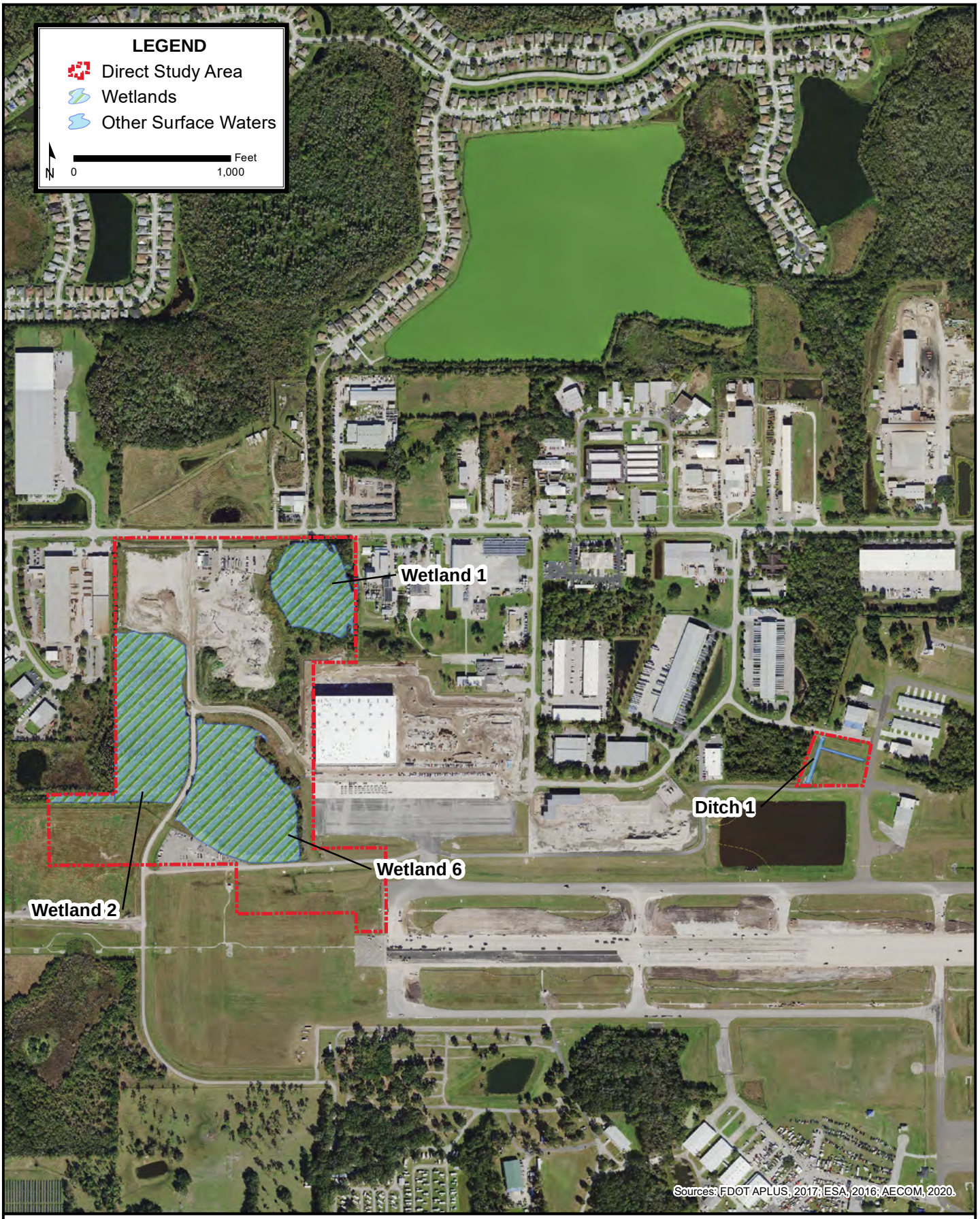
4.11.1. RESOURCE CHARACTERIZATION

The BSA was physically assessed for the presence of wetlands and other surface waters during field reviews of the Airport property. Based on the collected field data, three forested wetlands, covering approximately 28.3 acres, and one other surface water comprising 0.3 acre, occur within the BSA. Each individual wetland and other surface water is listed in **Table 4.11-1** and shown on **Figure 4.11-1**. See **Appendix I** for detailed descriptions of each wetland and other surface water area.

Table 4.11-1 Wetlands and Other Surface Waters within the BSA

Category	ID	FLUCFCS Code and Description[1]	USFWS Classification[2]	Acres in BSA
Wetlands	WL 1	630 – Wetland Forested Mixed	PFO1/3C	5.6
	WL 2	621 – Cypress / 631 – Wetland Scrub	PFO2C / PFO1/2C	11.5
	WL 6	631 – Wetland Scrub	PFO1/2C	11.2
			TOTAL WETLANDS:	**28.3**
Other Surface Waters	Ditch 1	510 – Streams and waterways	PUBx	0.3
			TOTAL OTHER SURFACE WATERS:	**0.3**

[1] FDOT, *Florida Land Use, Cover and Forms Classification System (FLUCFCS) Handbook*, 1999.
[2] Cowardin, Lewis M., et.al. U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States. 1979.



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WETLANDS AND OTHER SURFACE WATERS

FIGURE 4.11-1

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4.12. FLOODPLAINS

Executive Order (EO) 11988, *Floodplain Management*, defines floodplains as the lowland and relatively flat areas adjoining inland and coastal waters. Floodplain areas are identified based on flood frequency and intensity. Areas subject to a one percent or greater chance of flooding in a given year are commonly referred to as the 100-year floodplain. Further, areas subject to a 0.2 percent chance of flooding in a given year are referred to as the 500-year floodplain.

4.12.1. RESOURCE CHARACTERIZATION

The Federal Emergency Management Agency (FEMA) helps implement the National Flood Insurance Program (NFIP) by developing Flood Insurance Rate Maps (FIRM). These delineate the extent of floodplains across the U.S. The current effective FIRM for the LAL area is map number 12105C, panel 0460G with an effective date of December 22, 2016. For flood insurance purposes, FIRM floodplain areas are further classified into Special Flood Hazard Areas (SFHA), defined as areas where NFIP floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Data from the above-referenced FIRM panel is depicted on **Figure 4.12-1** for the DSA, showing presence of Zone A SFHA. Zone A SFHA is defined as those areas subject to inundation by the one-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply. Approximately 28.4 acres of Zone A SFHA are located within with the DSA for the Proposed Development Project.

4.13. SURFACE/GROUNDWATER RESOURCES

4.13.1. RESOURCE CHARACTERIZATION

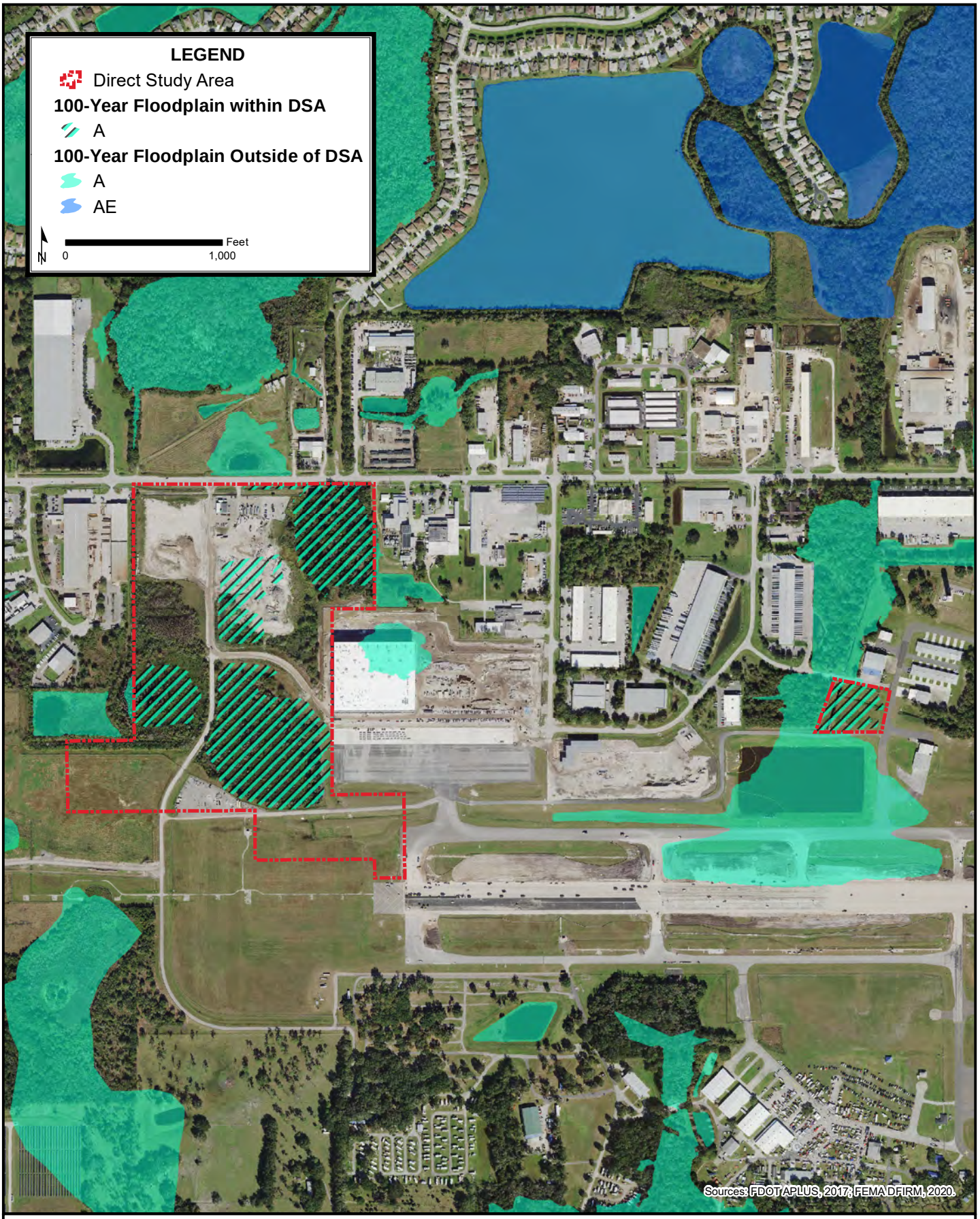
4.13.1.1. HYDROLOGY

LAL is located within the boundaries of the Alafia Watershed and can be divided into two separate drainage basins. Stormwater runoff from the eastern portion of the Airport generally flows in a southeasterly direction toward Poley Creek (a tributary of the North Prong Alafia River). Runoff from the majority of the Airport flows in a southwesterly direction via a complex system of ditches, culverts, and storm sewers. These systems ultimately discharge into a small man-made mitigation area, which eventually flows into the English Creek tributary. This system also collects stormwater runoff from approximately 1,037 acres north of Drane Field Road. English Creek is a tributary of the North Prong Alafia River.[22]

4.13.1.2. GROUNDWATER

The principal source of water supply in Polk County is the Upper Floridan aquifer which supplies nearly all the groundwater used for commercial-industrial self-supplied, public-supply, domestic self-supplied, agricultural irrigation uses, and recreational irrigation. Groundwater levels vary from season to season and from year to year, primarily as a function of the amount and distribution of rainfall. The surficial aquifer system is recharged primarily by the infiltration of rainfall and flows vertically to recharge the Upper Floridan aquifer.

[22] GTC Engineering, 2016, Drainage Calculations, Taxiway D Extension Lakeland Linder Regional Airport, Polk County, Florida, 41 p.



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

FLOODPLAINS

FIGURE 4.12-1

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Based on a study published by U.S. Geological Survey in 2007[23], groundwater use has decreased substantially in Polk County since 1965. In 1965, total groundwater withdrawals in Polk County were about 350 million gallons per day (mgd). In 2002, withdrawals totaled about 285 mgd. Water conservation practices for the mining and processing of phosphate ore, as well as a decrease in the number of mines operating in Polk County, have resulted in these water use declines. Water use from the commercial/industrial self-supplied category, which includes mining, decreased from 270 mgd in 1965 to 56 mgd in 2002.

4.13.1.3. WATER SUPPLY AND TREATMENT

Lakeland Water Utilities provides potable water and wastewater reclamation to residential, commercial and industrial customers in the City of Lakeland. Nineteen wells drilled 750 feet into the Floridan Aquifer supply raw water to the City's two treatment plants (13 at T.B. Williams Plant and six at C. Wayne Combee Plant). The T.B. Williams Plant went into continuous operation in April of 1983 as part of a major system upgrade and has a treatment capacity of 51 mgd. The C. Wayne Combee Plant was built in 2005 and has a treatment capacity of eight mgd.[24]

[23] Spechler, R.M., and Kroening, S.E., 2007, Hydrology of Polk County, Florida: U.S. Geological Survey Scientific Investigations Report 2006-5320, 114 p.

[24] City of Lakeland Water Utilities accessed from https://www.lakelandgov.net/departments/water-utilities/ on April 24, 2020.

CHAPTER 5 ENVIRONMENTAL CONSEQUENCES

5.1. INTRODUCTION

The potential environmental impacts resulting from construction of the Proposed Development Project are presented in this section, as well as operational impacts for calendar years 2022 and 2027.

5.1.1 AVIATION FORECAST USED IN THIS STUDY

For reference, a summary of air operations per Environmental Assessment (EA) study year, for both the No-Action Alternative and Proposed Development Project, is shown on **Table 5.1-1**. Boeing 767-300 and 737-800 aircraft are expected to generate the additional operations under the Proposed Development Project.

Table 5.1-1 Aircraft Operational Summary

Category	2022 No-Action	2022 Proposed Development Project	2022 Change in Operations	2027 No-Action	2027 Proposed Development Project	2027 Change in Operations
Air Carrier	7,300	13,140	5,840	7,300	16,060	8,760
Air Taxi/ Commuter	1,578	1,578	0	1,917	1,917	0
GA	129,619	129,619	0	159,038	159,038	0
Military	3,626	3,626	0	4,405	4,405	0
Total	**142,123**	**147,963**	**5,840**	**172,660**	**181,420**	**8,760**

Sources: Lakeland Linder International Airport (LAL) Master Plan Update, 2020; adjusted for EA by AECOM, 2020.
Note: values reflect rounding.

The No-Action Alternative forecast in this National Environmental Policy Act (NEPA) document uses an aviation forecast prepared before the COVID-19 public health emergency began. This forecast is included to give a conservative estimate of potential environmental impacts of the Proposed Development Project. Federal Aviation Administration (FAA) forecast approval was based on the methodology, data, and conclusions at the time the document was prepared. However, it is necessary to acknowledge the impacts of the COVID-19 public health emergency on aviation activity, including reduced confidence in growth projections using currently-available data.

5.2. AIR QUALITY

5.2.1. SUMMARY OF IMPACTS

5.2.1.1. CONSTRUCTION EMISSIONS

For this EA, air quality impact assessment entailed quantifying and disclosing air emissions associated with construction and operation of the Proposed Development Project. Detailed emissions estimation methodologies are given within **Appendix C.**[25] **Table 5.2-1** discloses the construction period criteria pollutant emissions computed for the Proposed Development Project. Construction activities and associated pollutant emissions are expected to occur 2022. Because the area is considered attainment/unclassifiable of all National Ambient Air Quality Standards (NAAQS), there are no applicable significance thresholds (Clean Air Act General Conformity *de minimis* thresholds) to which these emissions increases can be compared. Because construction emissions are temporary in

[25] The Air Quality Technical Report contained in Appendix C was updated to account for the additional construction equipment emissions associated with the addition of the proposed Taxiway A to the Proposed Development Project**.**

nature, it is not likely that the construction emissions will create a significant or lasting impact on air quality in the area.

Table 5.2-1 2022 Construction Emissions Inventory for Criteria Pollutants[1]

Project Component	CO (tons)	NO_x (tons)[2]	PM_{10} (tons)	$PM_{2.5}$ (tons)	SO_x (tons)	VOC (tons)[2]
Offroad Equipment	28.7	14.8	1.3	1.2	0.1	2.3
Onroad Vehicles	17.0	3.3	0.5	0.2	<0.1	1.1
Asphalt Paving	0.0	0.0	0.0	0.0	0.0	25.5
Fugitive Dust	0.0	0.0	49.6	5.0	0.0	0.0
Total	45.7	18.0	51.3	6.4	0.1	28.9

Notes: CO = Carbon Monoxide; NO_x = nitrogen oxides; $PM_{2.5}$ = particulate matter equal to or less than 2.5 micrometers in diameter; PM_{10} = particulate matter equal to or less than 10 micrometers in diameter; SO_x = sulfur oxides; VOC = volatile organic compounds.

[1] Construction was initially scheduled to be complete in 2021. Due to schedule delays, construction is currently expected to begin and be completed in 2022.

[2] NO_x and VOC are considered precursors to criteria pollutant formation (Ozone [O_3] and $PM_{2.5}$).

Source: AECOM, 2020

5.2.1.2. OPERATIONAL EMISSIONS

Operational emissions associated with the No-Action Alternative and Proposed Development Project were computed using the Aviation Environmental Design Tool (AEDT) (version 3C) and are shown on **Tables 5.2-2** and **5.2-3**.[26] The Proposed Development Project would generate approximately 5,840 and 8,760 additional aircraft operations in 2022 and 2027, respectively, compared to the No-Action Alternative (**Table 5.1-1**). Operation of the expanded facilities would potentially generate approximately 242,360 and 453,330 surface vehicle (employee vehicle and cargo truck) trips in 2022 and 2027, respectively, compared to the No-Action Alternative. Of note, the Proposed Development Project was initially scheduled to be operational in early 2022. Due to schedule delays, the expanded facility is not expected to become fully operational until late 2022. However, the following analysis, including **Tables 5.2-2** and **5.2-4**, include a full year of facility operations for 2022.

5.2.2. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

Mitigation to reduce impacts below the threshold of significance is not required. However, traffic delay mitigation (see **Section 5.11.1.4)** would incrementally reduce emissions from motor vehicles resulting from the Proposed Development Project. In addition, construction-related emissions can be reduced by employing the following typical emissions reduction measures, identified in FAA Advisory Circular (AC) 150/5370-10H, *Standards for Specifying Construction of Airports*:

- Suspension of construction activities during high-wind conditions;
- Creation of dust, odor and nuisance reporting system;
- Reduction of exposed erodible surface area through appropriate materials and equipment staging procedures;
- Cover of exposed surface areas with pavement or vegetation in an expeditious manner;
- Reduction of equipment idling times;
- Ensure contractor knowledge of appropriate fugitive dust and equipment exhaust controls;
- Soil and stock-pile stabilization via cover or periodic watering;
- Use of low- or zero-emissions equipment;

[26] When considering the emissions inventory, extending Taxiway A as proposed in this Final EA may result in a nominal increase in taxi distance for aircraft using the extended taxiway, which could result in a small increase in the overall operational emissions presented. However, the proposed taxiway extension would provide redundant aircraft access points, which is intended to increase taxiing efficiency and reduce aircraft queueing to access the air cargo facility. This would reduce aircraft idle time and provide a marginal decrease of aircraft emissions.

- Use of covered haul trucks and conveyors during materials transportation;
- Reduction of electrical generator usage wherever possible; and
- Prohibition of open burning for waste disposal.

Table 5.2-2 2022 Operational Emissions

Scenario	Source	CO (tons)	NO_x (tons)[1]	$PM_{2.5}$ (tons)	PM_{10} (tons)	SO_x (tons)	VOC (tons)[1]	CO_2e (metric tons)[2]
No-Action	Aircraft	867.2	42.9	1.1	1.1	5.1	36.9	12,580.9
	APU[3]	3.1	3.0	0.3	0.3	0.4	0.2	1,617.1
	GSE[4]	8.0	2.8	0.1	0.1	0.9	0.7	4,480.0
	Motor Vehicles	1,016.7	205.1	12.4	19.8	2.2	67.7	132,022.3
	Total	**1,895.0**	**253.8**	**13.9**	**21.3**	**8.6**	**105.5**	**150,700.3**
Proposed Development Project	Aircraft	872.2	49.3	1.2	1.2	5.6	38.5	13,735.9
	APU	3.3	3.4	0.3	0.3	0.4	0.2	2,001.7
	GSE	8.1	3.1	0.1	0.1	0.9	0.8	7,353.3
	Motor Vehicles	1,061.3	220.6	13.5	21.3	2.3	71.5	139,845.6
	Total	**1,944.8**	**276.4**	**15.1**	**23.0**	**9.2**	**111.0**	**162,936.5**
Net Change	Aircraft	5.0	6.4	0.1	0.1	0.5	1.6	1,155.0
	APU	0.2	0.4	<0.1	<0.1	<0.1	<0.1	384.6
	GSE	0.1	0.3	<0.1	<0.1	<0.1	0.1	2,873.3
	Motor Vehicles	44.6	15.5	1.1	1.5	0.1	3.8	7,823.3
	Total	**49.8**	**22.6**	**1.2**	**1.7**	**0.6**	**5.5**	**12,236.2**

[1] NO_x and VOC are considered precursors to criteria pollutant formation (O_3 and $PM_{2.5}$).
[2] CO_2e = Carbon Dioxide Equivalent
[3] APU = Auxiliary Power Units
[4] GSE = Ground Support Equipment
Sources: AEDT 3c, 2020.

Table 5.2-3 2027 Operational Emissions

Scenario	Source	CO (tons)	NO_x (tons)[1]	$PM_{2.5}$ (tons)	PM_{10} (tons)	SO_x (tons)	VOC (tons)[1]	CO_2e (metric tons)
No-Action	Aircraft	1,052.0	48.5	1.4	1.4	6.1	46.6	14,963.7
	APU	4.2	3.4	0.4	0.4	0.4	0.2	1,774.3
	GSE	10.6	3.1	0.1	0.1	1.2	0.8	4,704.2
	Motor Vehicles	838.4	144.4	8.4	16.1	2.1	50.8	131,737.9
	Total	**1,905.3**	**199.3**	**10.3**	**18.0**	**9.9**	**98.4**	**153,180.1**
Proposed Development Project	Aircraft	1,056.9	56.8	1.4	1.4	6.6	48.4	16,215.0
	APU	4.4	3.8	0.4	0.4	0.4	0.2	3,150.4
	GSE	10.7	3.4	0.1	0.1	1.2	0.9	9,033.1
	Motor Vehicles	894.9	166.1	9.8	18.3	2.3	55.6	146,822.7
	Total	**1,966.9**	**230.1**	**11.7**	**20.3**	**10.6**	**105.2**	**175,221.2**
Net Change	Aircraft	4.9	8.4	<0.1	<0.1	0.5	1.8	1,251.3
	APU	0.2	0.4	<0.1	<0.1	<0.1	<0.1	1,376.1
	GSE	0.1	0.4	<0.1	<0.1	<0.1	0.1	4,328.9
	Motor Vehicles	56.5	21.7	1.4	2.2	0.2	4.8	15,084.8
	Total	**61.6**	**30.8**	**1.5**	**2.3**	**0.8**	**6.7**	**22,041.1**

[1] NO_x and VOC are considered precursors to criteria pollutant formation (O_3 and $PM_{2.5}$).
Sources: AEDT 3c, 2020.

5.2.3. CONCLUSION

The ambient air monitoring data presented in **Appendix C.1** show that concentrations of regulated air pollutants in the Proposed Development Project area do not exceed, and are not close to approaching, any applicable NAAQS. FAA's criteria for determining significant air quality impacts is if a project causes or contributes to a violation of an applicable NAAQS. Because the Proposed Development Project occurs in a NAAQS attainment/unclassifiable area, there is no applicable numeric significance threshold against which emissions increases from the Proposed Development Project could be assessed. If Polk County were in nonattainment of the NAAQS, or maintenance of a NAAQS (which means the area was previously in nonattainment but the air quality is transitioning back to compliance), there would be numerical thresholds, called de minimis thresholds, against which air emissions increases associated with the Proposed Development Project could be compared. However, because Polk County is in attainment, the de minimis thresholds do not directly apply.

Table 5.2-4 summarizes the Proposed Development Project emissions previously reported in this section, compared to each pollutant's nonattainment de minimis threshold. This conservative comparison demonstrates that even if stringent de minimis thresholds were in place in Polk County, the Proposed Development Project would not exceed the thresholds. [27]

Additionally, Lakeland Linder International Airport (LAL) is approximately 50 miles east of the Gulf coast and 90 miles west of the Atlantic coast. The potential for prevailing wind patterns to further disperse air pollutants in the surrounding airshed is low. It is also important to note that sensitive receptors to air pollution within the vicinity of the Airport footprint (e.g., park, hospital, residential area, nursing home, school) are of sufficient distance from LAL emissions sources, that the likelihood for any localized increases in air concentrations due to the Proposed Development Project to affect the general public is low. As all monitored ambient air concentrations are well below the NAAQS, and in light of the foregoing discussions, it is unlikely that the Proposed Development Project would cause a NAAQS violation.

Table 5.2-4 Proposed Development Project Emissions and De Minimis Thresholds

Pollutant	2022 Total Project Emissions (tons per year)[1]	2027 Operational Emissions (tons per year)	Nonattainment de minimis (tons per year)	Maintenance de minimis (tons per year)
CO	+95.5	+61.6	100	100
NOx	+40.6	+30.8	100	100
PM10	+53.0	+2.3	70	100
PM2.5	+7.6	+1.5	70	100
Sox	+0.7	+0.8	100	100
VOC	+34.4	+6.7	70	100

[1]2022 Total Project Emissions include 2022 construction emissions (including construction of Taxiway A extension) and 2022 operational emissions.

Because the Proposed Development Project is not expected to generate operational or construction-related emissions that would exceed one or more of the NAAQS, or would not increase the frequency or severity of any such existing condition, the Proposed Development Project would not exceed impact thresholds identified in FAA Order 1050.1F that would indicate a significant impact.

[27] Note: For nonattainment de minimis values, the most stringent applicable threshold was considered. For Ozone, the most stringent that is applicable is for areas not in an Ozone Transport Region, which is the case for Polk County

5.3. BIOLOGICAL RESOURCES

5.3.1. SUMMARY OF IMPACTS

The Biological Assessment (BA) prepared for the Proposed Development Project assessed potential impacts to biological resources through review of the areas that could be directly affected by the construction activities associated with the Proposed Development Project (**Appendix D**). The study also included inter-agency consultation between the FAA and U.S. Fish and Wildlife Service (USFWS), as required by Section 7 of the Endangered Species Act (ESA). Copies of correspondence about the consultation undertaken for the Proposed Development Project is given in **Appendix A**. As stated in the final USFWS response, the requirements of Section 7 are fulfilled and further action is not required. Further details on the USFWS' species-specific concurrence is given in **Appendix A.**

5.3.1.1. HABITAT CONVERSION

Construction of the Proposed Development Project will result in the conversion of approximately 55.5 acres of land use/vegetative cover to Transportation use (Florida Land Use, Cover and Forms Classification System [FLUCFCS] 810). It is anticipated that 6.0 acres of land use/vegetative cover will convert into Reservoir (FLUCFCS 534) as a result of the proposed retention pond. **Table 5.3-1** lists the vegetative communities and land uses that will be converted to Transportation use or Reservoir use by the Proposed Development Project.

Table 5.3-1 Vegetative Community/Land Use Conversions Resulting from the Proposed Development Project

Category	Vegetative Community/Land Use	FLUCFCS Code[1]	USFWS Classification[2]	Acres Converted to Transportation (FLUCFCS 810)	Acres Converted to Reservoir (FLUCFCS 534)	Total
Uplands	Industrial	150	N/A	0.4	0.0	0.4
	Open Land	190	N/A	23.5	4.7	28.2
	Hardwood-Conifer Mixed	434	N/A	0.3	0.0	0.3
	Disturbed	740	N/A	8.3	--	8.3
	Transportation	810	N/A	0.0	0.1	0.1
	Subtotal Uplands			***32.5***	***4.8***	***37.3***
Wetlands	Cypress	621	PFO2C	1.4	0.0	1.4
	Wetland Forested Mixed	630	PFO1/3C	1.2	0.0	1.2
	Wetland Scrub	631	PFO1/2C	20.1	1.2	21.3
	Subtotal Wetlands			***22.7***	***1.2***	***23.9***
Other Surface Waters	Streams and Waterways	510	PUBx	0.3	0.0	0.3
	Subtotal Other Surface Waters			***0.3***	***0.0***	***0.3***
	Total			**55.5**	**6.0**	**61.5**

PFO1/2C = Palustrine, Forested, Broad-Leaved Deciduous/Needle-Leaved Evergreen, Seasonally Flooded; PFO1/3C = Palustrine, Forested, Broad-Leaved Deciduous/Needle-Leaved Evergreen, Seasonally Flooded; PFO2C = Palustrine, Forested, Needle-Leaved Deciduous, Seasonally Flooded; PUBx = Palustrine, Unconsolidated Bottom, Excavated.

[1]FDOT, *FLUCFCS Handbook*, 1999.

[2] Cowardin, Lewis M., *et.al. U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States.* 1979.

The Proposed Development Project would result in permanent impacts to approximately 52.7 acres of existing terrestrial and wetland habitats. An additional 8.8 acres of industrial, disturbed, and transportation land uses would also be converted per **Table 5.3-1** but do not provide suitable or high quality habitat. Portions of the Biological Study Area (BSA) have been previously affected by human activities at the Airport, including regular mowing and maintenance of the grassed infield areas. No federally listed species or designated critical habitats are expected to be adversely affected by the Proposed Development Project.[28]

To offset the loss of wetland functions and values, all necessary federal and state permits will be acquired and compensatory mitigation will be provided prior to commencing construction activities. The City proposes to purchase wetland credits from the Alafia River Mitigation Bank (ARMB) to offset the loss of wetland functions and values. Measures will be carried out to minimize impacts to listed species as summarized in **Section 5.3.2**.

Table 5.3-2 summarizes the proposed land use and vegetative cover types resulting from the construction and operation of the Proposed Development Project.

Table 5.3-2 Existing and Proposed Land Use and Vegetative Communities within the BSA

Category	Vegetative Community/Land Use	FLUCFCS[1] Code	USFWS Classification[2]	Existing Acres in BSA	Proposed Acres in BSA
Uplands	Industrial	150	N/A	0.6	0.2
	Open Land	190	N/A	28.2	0.0
	Hardwood-Conifer Mixed	434	N/A	0.9	0.6
	Disturbed	740	N/A	8.3	0.0
	Transportation	810	N/A	14.4	70.0
			Subtotal Uplands	***52.4***	***70.8***
Wetlands	Cypress	621	PFO2C	1.4	0.0
	Wetland Forested Mixed	630	PFO1/3C	5.6	4.4
	Wetland Scrub	631	PFO1/2C	21.3	0.0
			Subtotal Wetlands	***28.3***	***4.4***
Other Surface Waters	Streams and Waterways	510	PUBx	0.3	0.0
	Reservoir	534	POWx	0.0	6.0
			Subtotal Other Surface Waters	***0.3***	***5.8***
			Total	**81.0**	**81.0**

Notes: POWx = palustrine, open water, excavated

[1] FDOT, *FLUCFCS Handbook*, 1999.

[2] Cowardin, Lewis M., *et.al. U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States.* 1979

5.3.1.2. EFFECTS ON LISTED SPECIES

Table 5.3-3 lists the FAA's impact determination for federally and state listed species. Based on the findings and conservation measures identified in the BA (**Appendix D**), a determination was made by the FAA that the Proposed Development Project would have no effect on several protected species

[28] As a result of the adding the proposed Taxiway A extension in this final EA, 8.5 acres of Transportation land use were added to the BSA. This additional land cover contains previously cleared and graded land that is mowed and maintained at part of the airfield. It has low potential to provide suitable habitat for nearby wildlife. Further, because this area is a Transportation land use, no additional habitat conversion will occur due to the proposed taxiway extension.

with potential to be found in the Direct Study (DSA). It was determined that the Proposed Development Project may affect, but not likely to adversely affect the wood stork. FAA submitted the BA to the USFWS and initiated consultation under Section 7 of the Endangered Species Act on June 10, 2020. A Request for Additional Information (RAI) was received from the USFWS on June 18, 2020 stating that a Wood Stork Foraging Analysis was needed for the USFWS to begin Section 7 Consultation for the Proposed Development Project. FAA submitted its response to the RAI to the USFWS on September 17, 2020. On September 24, 2020, USFWS concurred with the FAA's effect determination, which concluded the consultation process (**Appendix A**). The addition of 8.5 acres of Transportation land use to the BSA as a result of adding the proposed taxiway extension in the Final EA would not affect wildlife species, as the expanded BSA area provides only low quality habitat. Therefore, FAA's determination for impacts to listed species provided in **Table 5.3-3** has not changed compared to the Draft EA and Section 7 Consultation Process described above.

5.3.1.3. INDIRECT AND SECONDARY IMPACTS

Indirect impacts to biological resources may occur within the established study areas for this EA, but can also extend further. Potential impacts to biological resources were also assessed through review of the areas that could be indirectly affected by the construction activities associated with the Proposed Development Project. Common species of wildlife located on the project site may be displaced during construction activities. The effects would be temporary and most of the common wildlife species would likely relocate to nearby similar habitats. However, wildlife that currently occupy habitat within the Proposed Development Project area are accustomed to the aviation activity associated with LAL and other industrial land uses in the area, and many are anticipated to remain in the vicinity during construction activities and return to habitats adjacent to the Proposed Development Project area following project completion.

Secondary impacts to the habitat provided by wetlands have the potential to occur within wetland habitats located outside of the Proposed Development Project area. Secondary impacts to wetlands due to the Proposed Development Project have been identified and disclosed in **Section 5.13**. Direct and secondary impacts to wetlands will be compensated for through purchase of wetland mitigation bank credits. Wetland mitigation credits will offset the loss of wetland functions and values that would have potentially been used by both listed and non-listed species. Therefore, secondary impacts to aquatic or wetland dependent species will be minimized.

The ESA also defines indirect impacts as those that are caused by the Proposed Development Project and are later in time, but still are reasonably certain to occur, and therefore Proposed Development Project operations may potentially impact biological resources. Increased airport operations associated with the Proposed Development Project may cause noise or visual disturbance to adjoining habitats that could affect wildlife utilization over time, however as noted above, wildlife have the ability to move to similar habitat further away. Increased light emissions may attract prey species (e.g., insects) which could indirectly draw predators (e.g., bird and bats) to the airport environs, which could marginally increase wildlife hazard potential. However, many wildlife species that currently occupy habitat within the Proposed Development Project area are accustomed to the aviation activity associated with LAL, the presence of light emission sources, and the industrial land uses in the area. These potential hazards can be managed using Wildlife Hazard Management Plan (WHMP) tools and practices outlined in **Section 5.3.2.1**.

Table 5.3-3 Project Impact Determination on Listed Species

Project Impact Determination[1]	Federally Listed Species
"May affect, not likely to adversely affect"	Wood stork (*Mycteria americana*)
"No effect"	Eastern indigo snake (*Drymarchon corais couperi*) Florida scrub jay (*Aphelocoma coerulescens*) Audubon's crested caracara (*Polyborus plancus audubonii*) Everglade snail kite (*Rostrhamus sociabilis plumbeus*)
Project Impact Determination[2]	**State Listed Species**
Will not affect	Gopher tortoise (*Gopherus polyphemus*) Little blue heron (*Egretta caerulea*) Tricolored heron (*Egretta tricolor*) Southeastern American kestrel (*Falco sparverius paulus*) Florida sandhill crane (*Antigone canadensis pratensis*) State listed plant species Florida burrowing owl (*Athene cunicularia floridana*) Least tern (*Sternula antillarum*)

[1] Effect determination language as defined by the USFWS in the Final ESA Section 7 Consultation Handbook (March 1998) are for federally listed species only.
[2] Effect determination language is not defined specifically for state-listed species. Therefore, it was determined that the Proposed Development Project will not affect any of the state listed species potentially occurring within the BSA.

5.3.2. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

If environmentally approved, the FAA will require the City to satisfy applicable federal and state permit and mitigation requirements related to habitat loss and impacts on protected species. These measures include:

1. Prior to and during construction, the City will be required to use the USFWS-approved Standard Protection Measures for the Eastern Indigo Snake (updated August 2013) (see **Appendix D**);
2. During the permitting phase of the Proposed Development Project, the City will purchase wetland mitigation credits from the ARMB to offset wetland functions and values potentially used by the wood stork, Everglade snail kite, little blue heron, tricolored heron, and Florida sandhill crane (see **Section 5.13.2** for further details);
3. Prior to construction, the City will be required to resurvey appropriate habitats within the project area to confirm the presence or absence of crested caracara nests, gopher tortoise burrows, Florida burrowing owl burrows, southeastern American kestrel nests, least tern nests, and Florida sandhill crane nests. If any of these species or their nests are present, the City will coordinate with the FAA, USFWS, and/or Florida Fish and Wildlife Commission (FWC) to minimize the Proposed Development Project impacts and get the necessary permits;
4. Prior to construction, the City will be required to resurvey appropriate habitats within 1,000 feet of the Proposed Development Project area for bald eagle nests. If a bald eagle nest is found within 1,000 feet of the Proposed Development Project, the City will coordinate with the USFWS (and FAA) to secure any and all approvals regarding this species; and
5. To prevent black bear encounters during construction activities, contractors will follow best management practices (BMPs). These involve keeping construction sites clean with wildlife-resistant containers for workers to use for food-related and other wildlife-attractant refuse; and frequently remove trash and use proper food storage on work sites.

5.3.2.1. WILDLIFE HAZARD MANAGEMENT

The construction of an open stormwater pond, or modifications to existing ponds, has the potential to attract nuisance wildlife. The existing upland and wetland habitats described in **Section 4.3** are

currently monitored as part of the Airport's current WHMP. The WHMP offers staff the appropriate tools to manage the goal of minimizing wildlife populations on site

Many of the tools described in the WHMP are designed to modify habitat on and around the LAL airfield to minimize wildlife attraction, congregation, and use of the Airport and adjacent areas. These long-term measures include removal of dead and dying trees that may serve as nesting sites, use of landscaping plants with minimal wildlife foraging and habitat value, pesticide application to remove insects that may attract birds, and turf management to reduce cover for both bird and bird prey species. Installation and routine inspection and repair of specially-designed airfield fencing minimizes intrusion onto the airfield by hazardous mammal species such as coyotes and feral hogs.

The WHMP supplements long-term wildlife control strategies with short term control methods, including trapping and removal, harassment, and take of wildlife as needed to ensure aircraft safety. Trapping and removal must be performed by a licensed wildlife trapper and biologists, and must follow Florida Administrative Code (F.A.C.) 68A-12.009 and 68A-24.002 for Nuisance Trapping Permit guidelines. LAL also holds a Wildlife Hazard Depredation Permit issued by USFWS and renewed annually. The permit authorizes harassment to disperse, or taking of federally listed species that present hazards to aircraft safety. FWC rule 68A-9.012 includes provisions for the harassment and take of wildlife that pose a threat to aircraft safety and human life at airports, and eliminates most state permitting requirements for such actions.

As noted in previous sections, the location of the stormwater pond shown for the Proposed Development Project in this EA is conceptual and subject to change. At the time of this Final EA's preparation, the Proposed Development Project's site design was able to relocate the proposed pond to a new location west of the proposed new air cargo facility access road and south of Drane Field Road, in the northwest quadrant of the Airport property (**Figure 1.2-1a**). This places the pond farther from Runway 9/27 than the original conceptual location. All proposed drainage improvements associated with the Proposed Development Project will use design measures to minimize wildlife attraction pursuant to Section 3-7 of the FAA AC 150/5200-33C. Measures include utilizing steep-sided, rip-rap lined pond edges for wet detention areas where practicable. Further, once the stormwater system improvements are constructed, the City will continue to monitor the improvements for nuisance wildlife. As with other similar wet detention ponds on the Airport, the tools available to staff in the WHMP will be employed to reduce wildlife use. Should these drainage improvements attract wildlife hazardous to aviation, the City will evaluate the need for the use of physical barriers which may include, for example, overhead wires or line, or synthetic cover or floating devices that cover the exposed surface to further avoid and/or reduce wildlife hazards.

Additional wildlife attractants that may pose hazards to aircraft safety (i.e. bird strikes) may exist in areas away from the immediate airport environment, such as wetlands, wildlife refuges, green spaces, and municipal landfills. Landfills pose a particular hazard as they have been demonstrated to attract large birds such as vultures, which pose an increased risk in the event of a bird strike. FAA guidance recommends that a landfill is located at least 10,000 feet (or approximately two miles) from the nearest point of any runway. The closest landfill to the Lakeland Linder Airport is the North City Landfill in Winter Haven, which is approximately 10 miles east of the airport and located near the Polk Parkway. There is also the Southeast County Landfill in Lithia, which is 13 miles southwest of the airport. These landfills are located outside of minimum FAA siting recommendations for the location of landfills in the vicinity of airports. The same siting recommendation has been adopted into state and local airport zoning laws, and therefore the landfill locations are also consistent with these airport zoning requirements.

5.3.3. CONCLUSION

The Proposed Development Project would not jeopardize the continued existence of any federally listed species. It would not convert designated or proposed critical habitat. It would not have substantial

impacts to non-listed species, or result in substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations. Conservation measures will be carried out for the species that may be affected by the Proposed Development Project. Therefore, the Proposed Development Project would not exceed impact thresholds identified in FAA Order 1050.1F that would indicate a significant impact.

5.4. CLIMATE

5.4.1. SUMMARY OF IMPACTS

Construction and operation of the Proposed Development Project would result in an increase in greenhouse gas (GHG) emissions, when compared to the No-Action Alternative. As a result, these emissions have been quantified. Detailed emissions estimation methodologies are given within **Appendix C**.

5.4.1.1. CONSTRUCTION EMISSIONS

Construction emissions of CO_2e would total roughly 13,483 metric tons, all of which is expected to occur in 2022 (**Appendix C**).

5.4.1.2. OPERATIONAL EMISSIONS

As discussed in **Section 5.2.1.2**, differences in GHG emissions between the No-Action Alternative and the Proposed Development Project are due to increases in air cargo aircraft, cargo delivery truck, and facility employee vehicle operations that would be expected to occur after the proposed Phase II cargo facilities are constructed and become operational. As shown on **Tables 5.2-2** and **5.2-3** a net increase of 12,236.2 and 22,041.1 metric tons of CO_2e is expected to occur with the Proposed Development Project in 2022 and 2027, respectively, when compared to the No-Action Alternative.[29]

As of the writing of this EA, neither Polk County nor the City of Lakeland has developed a local climate plan or climate adaptation plan or identified climate change mitigation goals or strategies.

5.4.2. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

No significant climate impacts are anticipated, and no mitigation measures are warranted. However, many voluntary measures available to reduce construction- and operational-related air emissions (**Section 5.2.2**) would also reduce fuel consumption. The air cargo services provider enacted a "Climate Pledge" corporate policy in 2019, which set a goal of achieving a company-wide net zero carbon status by 2040. Near-term strategies include a 2020 purchase of six million gallons of sustainable aviation fuels, setting a goal to power operations using 100 percent renewable energy by 2025, and investing in start-up companies developing alternative and renewable aircraft technologies (sustainable aviation fuels, hydrogen fuel cell aircraft, and Electric Vertical Take-off and Landing aircraft). At LAL, the air cargo tenant uses electric ground support equipment (GSE) wherever feasible, including cargo tractors, belt loaders, and K-loaders (heavy-duty cargo lifts). Use of electric GSE would expand with the Proposed Development Project. These measures, along with routine facility energy audits and improvements when appropriate, would in turn reduce the level of GHG emissions associated with the Proposed Development Project.

[29] When considering the emissions inventory presented, extending Taxiway A as proposed in this Final EA may result in a nominal increase in taxi distance for aircraft using the extended taxiway, which could result in a small increase in the overall operational emissions presented. However, the proposed taxiway extension would provide redundant aircraft access points, which is intended to increase taxiing efficiency and reduce aircraft queueing to access the air cargo facility. This would reduce aircraft idle time and provide a marginal decrease of aircraft emissions.

5.4.3. CONCLUSION

The FAA has not established significance thresholds for aviation GHG emissions, nor has the agency identified specific factors to consider in making a significance determination for GHG emissions. Consequently, there is currently no quantitative or qualitative basis for comparison for the GHG emissions presented in this document. Based on the analysis conducted for this EA, GHG emissions increases associated with the Proposed Development Project are modest compared to the overall totals at the airport.

5.5. COASTAL RESOURCES

5.5.1. SUMMARY OF IMPACTS

Consistency with the Florida Coastal Management Program (FCMP) involves the review and consideration of the 24 state Enforceable Policies that collectively provide the framework for the management of Florida's coastal resources. Project consistency information is coordinated with the Florida Department of Environmental Protection (FDEP) Florida State Clearinghouse to determine if the state identifies any objections to the Proposed Development Project, or if there are any issues to consider during the environmental impact analysis process in order to determine FCMP consistency. The Proposed Development Project is consistent with the 24 state statutes protecting Florida coastal resources. The FDEP indicates that the Proposed Development Project is preliminarily consistent with the Florida Coastal Management Program (**Appendix A**). The state's final concurrence will be determined during the environmental permitting process. See **Appendix B** for the FCMP consistency review summary.

5.5.2. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

No significant coastal resources impacts are anticipated, and no mitigation measures are warranted.

5.6. HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

5.6.1. SUMMARY OF IMPACTS

5.6.1.1. CONSTRUCTION IMPACTS

During construction, contractor staging areas will be located at various locations in the DSA. The staging areas will likely include portable aboveground storage tanks (AST)s for fuel storage, as well as the use of lubricants, paints, and solvents. The construction contractor(s) will be required to develop plans to prevent accidental releases to the environment and to minimize the environmental impact, should they occur.

Based on review of environmental records described in **Section 4.6.1**, only one site (Map ID #2 on **Figure 4.6-1)** is located within 150 feet of the DSA. The site operator was registered as a non-generator of hazardous waste under the Resource Conservation and Recovery Act (RCRA) beginning December 23, 1999. Historical violations associated with this site were resolved without need for ongoing assessment or remediation. Because no violations or enforcement actions have been recorded in the past five years, the RCRA registration is not indicative of significant environmental concern. The nearest National Priority List cleanup site is in excess of two miles from LAL.

Because the Proposed Development Project does not include demolition of existing structures, it is expected that construction activities would generate minimal construction and demolition debris. Debris and wastes that could be generated during the construction of the new building and pavements would be recycled where possible, and whatever could not be recycled would be disposed at a permitted landfill. Land clearing and grading activities associated with the Proposed Development Project would potentially generate vegetation and substrate debris that would be recycled. Clearing debris that cannot be recycled would be disposed of at a permitted landfill. Assuming that each square

foot of land clearing, grading and pavement demolition would generate one vertical foot of debris, the Proposed Development Project would be expected to generate approximately 109,707 cubic yards (CY) of debris.[30]

Polk County operates the North Central Landfill in Winter Haven, Florida, approximately 10 miles east of LAL. Hillsborough County operates the Southeast County Landfill in Lithia, Florida, approximately 13 miles southwest of LAL. Additional landfills and construction debris disposal services are operated by private businesses in Polk and Hillsborough counties, including Republic Services Cedar Trail Landfill and Advanced Disposal Construction and Demolition Waste Collection. Between the existing local landfills, non-recyclable construction debris produced from the Proposed Development Project should not appreciably impact overall landfill capacity. Suitable soils can be placed at the airport, as needed, or stockpiled at a City-owned site for re-use.

In general terms, management and handling of solid wastes and hazardous materials generated during the construction phase of any project would comply with all applicable federal, state and local regulations. Construction waste not diverted, recycled, or re-used would be transported to and disposed of in local permitted construction/demolition waste facilities or in local waste-to-energy plants following applicable state and local requirements. Construction contractor(s) would be required to develop pollution prevention, spill prevention, and response plans documenting the measures that will be taken to prevent accidental releases to the environment and, should they occur, the actions that will be undertaken to minimize the environmental impact.

5.6.1.2. OPERATIONAL IMPACTS

The use of fuel and other regulated substances such as lubricants and cleaning solvents that are necessary for routine operations of the air cargo facility and its aircraft will continue and will increase to correspond to the forecast growth in operations at the Airport and the increase in aviation activity associated with the Proposed Development Project. New aviation-related tenants would, in most cases, be required to develop site-specific pollution prevention plans (i.e., Spill Prevention Control and Countermeasures Plan [SPCC]) that reduce the potential for substantial impacts associated with regulated materials.

Entities participating in the storage, use, transportation, and disposal of hazardous materials at LAL would be required to prepare a SPCC documenting the measures that have been taken to prevent accidental release to the environment and, should they occur, the corrective actions that are in place to minimize the environmental impacts.

In addition, the air cargo services provider invests specifically in a number of recycling and solid waste reduction measures at LAL and as part of its system-wide sustainability efforts. These include single stream recycling for employee wastes, and programs to reduce the amount of packaging used for shipping.

5.6.2. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

The Proposed Development Project is not anticipated to result in significant hazardous material impacts. Therefore, mitigation measures are not warranted and have not been identified in this EA. If previously unknown contaminants are discovered during construction activities, or a spill occurs during construction, construction contract provisions would specify that work would stop until the National Response Center is notified. Depending on the parameters of potential soil contamination, the soil could be reused on-site.

[30] AECOM engineering estimate.

5.6.3. CONCLUSION

The Proposed Development Project would not generate a considerable or appreciable amount of hazardous materials or solid waste. Much of the land clearing and construction waste to be generated could be recycled or diverted to permitted landfills. The Proposed Development Project would not enable new activity types and would not result in new types of solid waste generated or hazardous materials in use at LAL.

Based on review of available environmental records and historical aerial photography, the majority of environmental contamination events or compliance issues documented at LAL are historical or otherwise minor in nature. All known historical violations within or adjacent to the Proposed Development Project area have been resolved and closed. No sites on or around LAL are listed on the National Priority List of contaminated sites. Adoption of avoidance and minimization protocols described in **Section 5.6.2** would further reduce the risk of potential impacts during construction and operation of the Proposed Development Project. Therefore, the Proposed Development Project would not exceed impact thresholds identified in FAA Order 1050.1F that would indicate a significant impact.

5.7. HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

5.7.1. SUMMARY OF IMPACTS

The Proposed Development Project has been evaluated in compliance with Section 106 of the National Historic Preservation Act (NHPA). This requires federal agencies to consider the effects of their actions on properties that may be eligible for listing or are listed in the National Register of Historic Places (NRHP). The Section 106 process generally requires three steps: 1) Initiation of the process through early coordination with the State Historic Preservation Officer (SHPO) and other interested parties; 2) identification of cultural resources that are listed in or are eligible for listing in the NRHP; and 3) assessment of the effects the project will have on eligible or listed properties.

As mentioned in **Section 4.7**, a Cultural Resources Assessment Survey (CRAS) was conducted at LAL that included background research and field survey (**Appendix F**). Archaeological field surveys performed for the CRAS uncovered no archaeological resources. Based on the results of the survey, no further archaeological work was recommended for the Direct Effects Area of Potential Effect (APE). With the addition of a proposed extension of Taxiway A to the Proposed Development Project for the Final EA, the Direct Effects APE was expanded to include the area that would be disturbed during construction of the taxiway. As noted in the CRAS, substantial portions of land at LAL have been disturbed and subject to grading over time. Based on past investigations at LAL and the archaeological survey conducted for the Proposed Development Project, there is low potential for encountering archaeological resources within previously graded and developed portions of the airfield. In addition, the Florida Master Site File (FMSF) shows no recorded cultural resources within the expanded APE. The additional area included in the Final EA Direct Effects APE was not field surveyed (shovel tested) for the occurrence of archaeological resources, it is unlikely that such resources would be encountered during construction of the proposed taxiway extension.

Historic architectural surveys completed for the CRAS identified 11 potentially historic resources or resource groups. All identified structures were evaluated against NRHP Criteria A through D to recommend whether or not each location was potentially eligible for listing to the National Register. The Aaron E. and Maude Morgan House (Map ID #2 on **Figure 4.7-2**) and the English Family House (Map ID #5) are each potentially eligible for listing to the National Register under Criterion C. **Table 5.7-1** summarizes the evaluation of the two resources. The Proposed Development Project would cause no direct physical effects to any potentially NRHP-eligible locations within the APE. The proposed taxiway extension would not impose new visual impacts on these resources. Noise from aircraft taxiing on the proposed new section of taxiway would be at levels and a location consistent

with that from aircraft taxiing on the air cargo apron. It is unlikely that the addition of the taxiway extension would produce additional noise impacts to these properties. Therefore, no additional impacts to potential historic structures would occur due to the addition of the Proposed taxiway extension in the Final EA.

To determine the potential for indirect effects on these two properties, the noise and visual environment in the Indirect Effects APE was evaluated (see **Table 5.7-1**). Based on the foregoing discussion, and the results listed on **Table 5.7-1**, the recommendation of the CRAS is that the Proposed Development Project will have no adverse effects on potential historic resources in the APE.

5.7.2. SECTION 106 CONSULTATION

Section 106 consultation was initiated in May 2020 with the FAA providing project information and the proposed APEs to the SHPO and the following federally-recognized Native American Indian tribes: the Miccosukee Tribe of Indians of Florida, Muscogee (Creek) Nation, Poarch Band of Creek Indians, the Seminole Nation of Oklahoma; and Seminole Tribe of Florida.

No objections to the proposed APE were received. The Seminole Tribe of Florida concurred with the APE and stated they will continue to consult with the FAA throughout the EA process as the Proposed Development Project falls within the tribe's area of interest. The Muscogee (Creek) Nation also stated that the Proposed Development Project falls within the tribe's area of interest and requested that they receive a copy of the Draft EA once finalized, for review and comment.

Table 5.7-1 Historic Evaluation Summary for Potentially NRHP-Eligible Resources

Map ID (Figure 4.7-2)	Name	NRHP Criterion A	NRHP Criterion B	NRHP Criterion C	NRHP Criterion D	Effects Recommendation
2	Aaron E. and Maude Morgan House	N	N	Y	N	*Direct:* No effect. *Indirect:* No adverse effects. Predicted sound levels remain noise-compatible for this agricultural/residential land use per FAA criteria. Property is 0.6 mile from project area with multiple tree stands and a campground between property and project area, no viewshed changes expected.
5	English Family House	N	N	Y	N	*Direct:* No effect. *Indirect:* No adverse effects. Predicted sound levels remain noise-compatible for this agricultural/residential land use per FAA criteria. Property is 0.68 mile from project area with dense tree stands protecting viewshed, no viewshed changes expected.

[1] Y = Recommended eligible under given criterion; N = Recommended ineligible under given criterion
Source: AECOM, 2020.

On October 20, 2020, the FAA submitted the CRAS to the SHPO for review and concurrence with the determination that there are two potentially NRHP-eligible resources within the APE, but they would not be adversely affected, as well as a recommendation that further evaluation of archaeological

resources within the Direct Effects portion of the APE is not warranted. On February 19, 2021, the SHPO submitted a letter in response to the CRAS concurring with the FAA's determination of no effect to historic properties.

The Draft EA, which contains the CRAS, was provided to the Seminole Tribe of Florida and Muscogee (Creek) Nation as requested for review and comment. On May 18, 2021, the Seminole Tribe of Florida responded that it has no objections or other comments regarding the Proposed Development Project, provided the Tribal Historic Preservation Office would be notified if any archaeological, historical, or burial resources are inadvertently discovered during project implementation. On June 8, 2021, the Muscogee (Creek) Nation's Historic and Cultural Preservation Department concurred that there should be no effects to any known historic properties. The Muscogee (Creek) Nation requested that all work cease and the Nation and other appropriate agencies be notified immediately, should inadvertent discoveries of cultural resources, human remains, or other items related to the Native American Graves Protection and Repatriation Act occur.

For reference, copies of the SHPO and tribal consultation materials supporting this EA are contained within **Appendix A.**

5.7.3. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

As a result of the CRAS and Section 106 consultations, a determination of no effect on historic properties has been made. However, there may still be potential to encounter prehistoric or historic artifacts or physical remains that could be associated with Native American, early European, or American settlement during construction. If these items are encountered at any time within the project site area, all ground disturbing activities in the vicinity of the discovery would cease. Responsible parties will contact the Florida Division of Historic Resources, Compliance Review Section. Project activities would not resume without verbal and/or written authorization. If unmarked human remains are encountered during permitted activities, all work would stop immediately and the proper authorities notified.

5.7.4. CONCLUSION

The Proposed Development Project will have no effect on any historic, cultural or archaeological resources. No NRHP-listed or -eligible resources are contained within the Direct Effects APE of the Proposed Development Project. Therefore, there would be no direct effects on listed or eligible resources. The Proposed Development Project would not cause any substantial indirect effects within the Indirect Effects APE. Adoption of measures to address the possibility of unexpected finds during construction (**Section 5.7.3**) are consistent with state statutes to prevent and address potential significant impacts to previously undiscovered cultural resources. As a result, the Proposed Development Project overall would not have a significant impact on historical, archaeological, or cultural resources. The SHPO has concurred with the FAA's determination of no effect to historic resources.

5.8. LAND USE

5.8.1. SUMMARY OF IMPACTS

The Proposed Development Project is consistent with applicable federal, state and local land use plans and zoning ordinances. All of the property within LAL's boundaries is and will continue to be zoned for airport use and operated as a public-use airport. The Proposed Development Project would be located entirely on Airport property and no changes to zoning are anticipated. The development of the Proposed Development Project will be subject to all applicable local zoning ordinances and land development codes. Local and regional planning agencies were notified of the Proposed Development Project during early agency coordination (**Appendix A**). No objections to the Proposed Development Project or concerns with land use were received from local planning agencies or departments .

5.8.2. CONCLUSION

The FAA has not established significance thresholds for land use, nor have they identified specific factors to consider in making a significance determination for land use. The Proposed Development Project would be consistent with current and future land use plans and zoning ordinances established for the LAL area. Therefore, the Proposed Development Project would not exceed impact thresholds identified in FAA Order 1050.1F that would indicate a significant impact. As no significant impacts were identified in terms of land use changes, no avoidance, minimization, and/or mitigation measures have been considered.

5.9. NATURAL RESOURCES AND ENERGY SUPPLY

5.9.1. SUMMARY OF IMPACTS

The following factors were considered when identifying impacts associated with the Proposed Development Project, each of which are discussed further below.

- Operational Utility Demands: any large demand on local existing or planned utilities;
- Consumable Materials Demand: volume(s) of any scarce or unusual materials needed to construct the Proposed Development Project; and
- Fuel Demand

Utility Impacts

Lakeland Electric supplies electricity to LAL and surrounding communities. Water and wastewater services are delivered to the Airport through Lakeland Water Utilities. Multiple force main systems located on Airport property are supported by numerous sanitary lines varying in size from eight inches to 10 inches. Currently, there are sanitary lines providing service to all facilities on the northern portion of Airport property and select areas on the south portion of Airport property. Water service is supplied to the Airport through Lakeland Water Utilities, which utilizes two water treatment plants in the area and has a treatment capacity of 51 million gallons per day (mgd).

Operationally, the Proposed Development Project would create additional demand for potable water, sewer services, electricity and other utilities at LAL, but this increased demand would not surpass current supplies and capacities. The projected increase in number of employees per day at LAL resulting from the Proposed Development Project is projected to be 280 (399 maximum peak) in 2022 and 566 (808 maximum peak) in 2027. **Table 5.9-1** summarizes the projected utility demands of the Proposed Development Project for the study years 2022 and 2027. In June 2020, notification of the Proposed Development Project was submitted to Lakeland Electric and Lakeland Water Utilities. No objections or concerns were received regarding utility demands.

Table 5.9-1 Estimated Average Proposed Development Project Utility Demands

Utility Type	2022	2027
Electric power	3 MW	5 MW
Natural gas	50,000 CFH	50,000 CFH
Potable water	40,000 gallons/day	60,000 gallons/day
Wastewater generation	6,000 gallons/day	6,000 gallons/day
Storm drain	100,000,000 gallons/year	100,000,000 gallons/year

Notes: CFH = cubic feet per hour; MW = megawatts; Demands are total for representative year.
Sources: AECOM, 2020.

Consumable Materials Impacts

Construction of the Proposed Development Project would require approximately 134,615 square yards (SY) of asphalt, 30,904 cubic yards (CY) of aggregate (subbase), 54,584 CY of concrete, 17,812 CY of topsoil, and 147,110 CY of fill material.[31] There are several suppliers of construction materials located in the region. The Proposed Development Project would not create a demand for construction materials that would be in short supply, produce scarcity of high-commodity resources or deplete rare or valuable sources of raw materials unique to the area.

Fuel Demand

Two types of aviation fuel are available at LAL: 100 Octane Low Lead (100LL) aviation gasoline (AvGas) and Jet-A. AvGas is used by piston-engine aircraft and Jet-A is used by aircraft with turbine engines. The current fuel storage facilities (fuel farms) at LAL can store 24,000 gallons of AvGas 100LL and 72,000 gallons of Jet-A fuel at LAL. By 2027, annual Jet-A fuel consumption at LAL, including with the Proposed Development Project, is projected to be approximately 711,332 gallons of Jet-A fuel.[32] Overall, projections indicate the need for additional fuel storage capacity at LAL providing a total of 850,000 gallons of Jet-A fuel capacity to include the Proposed Development Project operations. Once operational, the proposed fuel storage improvements at LAL will sufficiently accommodate the day-to-day fuel demand at the Airport, including the Proposed Development Project. There are no supply/demand system concerns or impacts anticipated as a result of the Proposed Development Project.

5.9.2. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

Because the Proposed Development Project would not cause demand for energy or natural resources that would exceed available or future supplies, mitigation measures are not warranted. To the extent applicable and practical, LAL would consider design measures that reduce energy consumption, solid waste generation, and water consumption. They would apply sustainable construction and engineering practices wherever possible. Adding aircraft fuel storage capacity as part of the Proposed Development Project would address the Airport's overall fuel requirements.

5.9.3. CONCLUSION

The Proposed Development Project would not cause unsupportable demands on available natural resources or energy supplies. Construction and operation of the Proposed Development Project would not require consumable natural and energy resources that would be considered in short supply in Polk County. Therefore, the Proposed Development Project would not exceed thresholds identified in FAA Order 1050.1F that would indicate a significant impact. Because the Proposed Development Project would not cause demand for energy or natural resources that would exceed available or future supplies, mitigation measures are not warranted.

5.10. NOISE AND NOISE COMPATIBLE LAND USE

5.10.1. SUMMARY OF IMPACTS

The noise exposure analyses conducted for this EA evaluated potential impacts for noise-sensitive areas that would be exposed to the composite 65 decibel (dB) day-night average sound level (DNL 65 dB) or higher. Noise-sensitive land uses typically include residential, educational, health, religious, certain parks and recreational, and cultural (including historical) categories. Areas within the DNL 65 dB or higher noise exposure contours were evaluated to determine their compatibility with such levels

[31] Quantities were updated from the Draft EA to include the proposed Taxiway A extension.

[32] Totals were obtained from AEDT 3c. For aircraft, AEDT simulates fuel usage up to a certain altitude, so it is possible that the total annual full flight consumption of Jet-A could be slightly higher than what is reported here.

of noise. FAA's land use compatibility guidelines contained in Appendix A of Title 14 Code of Federal Regulations (CFR) Part 150 were used to evaluate aircraft related noise associated with the Proposed Development Project and effects on land use compatibility. Compared to the No-Action Alternative in 2022, the Proposed Development Project would increase incompatible land use (residential) by 2.7 acres (3.2 acres total). Of the six residences located on the affected residential parcels, two would be located within the DNL 65 contour. Compared to the No-Action Alternative in 2027, the Proposed Development Project would increase incompatible land use residential by 3.7 acres (5.5 acres total) and would increase the number of residences within the DNL 65 contour by one (three total). The analysis shows an increase in aircraft noise would occur if the Proposed Development Project was implemented, but the increase would not result in a significant impact.

5.10.1.1. CONSTRUCTION NOISE

Construction noise would temporarily increase sound levels in the immediate vicinity of the construction and land clearing activities. Land clearing and grading operations are the noisiest, with such equipment generating noise levels as high as 70 to 95 dB within 50 feet of their operation. Dump trucks accessing the site can also generate noise that may be noticeable during morning and nighttime hours. Distance rapidly diminishes noise levels, so area residents would likely experience a modest increase in noise during construction hours. The potential noise impact associated with the operation of machinery on-site would be temporary and can be reduced using construction timing and staging. To further minimize noise impacts, construction equipment would be maintained to meet manufacturers' operating specifications. The distance between the Proposed Development Project and the nearest sensitive area (i.e., residence) is approximately 0.3 mile. Impacts related to the delivery of materials may be minimized by requiring that the contractor use designated haul routes that directly connect Polk Parkway with Interstate Highway 4 and avoid residential and other noise-sensitive areas. Contractors will follow all local land development codes and noise ordinances during construction of the Proposed Development Project. Overall, construction noise is expected to have a minor and temporary impact.

5.10.1.2. AIRCRAFT NOISE AND LAND USE COMPATIBILITY

As previously discussed in **Section 1.2.1**, the additional air cargo aircraft operations generated by the Proposed Development Project would be conducted by the Boeing 767-300 and 737-800 aircraft. **Table 1.2-1** gives a summary of the additional aircraft operations anticipated and the operational schedule. For further information on the inputs and assumptions used for this analysis, see **Appendix G**.

2022 Noise Exposure

The analysis of the Proposed Development Project noise exposure and land use compatibility compared to the No-Action Alternative in 2022 is summarized on **Tables 5.10-1** and **5.10-2,** and **Figures 5.10-1** through **5.10-4**. Approximately 93.9 acres of additional land, of which approximately 21.4 acres would be off airport property, would be exposed to DNL 65 dB or greater when the air cargo facility expansion becomes operational in 2022 when compared to the No-Action Alternative. As shown in **Figure 5.10-4**, residential parcels would be newly exposed to the DNL 65 dB contour due to the Proposed Development Project in 2022; however, none of these areas would experience an increase of 1.5 dB or more in the DNL 65 dB contour. These areas would experience an increase ranging from 0.9 to 1.2 dB in the DNL 65 dB contour.

Of the 93.9 acres, approximately 2.7 acres of residential land use (1.6 acres single-family residential and 1.1 acres mobile homes) would be newly included in the DNL 65 dB. Two households (total estimated population of 6.1) would be exposed to the DNL 65 dB. Further detail on the noise modeling data is given in **Appendix G**.

Table 5.10-1 2022 Noise Exposure Estimates for Land Use

Location	Land Use Type	No-Action (DNL 65+ dBA, acres)	Proposed Development Project (DNL 65+ dBA, acres)	Change (DNL 65+ dBA, acres)	No-Action (DNL 70+ dBA, acres)	Proposed Development Project (DNL 70+ dBA, acres)	Change (DNL 70+ dBA, acres)	No-Action (DNL 75+ dBA, acres)	Proposed Development Project (DNL 75+ dBA, acres)	Change (DNL 75+ dBA, acres)
On-Airport	Governmental, Institutional	556.5	593.7	37.2	340.3	360.8	20.5	174.1	189.3	15.2
	Vacant Governmental	196.6	231.9	35.3	63.0	76.6	13.6	23.6	26.4	2.8
	Subtotal On-Airport	*753.1*	*825.6*	*72.5*	*403.3*	*437.4*	*34.1*	*197.7*	*215.7*	*18.0*
Off-Airport	Agricultural	1.6	3.9	2.3	0.0	0.0	0.0	0.0	0.0	0.0
	Commercial	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Industrial	11.1	23.1	12.0	0.0	0.0	0.0	0.0	0.0	0.0
	Miscellaneous, Unspecified	1.4	3.1	1.7	0.0	0.0	0.0	0.0	0.0	0.0
	Mobile Homes	<0.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
	Single-Family Residential	0.5	2.1	1.6	0.0	0.0	0.0	0.0	0.0	0.0
	Vacant Commercial	0.0	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
	Vacant Industrial	3.1	4.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0
	Subtotal Off-Airport	*17.7*	*39.1*	*21.4*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
TOTAL		**770.8**	**864.7**	**93.9**	**403.3**	**437.4**	**34.1**	**197.7**	**215.7**	**18.0**

dBA = A-weighted decibels
Source: AEDT 3c, 2020; AECOM, 2020.

Table 5.10-2 2022 Noise Exposure: Household and Population Estimates

Category	No-Action (DNL 65+ dB)	Proposed Development Project (DNL 65+ dB)	No-Action (DNL 70+ dB)	Proposed Development Project (DNL 70+ dB)	No-Action (DNL 75+ dB)	Proposed Development Project (DNL 75+ dB)
Parcels	3	6	0	0	0	0
Total Households on Parcels	3	6	0	0	0	0
Households in Contour	0	2	0	0	0	0
Population in Contour	0	6.1	0	0	0	0

Source: AECOM, 2020.
Note: If even a portion of a parcel was within the contour, the entire parcel was counted in the table. The total households shown are for each entire parcel. Of these, the number of households in the contour are only those physically located within the contour. Population estimated by multiplying the reported average household size (3.06) within the Socioeconomic Study Area (SSA) by the number of households within the contour.

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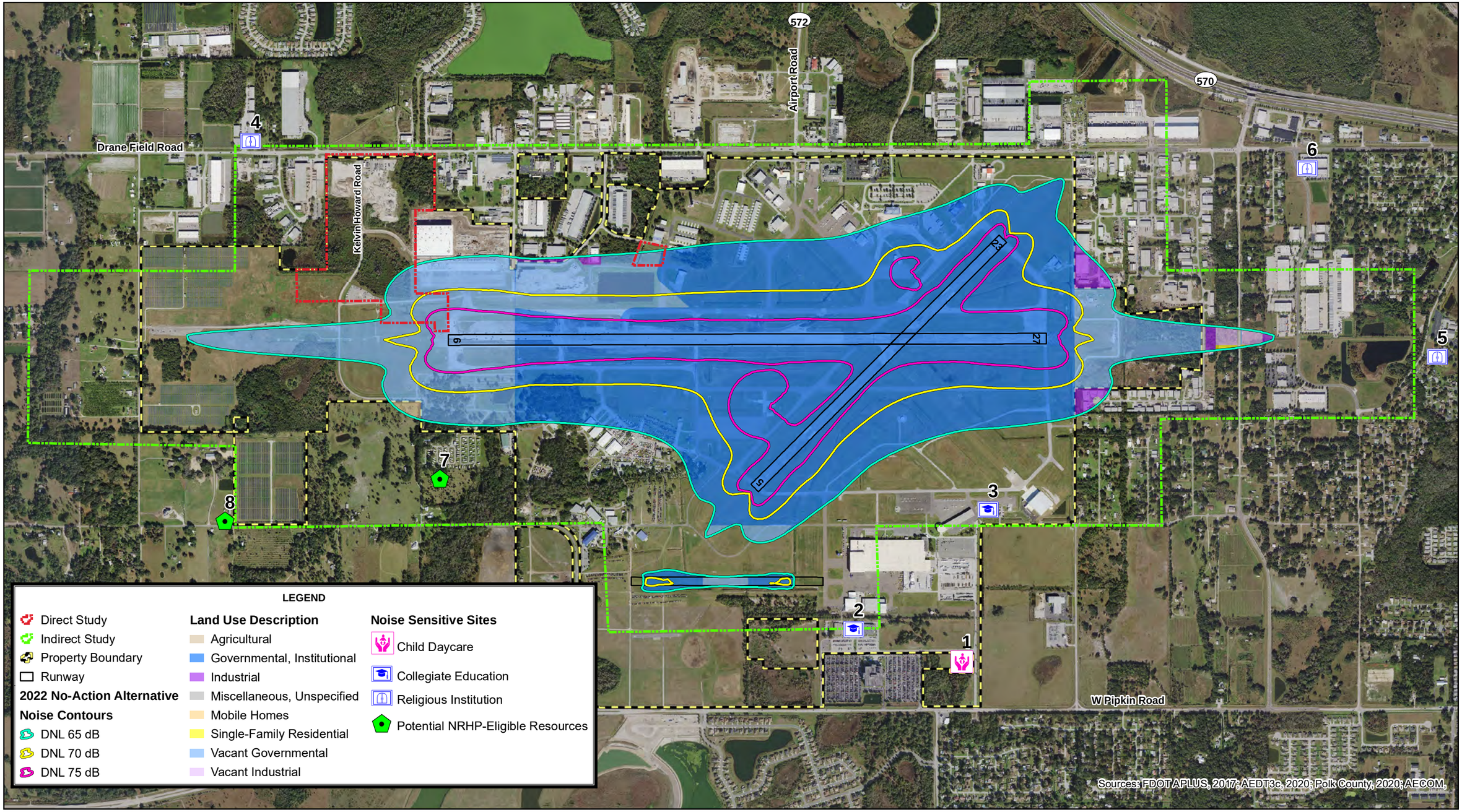

NORTH

0 Feet 1,600

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2022 NO-ACTION NOISE CONTOURS (1 OF 2)

FIGURE 5.10-1

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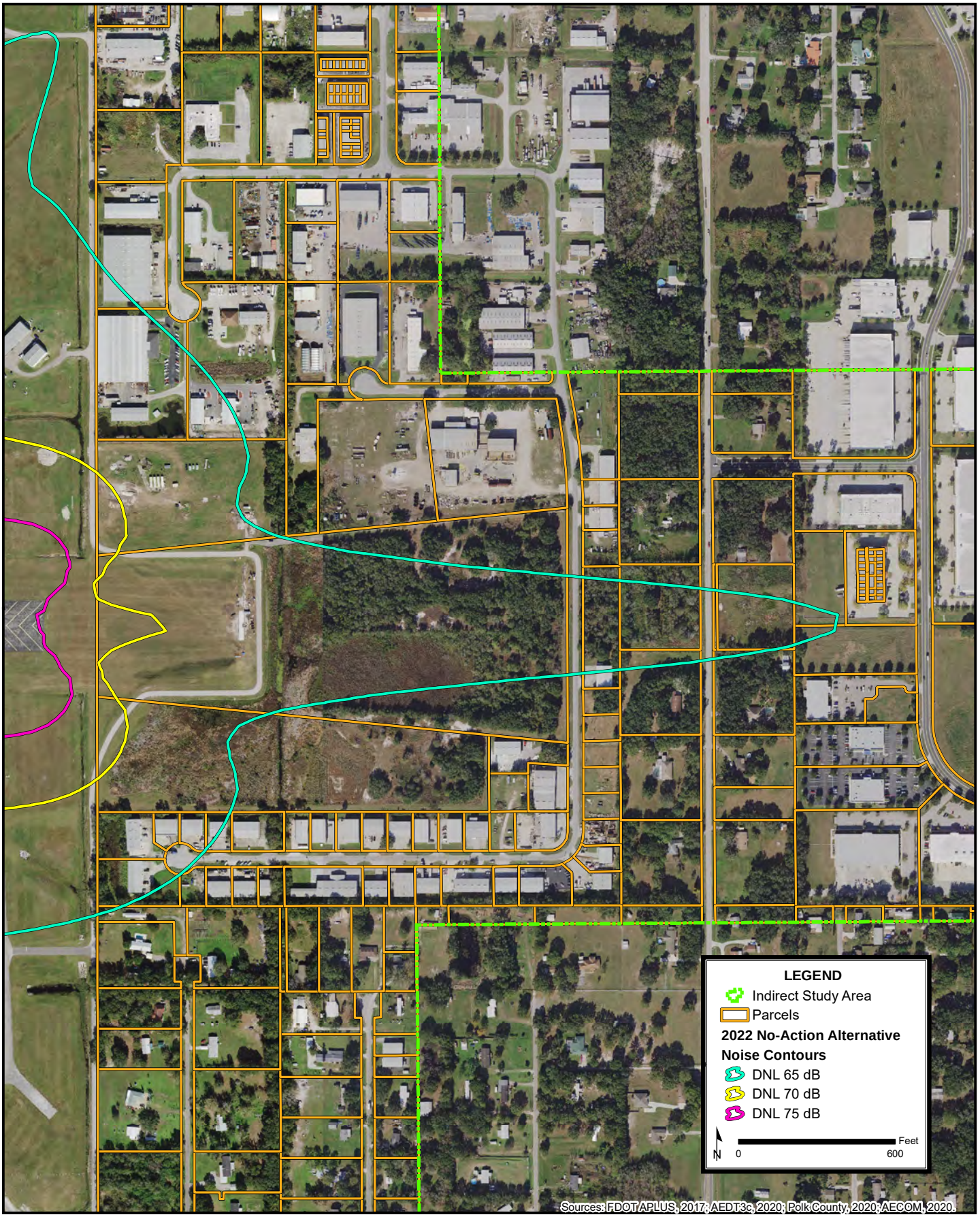

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2022 NO-ACTION NOISE CONTOURS (2 OF 2)

FIGURE 5.10-2

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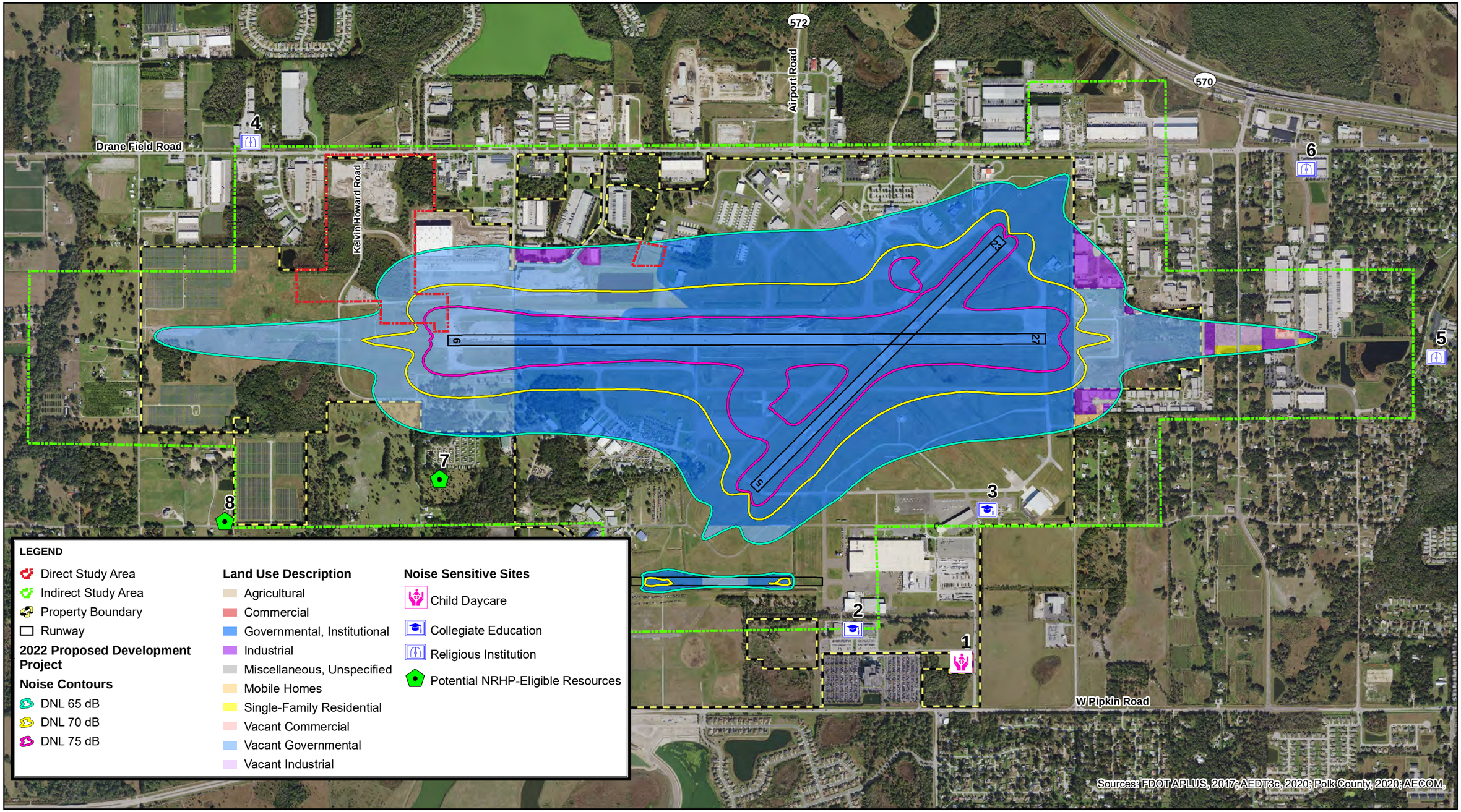

NORTH

0 Feet 1,600

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2022 PROPOSED DEVELOPMENT PROJECT NOISE CONTOURS (1 OF 2)

FIGURE 5.10-3

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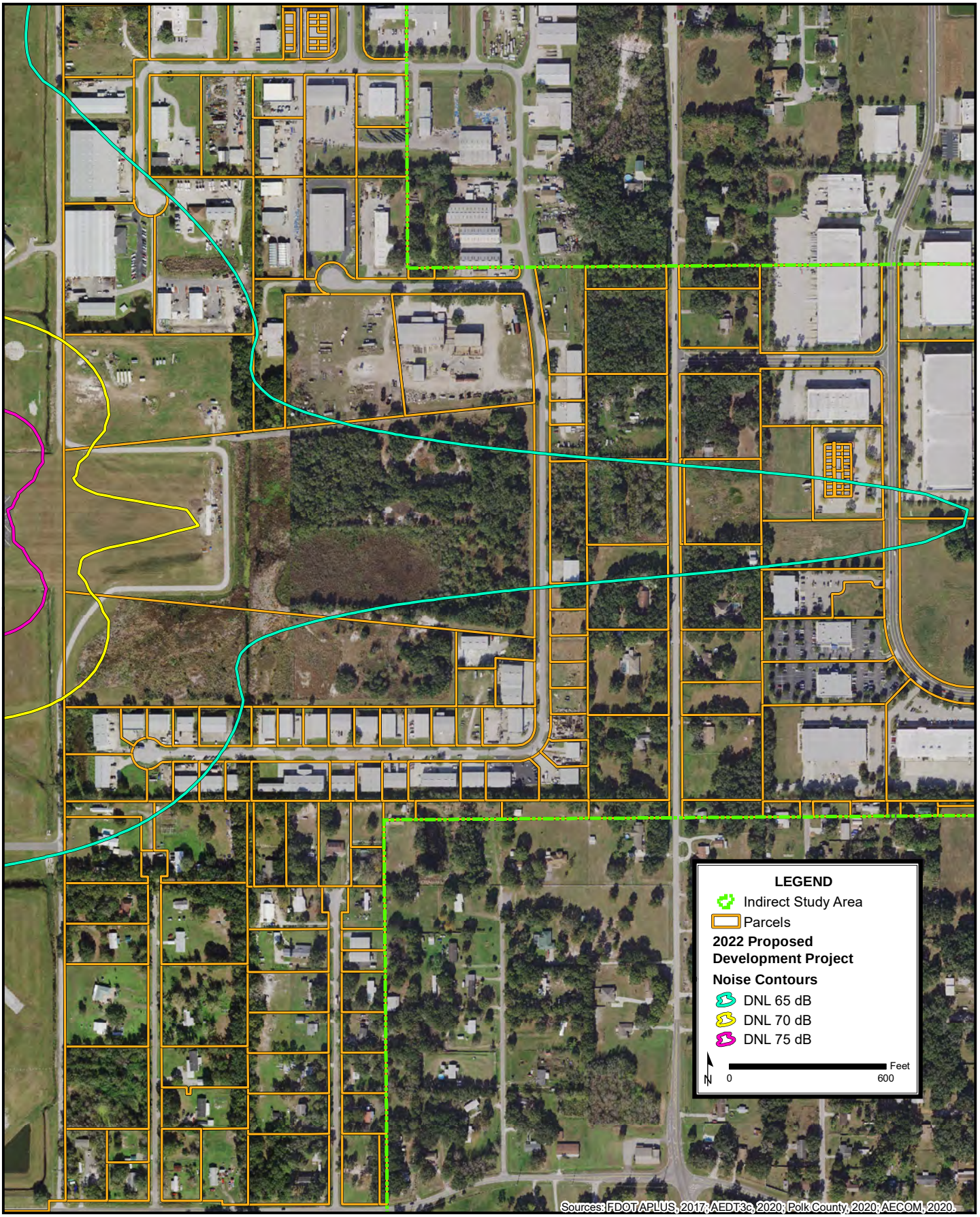

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2022 PROPOSED DEVELOPMENT PROJECT NOISE CONTOURS (2 OF 2)

FIGURE 5.10-4

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2027 Noise Exposure

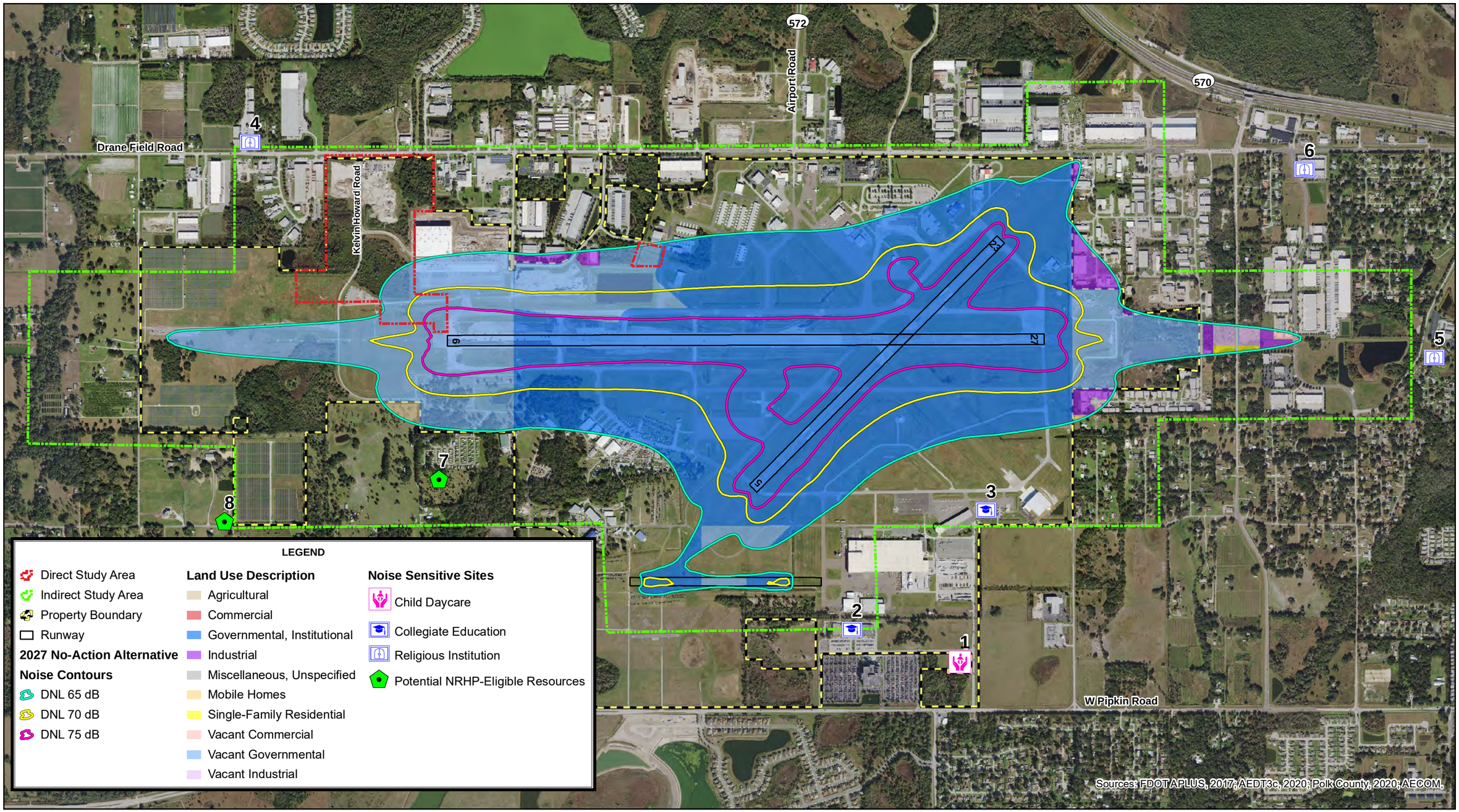
Proposed Development Project noise exposure and land use compatibility compared to the No-Action Alternative in 2027 is summarized in **Figures 5.10-5** through **5.10-8**, **Table 5.10-3** and **Table 5.10-4**. Approximately 92.5 acres of additional land, of which 25.7 acres would be off airport property, would be exposed to DNL 65 dB or greater with the Proposed Development Project compared to the No-Action Alternative by 2027. Of this, approximately 3.7 acres of residential land use (2.1 acres single-family residential and 1.6 acres mobile homes) would be exposed to DNL 65 dB. As shown in **Figures 5.10-5** and **5.10-7**, residential parcels would be newly exposed to the DNL 65 dB contour due to the No-Action and Proposed Development Project scenarios in 2027; however, none of these areas would experience an increase of 1.5 dB or more in the DNL 65 dB contour. These areas would experience an increase ranging from 0.7 to 1.1 dB in the DNL 65 dB contour.

Additional cargo trucks using the air cargo facility are anticipated to generate additional noise. However, the facility is not located in a residential land use area, and trucks are expected to use routes that avoid residential areas. Therefore, the additional truck noise is not expected to result in significant impacts to residential land use.

5.10.1.3. NOISE SENSITIVE SITE ANALYSIS

In addition to the evaluation of land use compatibility, the EA also evaluated the change in noise at Noise Sensitive Sites (NSS) in the vicinity of the Airport. The computed noise levels at all NSS locations evaluated in this EA are listed in **Table 5.10-5.** Refer to **Figures 5.10-1, 5.10-3, 5.10-5,** through **5.10-7** for NSS locations (e.g., churches, parks, schools, historic sites, and daycare facilities) in the vicinity of LAL.

As shown in **Table 5.10-5**, no NSS locations would also be newly exposed to a DNL 65 dB sound level and none are exposed to an increase of 1.5 dB or more in the 65 DNL dB contour.



LEGEND

- Direct Study Area
- Indirect Study Area
- Property Boundary
- Runway

2027 No-Action Alternative Noise Contours

- DNL 65 dB
- DNL 70 dB
- DNL 75 dB

Land Use Description

- Agricultural
- Commercial
- Governmental, Institutional
- Industrial
- Miscellaneous, Unspecified
- Mobile Homes
- Single-Family Residential
- Vacant Commercial
- Vacant Governmental
- Vacant Industrial

Noise Sensitive Sites

- Child Daycare
- Collegiate Education
- Religious Institution
- Potential NRHP-Eligible Resources

NORTH

0 Feet 1,600

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2027 NO-ACTION NOISE CONTOURS (1 OF 2)

FIGURE 5.10-5

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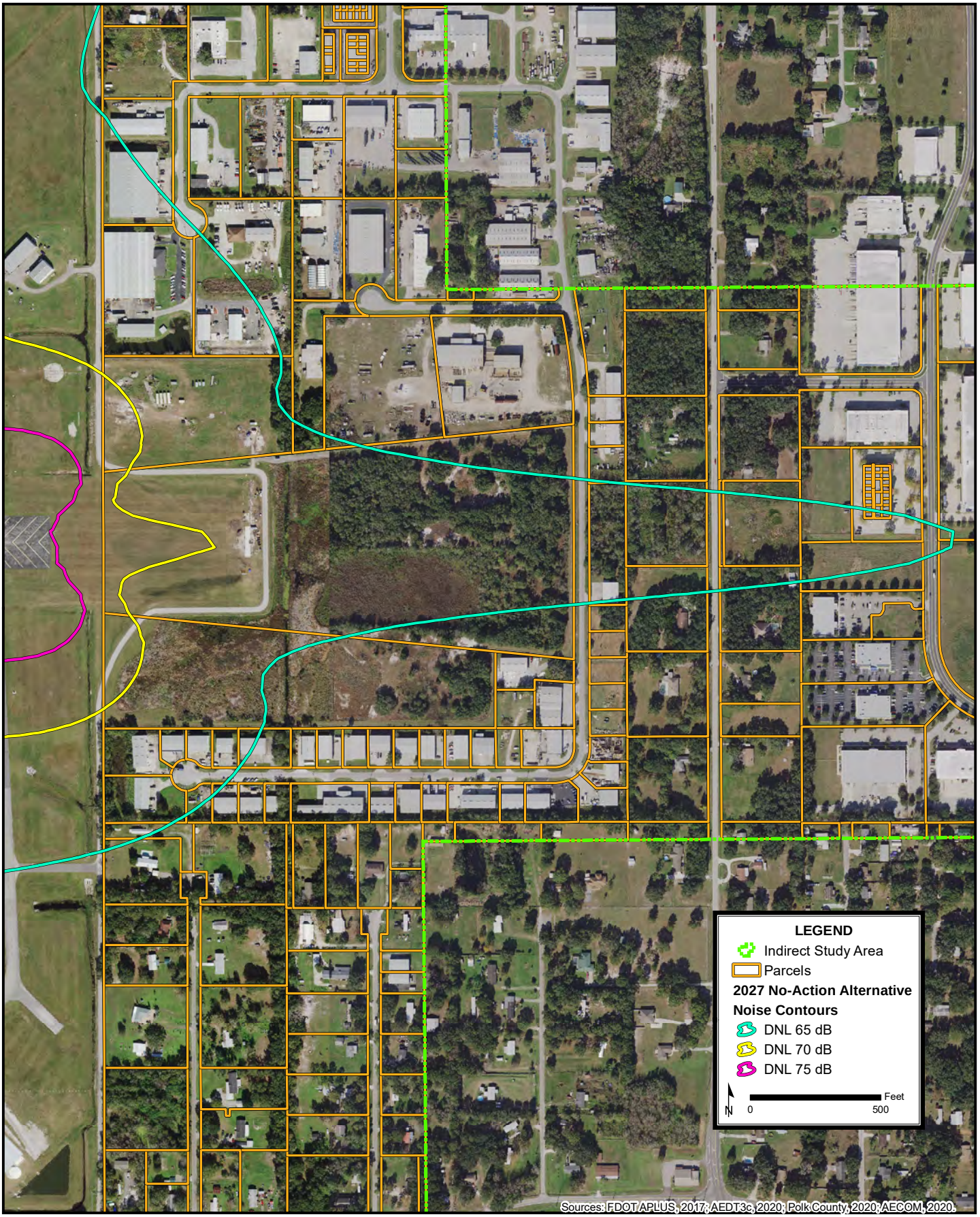

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LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2027 NO-ACTION NOISE CONTOURS (2 OF 2)

FIGURE 5.10-6

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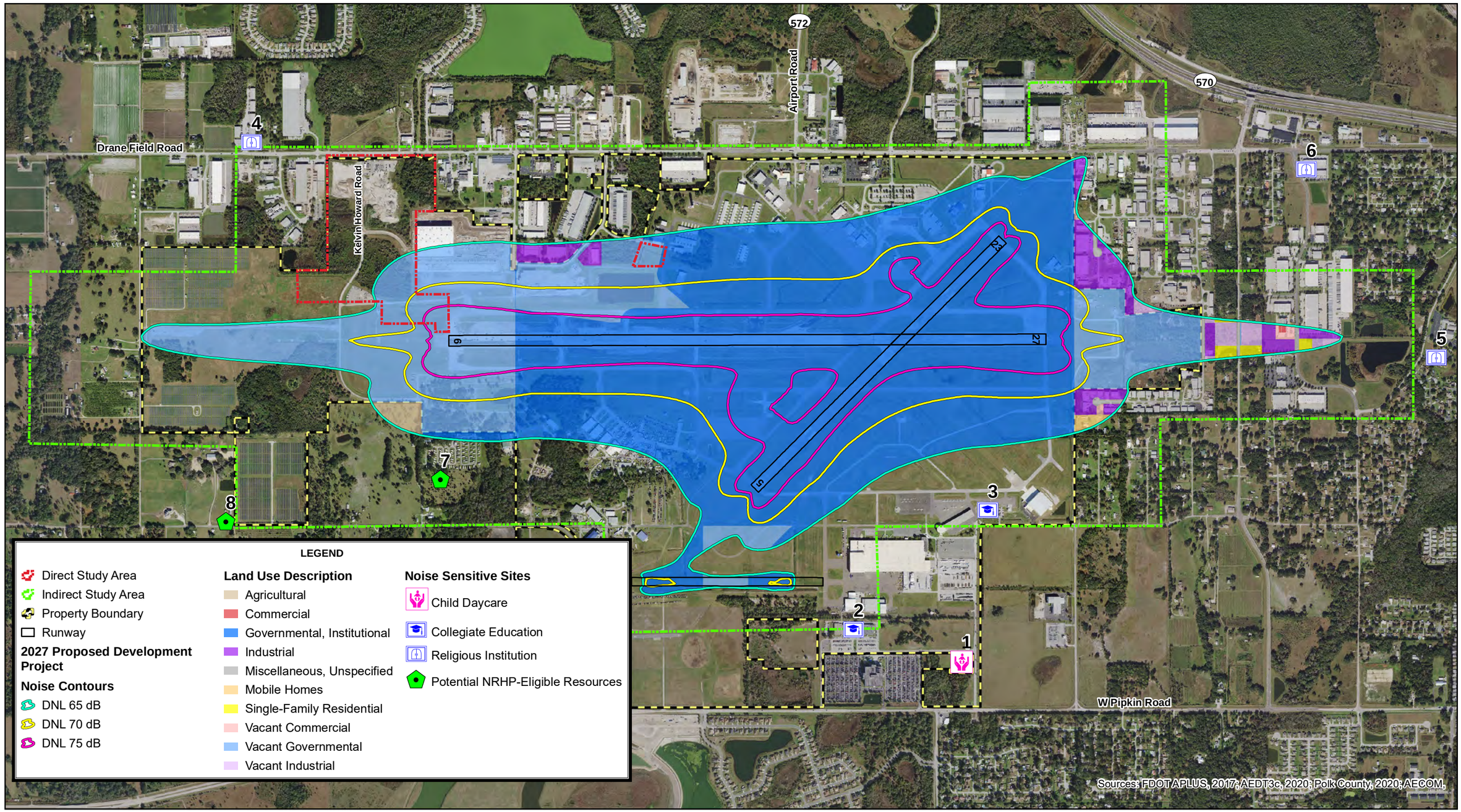

NORTH

0 Feet 1,600

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2027 PROPOSED DEVELOPMENT PROJECT NOISE CONTOURS (1 OF 2)

FIGURE 5.10-7

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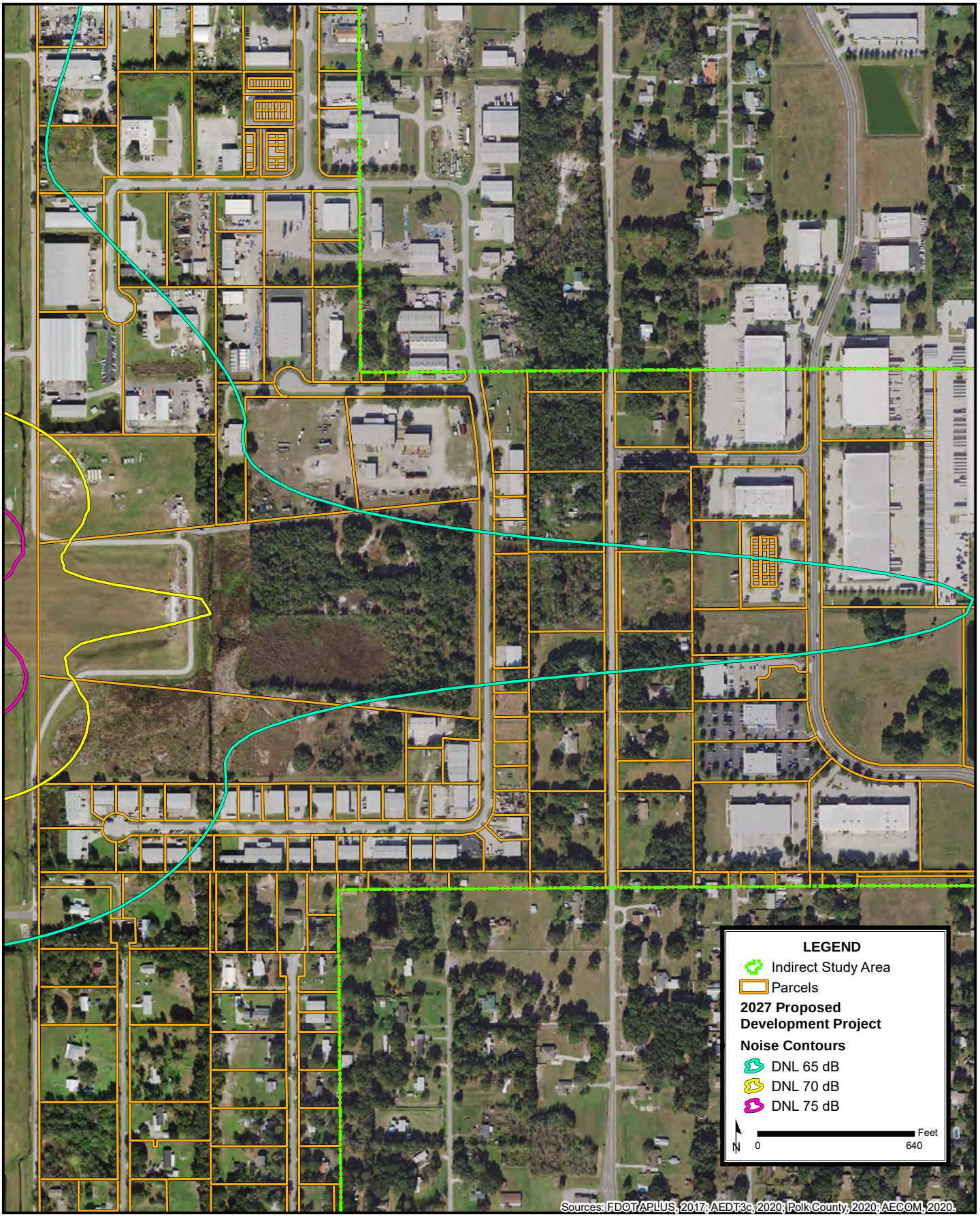

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LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2027 PROPOSED DEVELOPMENT PROJECT NOISE CONTOURS (2 OF 2)

FIGURE 5.10-8

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Table 5.10-3 2027 Noise Exposure Estimates for Land Use

Location	Land Use Type	No-Action (DNL 65+ dBA, acres)	Proposed Development Project (DNL 65+ dBA, acres)	Change (DNL 65+ dBA, acres)	No-Action (DNL 70+ dBA, acres)	Proposed Development Project (DNL 70+ dBA, acres)	Change (DNL 70+ dBA, acres)	No-Action (DNL 75+ dBA, acres)	Proposed Development Project (DNL 75+ dBA, acres)	Change (DNL 75+ dBA, acres)
On-Airport	Governmental, Institutional	599.0	635.4	36.4	364.2	383.5	19.3	196.9	210.2	13.3
	Vacant Governmental	221.3	251.8	30.5	72.2	86.2	14.0	26.1	29.0	2.9
	Subtotal On-Airport	*820.3*	*887.2*	*66.9*	*436.4*	*469.7*	*33.3*	*223*	*239.2*	*16.2*
Off-Airport	Agricultural	2.6	5.1	2.5	0.0	0.0	0.0	0.0	0.0	0.0
	Commercial	0.1	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
	Industrial	19.2	32.8	13.6	0.0	<0.1	<0.1	0.0	0.0	0.0
	Miscellaneous, Unspecified	2.3	4.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
	Mobile Homes	0.4	2.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
	Single-Family Residential	1.4	3.5	2.1	0.0	0.0	0.0	0.0	0.0	0.0
	Vacant Commercial	0.8	1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0
	Vacant Industrial	4.0	7.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
	Subtotal Off-Airport	*30.8*	*56.5*	*25.7*	*0.0*	*<0.1*	*<0.1*	*0.0*	*0.0*	*0.0*
TOTAL		**851.1**	**943.7**	**92.6**	**436.4**	**469.7**	**33.3**	**223.0**	**239.2**	**16.2**

Source: AEDT 3c, 2020; AECOM, 2020.

Table 5.10-4 2027 Noise Exposure: Household and Population Estimates

Category	No-Action (DNL 65+ dB)	Proposed Development Project (DNL 65+ dB)	No-Action (DNL 70+ dB)	Proposed Development Project (DNL 70+ dB)	No-Action (DNL 75+ dB)	Proposed Development Project (DNL 75+ dB)
Parcels	5	7	0	0	0	0
Total Households on Parcels	5	7	0	0	0	0
Households in Contour	2	3	0	0	0	0
Population in Contour	6.1	9.2	0	0	0	0

Source: AECOM, 2020.

Note: If even a portion of a parcel was within the contour, the entire parcel was counted in the table. The total households shown are for each entire parcel. Of these, the number of households in the contour are only those physically located within the contour. Population estimated by multiplying the reported average household size (3.06) within the Socioeconomic Study Area (SSA) by the number of households within the contour.

Table 5.10-5 Noise Sensitive Site Analysis

NSS ID	Name	Type	2022 No-Action (dB)	2022 Proposed Development Project (dB)	2022 Change (dB)	2027 No-Action (dB)	2027 Proposed Development Project (dB)	2027 Change (dB)
1	Early Childhood Learning Center	Child Daycare	54.6	55.1	0.5	55.3	55.8	0.5
2	Polk State College Airside Center	Collegiate Education	56.5	56.9	0.4	57.3	57.6	0.3
3	Polk State Aerospace Flight School	Collegiate Education	59.2	60.2	1.0	59.8	60.6	0.8
4	Faith Celebration Church	Religious Institution	53.4	54.4	1.0	54.1	54.9	0.8
5	Bethany Christian Church	Religious Institution	60.8	61.7	0.9	61.3	62.2	0.9
6	Life Church Lakeland	Religious Institution	55.9	56.8	0.9	56.8	57.4	0.6
7	Aaron E. and Maude Morgan House	Potential NRHP-Eligible Resources[1]	60.2	61.3	1.1	60.7	61.7	1.0
8	English Family House	Potential NRHP-Eligible Resources[1]	55.1	56.0	0.9	55.8	56.6	0.8

Source: AEDT 3c, 2020; AECOM, 2020; FMSF, 2020.

[1] See Section 4.6 and 5.6 for discussion on potential NRHP-eligible resources.

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5.10.2. CONCLUSION

An action would have a significant noise impact if it would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or causes a noise sensitive area to be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase.

When compared to the No-Action Alternative in 2022, the additional aircraft operations associated with the Proposed Development Project would increase the amount of noncompatible (residential) land use by 2.7 acres. This would involve all or portions of six individual parcels. Of the six residences located on the parcels, two would be located within the DNL 65 contour. The parcels and residences located within, or newly within, the 2022 DNL 65 contour would not experience an increase in aircraft noise of 1.5 dB or greater. In 2027, it was projected that 3.7 additional acres of noncompatible (residential) land use would be located within the DNL 65 contour, when compared to the No-Action Alternative (seven parcels total). Of the seven residences located on the parcels, one additional residence would be located within the 2027 DNL 65 contour (total of three). The parcels and residences within, or newly within, the 2027 DNL 65 contour would not experience an increase of 1.5 dB or greater. Other noise sources associated with the Proposed Development Project, including traffic noise, would not generate substantial noise near residential areas or NSS locations.

In both study years, none of the residences located within, or newly within, the DNL 65 contour would experience a noise increase of DNL 1.5 dB or greater. Based on FAA's guidance for preparing NEPA impact evaluations, significant noise impacts would not occur if the Proposed Development Project was implemented. Therefore, mitigation is not required for the purpose of reducing the impact below the threshold indicating a significant impact.

No changes to existing flight procedures for LAL were proposed as part of the Proposed Development Project, and the noise analysis in this EA was prepared using published arrival and departure procedures and current operational information. Because the noise impacts disclosed in the EA do not exceed the FAA's threshold for significant impact, specific mitigation measures were not proposed.

However, a noticeable increase in aircraft noise and community noise complaints occurred after the air cargo facility (Phase I) became operational in 2020. As discussed in this EA, the proposed Phase II expansion will increase the number of air cargo flights at LAL. While the incremental increase in noise exposure would not represent a significant impact, a noticeable change in aircraft noise would likely result from the operation of the expanded air cargo facility. Since the opening of the Phase I facility, the City of Lakeland has been working with the surrounding communities to understand and resolve aircraft noise complaints. In response to community concerns, the City implemented a voluntary preferential runway use program for eastern arrivals and western departures between the hours of 10:00 pm and 7:00 am, when winds, weather, and other factors allow. The City has also proposed conceptual new arrival and departure procedures at LAL as potential noise abatement measures. The conceptual procedures, which were presented at the Draft EA Public Hearing, are incorporated for reference into this Final EA (**Appendix L**). New or modified procedures requested by the City will be considered by the FAA. If the proposed procedures are deemed feasible by the FAA, the procedures would be subject to separate FAA approval processes that would be coordinated across multiple FAA air traffic and flight procedural lines of business. This process would also include an evaluation of environmental effects, including changes in noise exposure, as required by NEPA.

5.11. SOCIOECONOMICS, ENVIRONMENTAL JUSTICE AND CHILDREN'S HEALTH AND SAFETY RISKS

5.11.1. SUMMARY OF IMPACTS

Factors considered in evaluating the potential for socioeconomic impacts from the Proposed Development Project included residential relocations, community business relocations, disruptions of traffic patterns and reduction of level of service (LOS) on area roadways, and loss in community tax base.

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires FAA to include environmental justice as part of their mission. They must identify and address the potential for disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations, low-income populations, and Native American tribes. Department of Transportation (DOT) Order 5610.2, *Environmental Justice in Minority and Low-Income Populations,* provides guidance used for this analysis. EO 13045, *Protection of Children from Environmental Health Risks and Safety Risk*, requires federal agencies to identify and assess environmental health and safety risks that may disproportionately affect children. This includes risks to health or to safety from products or substances a child is likely to come in contact with or ingest, such as air, food, drinking water, recreational waters, soil, or commercial products.

5.11.1.1. SOCIOECONOMICS

As part of the Proposed Development Project, no off-airport residences or businesses would be relocated, and no land acquisitions are required. The Proposed Development Project would be located entirely on Airport property. Construction and operation of the Proposed Development Project would offer additional temporary and long-term jobs, which would have beneficial impacts on the local economy and tax base. Employees at the air cargo facility are expected to be from Polk County and surrounding areas. No impacts to the regional housing supply are anticipated. Impacts to local traffic patterns would be mitigated to insignificant levels as described in **Section 5.11.1.4**. No impacts to public services for the area are anticipated.

5.11.1.2. ENVIRONMENTAL JUSTICE

As discussed in **Section 4.9**, there is relatively low level of minority population within the Socioeconomic Study Area (SSA) compared to state, regional, and national data. Low-income and linguistically isolated populations are comparable to state, regional, and national trends. The SSA is comprised of eight census block groups, with group 121050119021 covering the area of the on-airport and off-airport land uses that are newly introduced into the noise contour. Within this group, the reported population is 14 percent minority compared to 16 percent within the SSA and 11 percent poverty compared to eight percent within the SSA. The Proposed Development Project would not result in the displacement of any homes or businesses. Additionally, the noise analysis for the Proposed Development Project, discussed in **Section 5.10**, shows that residential locations would not experience a 1.5 dB increase in noise due to the Proposed Development Project. Therefore, the Proposed Development Project would not result in a significant noise impact in those areas. Based on the analysis in this EA, the Proposed Development Project would not result in a disproportionately high and adverse impact on minority and low-income populations.

5.11.1.3. CHILDREN'S HEALTH AND SAFETY

The Proposed Development Project would not result in the acquisition or relocation of any residences, schools, childcare centers, or other similar facilities. No schools or childcare facilities are located in areas that would be affected by the Proposed Development Project. Since there are no schools, daycare centers, or other similar facilities within or adjacent to the DSA and the proposed

improvements would be located entirely on the restricted Airport property, the Proposed Development Project is not anticipated to increase environmental health and safety risks or exposures to children in the surrounding community. There would be no disproportionate health and safety risk to children resulting from the Proposed Development Project.

5.11.1.4. SURFACE TRANSPORTATION

The Proposed Development Project would result in a temporary increase in local surface traffic volume during the construction phase due to construction employee commutes, construction material deliveries, and the offsite transport of construction debris. These impacts would occur in 2022 and are not expected to be significant.

Potential traffic impacts associated with air cargo operations at LAL have been under study since 2019. The first study, completed prior to this EA in May 2019, was a Major Traffic Study for Phase I of the air cargo facility. The 2019 Phase I Study was prepared to comply with County and local land development review and permitting requirements for the construction of Phase I, and was coordinated with Polk County and the City of Lakeland. The 2019 Phase I Study evaluated traffic for the Phase I development alone, and did not include traffic conditions for the proposed Phase II expansion. Therefore, a second supplemental traffic study was conducted for the Proposed Development Project evaluated in this EA, and is described below. Both studies were considered in the traffic analyses for this EA.

To define the study area for the 2019 Phase I Study, information was provided for planned Phase I operations. According to the information in the 2019 traffic study, traffic associated with Phase I would utilize Drane Field Road to reach either County Line Road, Airport Road, or the Polk Parkway. Heavy truck traffic would predominantly use Drane Field Road eastbound to Airport Road as a means to reach Interstate 4, although some trucks would continue past Airport Road and continue along Drane Field Road to either access the Polk Parkway or continue east. Although some truck trips would head westbound on Drane Field Road to County Line Road and either head north or south on County Line Road to their destinations. Most of the vehicle trips going westbound on Drane Field Road from the Phase I facility would be employee vehicles. Based on the study's origin and destination patterns, a roadway capacity analysis was performed on roadways along these routes that could be utilized by heavy truck traffic. The capacity analysis utilized trip generation rates, volumes and capacities from the Florida Department of Transportation (FDOT) District One Regional Planning Model and the Polk County Transportation Planning Organization for background traffic. The background traffic was adjusted to include Phase I operations alongside other planned developments in the area including Lakeland Central Park, Airport Commerce Park, Laurel Highlands, Rooms to Go Phase 5, Key Logistics Center, Lakeside Preserve, and the Riverside Development. Based on the analysis, four intersections along Drane Field Road were selected for detailed study to determine whether Phase I air cargo traffic volumes would substantially reduce the levels of service at the study intersections and roadway segments. This information was used to inform the No-Action Alternative traffic analysis for the EA.

The 2019 Phase I Study was supplemented for use in this EA to determine whether additional traffic generated by the Proposed Development Project would cause or contribute to any significant traffic impacts. This supplemental study is incorporated into the Final EA as the Traffic Study Technical Report, **Appendix H**. For this 2020 Phase II Study, the traffic conditions and roadway capacity analysis contained in the 2019 Phase I Study was validated for use in the EA to represent the No-Action Alternative. Traffic volume updates and adjustments were performed where needed to accurately reflect No-Action traffic conditions for the EA analysis years of 2022 and 2027. Information provided for Phase II operations did not reveal any trip distribution or origin/destination information different from that used for the 2019 Phase I Study.

The 2020 Phase II Study's focus was to supplement and update the LOS analysis for the four intersections identified in the 2019 Phase I Study. As stated in **Appendix H**, increased daily cargo truck and passenger vehicle traffic that would result from the operations of the Proposed Project were added to the forecasted No-Action Alternative traffic volumes for each study year to develop total traffic volumes and calculate intersection LOS that would result from the Proposed Project. Akin to the 2019 Phase I Study, the 2020 Phase II Study analysis utilized methods prescribed by the Highway Capacity Manual [33] and calculations were performed using Synchro software.

As indicated in the 2019 Phase I and the 2020 Phase II studies discussed above, traffic volumes in the vicinity of LAL are expected to increase over time. If implemented, the Proposed Development Project would further increase local surface traffic volumes. The increase would result from additional daily trips generated by the facility's new employees and daily arrival and departure of delivery trucks. Once operational, the Proposed Development Project is expected to result in roughly 500 and 1,010 average additional daily employee commute and cargo truck trips in 2022 and 2027, respectively. A detailed traffic impact analysis was conducted for the Proposed Development Project and is included as **Appendix H**. **Table 5.11-1** shows predicted traffic volumes and performance measurements at four local intersections (**Figure 4.10-1**) for all project years and scenarios.

In 2022, the LOS at three of the intersections are not expected to change as a result of the Proposed Development Project. However, the intersection of Kidron Road and Drane Field Road is expected to experience a decreased LOS from C to E with construction and operation of the Proposed Development Project. In 2027, the County Line Road/Drane Field Road and Kelvin Howard Road/Drane Field Road intersections are expected to experience decreased but acceptable LOS. However, the Proposed Development Project would result in an LOS decrease from D to F at the intersection of Kidron Road and Drane Field Road. As described in **Section 4.10.1.6**, LOS D is considered the lowest acceptable condition for automobile traffic.[34]

Two options were developed to reduce the impacts to LOS and reduce average vehicle delay that would be caused by the Proposed Development Project at the intersection of Kidron Road and Drane Field Road. The resulting average vehicle delay and LOS in 2022 and 2027 are shown on **Table 5.11-2.** The first option includes retaining the existing stop sign but adding dedicated turning lanes at the intersection. Adding dedicated turn lanes alone would reduce the majority of traffic impacts caused by the Proposed Development Project at this intersection. In both study years, the intersection would remain at an acceptable LOS with this mitigation scenario. The second option includes the addition of turn lanes and replacing the existing stop sign with a traffic signal. Adding both a traffic signal and dedicated turn lanes would further reduce the LOS and delay impacts, and these conditions would actually improve compared to the No-Action Alternative.

Improvements to the intersection of Kidron Road and Drane Field Road were initially recommended in 2019 based on a warrant analysis first prepared during the Phase I development permitting process. As described above, this recommended improvement was further analyzed in the EA as a means of offsetting traffic impacts associated with the Proposed Development Project (**Appendix H**). Between completion of the traffic study in **Appendix H** and the completion of this EA, Mitigation Option #1 has since been constructed as a means of preemptively calming traffic and reducing congestion on Drane Field Road. Therefore, Mitigation Option #1 has already been implemented, and as shown in the analysis on **Table 5.11-2**, the mitigation serves to offset traffic impacts in 2022 and 2027 caused by the Proposed Development Project.

[33] Transportation Research Board. Highway Capacity Manual, 6th Edition: A Guide for Multimodal Mobility Analysis (HCM). 2016
[34] Florida Department of Transportation. *2020 Quality/Level of Service Handbook*. June 2020.

Table 5.11-1 Intersection Traffic Volume and Performance Summary

Intersection	Control/Signal Type	2022 Volume: No-Action	2022 Volume: Project	2022 Volume: Change	2022 AM LOS: No-Action	2022 AM LOS: Project	2022 AM Delay: No-Action	2022 AM Delay: Project	2022 AM Delay: Change	2022 PM LOS: No-Action	2022 PM LOS: Project	2022 PM Delay: No-Action	2022 PM Delay: Project	2022 PM Delay: Change
County Line Road at Drane Field Road	Signal Controlled	10,128,800	10,333,600	204,800	B	B	17.8	18.6	0.8	B	B	18.8	19.4	0.6
Airfield Court/West Airport Road at Drane Field Road	Signal controlled	6,872,100	7,170,200	298,100	C	C	24.0	24.1	0.1	B	B	17.7	17.8	0.1
Kelvin Howard Road at Drane Field Road	Stop sign controlled/Unsignalized	3,605,400	3,879,100	273,700	C	C	18.9	22.1	3.2	C	C	18.3	21.2	2.9
Kidron Road at Drane Field Road	Stop sign controlled/Unsignalized	4,365,800	4,809,900	444,100	C	E	24.2	38.7	14.5	C	E	22.5	36.6	14.1
Intersection	**Control/Signal Type**	**2027 Volume: No-Action**	**2027 Volume: Project**	**2027 Volume: Change**	**2027 AM LOS: No-Action**	**2027 AM LOS: Project**	**2027 AM Delay: No-Action**	**2027 AM Delay: Project**	**2027 AM Delay: Change**	**2027 PM LOS: No-Action**	**2027 PM LOS: Project**	**2027 PM Delay: No-Action**	**2027 PM Delay: Project**	**2027 PM Delay: Change**
County Line Road at Drane Field Road	Signal Controlled	11,112,200	11,481,300	369,100	B	C	19.7	22.0	2.3	B	C	21.4	23.8	2.4
Airfield Court/West Airport Road at Drane Field Road	Signal controlled	7,486,600	8,046,200	559,600	C	C	24.2	25.0	0.8	B	C	17.8	17.8	0.0
Kelvin Howard Road at Drane Field Road	Stop sign controlled/Unsignalized	3,917,700	4,382,000	464,300	C	D	20.8	27.1	6.3	C	D	20.0	25.8	5.8
Kidron Road at Drane Field Road	Stop sign controlled/Unsignalized	4,690,300	5,537,900	847,600	D	F	29.7	126.0	96.3	D	F	26.7	114.5	87.8

Sources: AECOM, 2020; Transportation Research Board. *Highway Capacity Manual*, 6th Edition: A Guide for Multimodal Mobility Analysis (HCM). 2016; except as noted with "*" "Project" in table refers to Proposed Development Project identified in this EA. Calculations performed with Synchro software. Reported delays are in seconds per vehicle.

Table 5.11-2 Kidron Road and Drane Field Road Traffic Control Options

Control/Signal Type	2022 AM LOS: No-Action	2022 AM LOS: Project	2022 AM Delay: No-Action	2022 AM Delay: Project	2022 AM Delay: Change	2022 PM LOS: No-Action	2022 PM LOS: Project	2022 PM Delay: No-Action	2022 PM Delay: Project	2022 PM Delay: Change
Existing: Stop sign controlled/Unsignalized	C	E	24.2	38.7	14.5	C	E	22.5	36.6	14.1
Option 1: Stop Sign with Added Dedicated Turn Lanes	C	C	24.2	21.2	-3.0	C	C	22.5	19.5	-3.0
Option 2: Signal with Added Dedicated Turn Lanes	C	B	24.2	11.0	-13.2	C	B	22.5	10.2	-12.3
Control/Signal Type	**2027 AM LOS: No-Action**	**2027 AM LOS: Project**	**2027 AM Delay: No-Action**	**2027 AM Delay: Project**	**2027 AM Delay: Change**	**2027 PM LOS: No-Action**	**2027 PM LOS: Project**	**2027 PM Delay: No-Action**	**2027 PM Delay: Project**	**2027 PM Delay: Change**
Existing: Stop sign controlled/Unsignalized	D	F	29.7	126.0	96.3	D	F	26.7	114.5	87.8
Option 1: Stop Sign with Added Dedicated Turn Lanes	D	D	29.7	32.0	2.3	D	D	26.7	28.4	1.7
Option 2: Signal with Added Dedicated Turn Lanes	D	B	29.7	13.0	-16.7	D	B	26.7	12.0	-14.7

Sources: AECOM, 2020; Transportation Research Board. *Highway Capacity Manual*, 6th Edition: A Guide for Multimodal Mobility Analysis (HCM). 2016; except as noted with "*" Calculations performed with Synchro software. Reported delays are in seconds per vehicle. "Project" in table refers to Proposed Development Project identified in this EA.

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5.11.2. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

Because significant socioeconomic, environmental justice, and children's health and safety risks impacts would not occur with the Proposed Development Project, mitigation measures are not warranted in these cases. As discussed in previous sections, existing controls at the intersection of Kidron and Drane Field Road would not be sufficient to prevent LOS degradation and increased traffic delay due to traffic caused by the Proposed Development Project. Applying Mitigation Option #1 at this intersection, which keeps the existing stop sign but adds turn lanes, prevents the LOS decreases and nearly eliminates extra delay. Applying control option #2, which adds a traffic signal in addition to turn lanes, actually improves LOS and delay conditions compared to the No-Action Alternative. As previously stated, mitigation Option #1 has been implemented during completion of this EA, effectively mitigating and offsetting traffic impacts in 2022 and 2027 caused by the Proposed Development Project.

5.11.3. CONCLUSION

The FAA considers impacts to be significant if there are disproportionately high and adverse impacts on low-income and minority populations, disproportionate health and safety risks to children or a change in the community tax base. They also consider disruption or division of an established community, extensive relocation of residents without sufficient relocation housing available, and relocation of businesses that would create severe economic hardship. None of these would occur with the Proposed Development Project.

However, FAA also considered disruption of traffic patterns reducing LOS to unacceptable levels on area roads when making impact decisions. The analysis presented in **Section 5.11.1.4** shows that impacts to local traffic patterns affecting the LOS at the intersection of Kidron Road and Drane Field Road could be significant without appropriate mitigation. The analysis presented above indicates that with appropriate traffic mitigation measures, including the already-implemented mitigation Option #1, the Proposed Development Project would not cause a significant impact.

5.12. LIGHT EMISSIONS AND VISUAL EFFECTS

5.12.1. SUMMARY OF IMPACTS

Proposed Development Project lighting sources will be similar to existing structures at LAL and the adjacent industrial land use areas. Based on the construction of the existing air cargo facility (i.e., Phase I), conceptual design of the lighting for the Proposed Development Project includes pole-mounted lights in the parking areas and building-mounted exterior lights that are controlled via photocell. Specific fence and pole lighting requirements will be determined during project design. To comply with local site development standards, any newly-installed fence or pole lighting necessary for the Proposed Development Project will be shielded or oriented away from nearby roadways and other light sensitive areas where the potential for hazard or annoyance exists.[35] Obscuring the visual impacts using vegetation or landscaping could also be considered. The distance between the Proposed Development Project and the nearest sensitive receptor (i.e., residence) is approximately 0.3 mile, and the line of sight between the two is partially obscured by vegetation and other existing structures. While the visual landscape would change as a result of the Proposed Development Project, it would be compatible with the Airport area and not result in intrusive visual impacts.

5.12.2. CONCLUSION

The lighting modifications associated with the Proposed Development Project would not cause changes in light emissions resulting in substantial annoyance or causing interference with normal activities. They would also not affect the visual character of the area. Therefore, the Proposed

[35] Polk County, Florida. *Land Development Code*. July, 2019.

Development Project would not have a significant impact. Because significant impacts associated with the Proposed Development Project have not been identified, mitigation is not warranted.

5.13. WETLANDS

5.13.1. SUMMARY OF IMPACTS

Constructing the Proposed Development Project would result in approximately 25.2 acres of direct and secondary impacts to wetlands and other surface waters.

According to **Table 5.13-1** and **Figure 4.11-1**, construction of the Proposed Development Project would result in approximately 23.9 acres of direct impacts to wetlands and 0.3 acre to other surface waters (ditch). Secondary impacts to the habitat functions of wetlands within 25 feet of the direct impacts were also quantified and are shown in **Table 5.13-1**. Approximately 1.0 acre of secondary impacts to wetlands would occur as a result of the Proposed Development Project.[36]. On December 17, 2020, the United States (U.S.) Environmental Protection Agency (EPA) approved the State of Florida's request to assume responsibility of a portion of the Clean Water Act Section 404 Program in place of the U.S. Army Corps of Engineers (USACE). The State 404 Program became effective as of December 22, 2020 and is administered by the FDEP (Chapter 62-331, F.A.C.). Based on this ruling, it has been determined that the wetlands within the BSA will be assumed by the FDEP through the State 404 program. Therefore, as part of the permitting process, a request will be made to the FDEP for a formal jurisdictional determination of federally-regulated waters that could be impacted by the Proposed Development Project.

Table 5.13-1 Impacts to Wetlands and Other Surface Waters Resulting from the Proposed Development Project

Category	ID	FLUCFCS Code[1]	USFWS Classification[2]	Acres of Direct Impacts	Acres of Secondary Impacts	Total
Wetlands	WL 1	630	PFO1/3C	1.2	0.3	1.5
	WL 2	631	PFO1/2C	10.1	0.7	10.8
	WL 2	621	PFO2C	1.4	0.0	1.4
	WL 6	631	PFO1/2C	11.2	0.0	11.2
			Subtotal Wetlands	*23.9*	*1.0*	*24.9*
Other Surface Waters	Ditch 1	510	PUBx	0.3	0.0	0.3
			Subtotal Other Surface Waters	*0.3*	*0.0*	*0.3*
			Total	**24.2**	**1.0**	**25.2**

[1] FDOT, *FLUCFCS Handbook*, 1999.

[2] Cowardin, Lewis M., *et.al. U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States.* 1979

Notes: Totals may not add up due to rounding

The construction of the existing air cargo facility (Phase I) resulted in direct impacts to 4.76 acres of forested wetlands and 6.38 acres of other surface waters consisting of upland-cut ditches. Compensatory mitigation was completed in the form of wetland creation south of LAL within the Alafia River Watershed.

Additional wetlands potentially impacted by the Proposed Development Project were further assessed using the Uniform Mitigation Assessment Method (UMAM). UMAM gives a standard procedure for

[36] The proposed Taxiway A extension newly included as part of the Proposed Development Project would be constructed within a portion of the existing Wetland 6. However, the entire wetland would be filled as part of the proposed apron expansion, regardless of the addition of the proposed taxiway extension. Therefore, the addition of the proposed taxiway extension would result in no additional wetland impacts.

assessing the functions offered by wetlands and other surface waters, the amount that those functions are reduced by a project, and the amount of mitigation necessary to offset that loss. A UMAM assessment was performed for each wetland proposed to be impacted by the Proposed Development Project.

Tables 5.13-2 and **5.13-3** shows the results of the UMAM assessment score (delta) for each wetland, the impact acreage, and the functional loss associated with the impacts. The approximate functional loss of wetland values as a result of 24.9 acres of direct and secondary impacts is 11.04 units. The UMAM scores are preliminary and may be refined during both the federal and state permitting process for the Proposed Development Project. The UMAM assessment does not include impacts to Ditch 1 as this upland-cut ditch is not considered to be jurisdictional and does not require mitigation. The detailed UMAM assessment for each wetland listed in **Table 5.13-1** is given in **Appendix I**.

In summary, a total of approximately 29.66 acres of direct and secondary impacts to wetlands may occur from both the construction of both the existing air cargo facility (Phase I) and the Proposed Development Project (Phase II) resulting in approximately 12.81 units total of functional loss requiring mitigation.

5.13.2. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

The development of alternatives to the Proposed Development Project included a study of a range of reasonable alternatives. While no practicable alternative avoiding all wetland impacts was identified, some wetland habitat within the DSA will be avoided. During the preparation of this EA, the Proposed Development Project conceptual layout was modified to minimize the impacts to WL 1, avoiding approximately 4.4 acres of impacts to forested wetland.

Wetland impacts resulting from construction of the Proposed Development Project will be mitigated to satisfy all state and federal mitigation requirements. Approximately 24.9 acres of impact to forested/scrub wetlands would result in 11.04 units of functional loss. The Proposed Development Project is located within the Alafia River watershed.

The ARMB services the Alafia River watershed and offers forested wetland mitigation credits. ARMB is a 468-acre site located north of Lithia Springs in Hillsborough County. Forested wetland mitigation credits at ARMB were approved by Southwest Florida Water Management District (SWFWMD) in May 2017 and by USACE in April 2018. The City has already reserved and/or purchased approximately 10.1 federal/state wetland credits from the ARMB for wetland impacts resulting from the Proposed Development Project and is coordinating with ARMB to acquire an additional 1.5 wetland credits. Therefore, it is anticipated that prior to construction of the Proposed Development Project, the City will have purchased approximately 11.6 total federal/state wetland credits from the ARMB to offset the loss of 24.9 acres (11.04 units) of wetland function with approximately 0.56 excess wetland credit.

5.13.3. CONCLUSION

The Proposed Development Project would not adversely affect the function of wetlands to protect the quality of municipal water supplies, including sole source, potable water aquifers. The Proposed Development Project would not substantially alter the hydrology needed to sustain the functions and values of the affected wetlands or any wetlands to which they are connected. Although 23.9 acres of wetlands would be directly impacted by the Proposed Development Project, it would not substantially alter the hydrology needed to sustain the functions and values of connected wetlands. With the exception of Wetland 1, the wetland systems within the Proposed Development Project area are isolated. Wetland 1 has a man-made ditch running along the eastern side that runs underneath Drane Field road. During the design phase of the Proposed Development Project, including stormwater drainage improvements, hydrological connection can be maintained via rerouting via control structures or a pipe system, if necessary.

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Table 5.13-2 Representative UMAM Scores for Wetland Impacts

WL ID	FLUCFCS Code (USFWS Classification)	Impact Type	Location & Landscape Support – Current	Location & Landscape Support – With Project	Water Environment – Current	Water Environment – With Project	Community Structure – Current	Community Structure – With Project	Score – Current	Score – With Project	Score – Delta
WL 1	630 (PFO1/3C)	Direct	3	0	4	0	5	0	0.40	0.00	0.40
WL 1	630 (PFO1/3C)	Secondary	3	2	4	4	5	4	0.40	0.33	0.07
WL 2	621 (PFO2C)	Direct	4	0	7	0	7	0	0.60	0.00	0.60
WL 2	631 (PFO1/2C)	Direct	3	0	5	0	5	0	0.43	0.00	0.43
WL 2	631 (PFO1/2C)	Secondary	4	3	5	5	6	5	0.50	0.43	0.07
WL 6	631 (PFO1/2C)	Direct	3	0	5	0	6	0	0.47	0.00	0.47

Source: AECOM, 2020. Note: Score = Sum/30

Table 5.13-3 Uniform Mitigation Assessment Methodology (UMAM) Analysis of Wetland Impacts Resulting from the Proposed Development Project

Impact Type	WL ID	FLUCFCS Code[1]	USFWS Classification[2]	Score (Delta)	Acres of Impacts	Functional Loss (Units)
Direct Impacts	WL 1	630	PFO1/3C	0.40	1.2	0.48
	WL 2	621	PFO2C	0.60	1.4	0.86
	WL 2	631	PFO1/2C	0.43	10.1	4.38
	WL 6	631	PFO1/2C	0.47	11.2	5.25
	Subtotal Direct Impacts				*23.9*	*10.97*
Secondary Impacts	WL 1	630	PFO1/3C	0.07	0.3	0.02
	WL 2	631	PFO1/2C	0.07	0.7	0.05
	Subtotal Secondary Impacts				*1.0*	*0.07*
	Total				**24.9**	**11.04**

[1] FDOT, *FLUCFCS Handbook*, 1999.
[2] Cowardin, Lewis M., *et.al. U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States.* 1979.
Source: AECOM, 2020.
Notes: Totals may not add up due to rounding

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Through the use of mitigation measures, the Proposed Development Project would not substantially reduce the affected wetlands' ability to retain floodwaters or storm-associated runoff. As previously stated, wetland mitigation proposed consists of purchasing wetland credits at the ARMB which is located within the same watershed (Alafia River) as the Proposed Development Project. Through the use of this mitigation measure, drainage and flood storage loss will be offset and maintained within the watershed. Stormwater improvements will also be designed to maintain the drainage and flood storage. Therefore, threats to public health, safety, and welfare are not expected.

The Proposed Development Project would not adversely affect the maintenance of natural systems that support wildlife and fish habitat or economically-important timber, food, or fiber resources or surrounding wetlands. The natural systems and functions within the filled wetland areas will be gone. But mitigation is proposed. Design modifications have been made to avoid impacts to the majority of Wetland 1. Erosion control measures will be developed during the design and permitting phase to avoid impacts to wetland areas not proposed to be impacted and/or located outside of the project area. In addition, compensatory mitigation proposed would offset any loss to wetland functions resulting from the Proposed Development Project.

The Proposed Development Project would be consistent with applicable state wetland strategies. Per federal and state wetlands regulations, impacts to wetlands have been avoided to the greatest extent practicable and for those impacts which could not be avoided, they were minimized. For unavoidable impacts, mitigation will be provided as described in **Section 5.13.2**.

Based on the information above, significant impacts to wetlands will not result with the Proposed Development Project based on the impact minimization and mitigation measures described above.

5.14. FLOODPLAINS

5.14.1. SUMMARY OF IMPACTS

Approximately 28.4 acres of Zone A Special Flood Hazard Area (SFHA) intersect with the DSA for the Proposed Development Project and would be impacted. As part of this EA process and to satisfy floodplain regulatory requirements, a study of a range of reasonable alternatives, including different locations for these facilities, was performed (see **Section 3.0**). No practicable alternative avoiding floodplain impacts was identified.[37] .

Based on Federal Emergency Management Agency (FEMA) and NEPA guidance and DOT Order 5650.2, floodplain impacts were evaluated to determine the magnitude and potential effects of 100-year floodplain encroachment. The Proposed Development Project would include unavoidable floodplain encroachment, but is not considered to exceed any significance criteria for floodplain impacts, a federal finding is not required based on the following evaluation conclusions:

- **The Proposed Development Project does not have a high probability of loss of human life**. The Proposed Development Project would not increase flood potential, or have a high probability of loss of human life.
- **The Proposed Development Project does not have substantial encroachment-related costs or damage and would not cause interruption of aircraft service or loss of a vital transportation facility**. Substantial encroachment-related costs or damage are not expected. Project design plans will be required to meet applicable state and local floodplain requirements, including mitigation if required. Therefore, the Proposed Development Project

[37] The proposed Taxiway A extension, which was added to the Proposed Development Project after the Draft EA was circulated for comments, would not be constructed in a floodplain. The addition of this project component would result in no additional floodplain impacts.

is not expected to increase the likelihood of interruption of aircraft service at LAL or loss of a vital transportation facility.

- **The Proposed Development Project would not have an adverse impact on natural and beneficial floodplain values**. The Proposed Development Project would not erode or contaminate floodplain areas in a manner that would reduce the floodplain's habitat and natural values. With the proposed mitigation to offset impacts to wetlands (**Section 5.13.2**) and conservation measures for protected and listed species (**Section 5.3.2**), the 28.4 acres of floodplain loss would not be expected to significantly disrupt the floodplain's ability to offer food, water, and cover to aquatic or terrestrial organisms.

The impacted floodplain area offers limited value for flood volume storage and infiltration due to its high water table and poorly-drained soils. Existing flood control capabilities in the area of would be retained, and compensatory flood water storage and drainage improvements would be constructed. Therefore, the Proposed Development Project would not cause a significant alteration of water flow that would result in unacceptable upstream or downstream flooding.

5.14.2. IMPACT AVOIDANCE, MINIMIZATION, AND MITIGATION

The Proposed Development Project drainage system improvements, which would be part of the LAL stormwater management system, would be designed to properly convey and store stormwater flows, and would not impede floodwater flows during major storm events. The Proposed Development Project's design would be required to comply with local floodplain management policies and regulations, which promote designs to minimize flood impacts. Compensatory storage of flood water volumes would be developed as necessary to meet local and state permit requirements. Compensatory storage involves excavating areas in the same floodplain area to offset or balance out areas that would be filled in due to the Proposed Development Project.

The proposed construction of the stormwater drainage improvements would offer compensatory storage and offset loss of floodplain storage capacity. During the permitting process, the project's design plans and efforts to further avoid, minimize, and mitigate impacts to animal habitats will be coordinated with reviewing agencies, as described in **Section 5.3.2**, and further minimize impacts to natural and beneficial floodplain values. Wetland mitigation described in **Section 5.13.2** will prevent the loss of these values within the region. Adverse effects could be further minimized by elevating all facilities above the base flood elevation, applying construction period erosion and sedimentation controls, and using pervious surfaces for stormwater retention and treatment where possible.

5.14.3. CONCLUSION

Because the Proposed Development Project would include above-grade construction, drainage system improvements would be designed to properly convey and store the stormwater associated with the new facilities. The improvements would be designed so the Proposed Development Project would not be expected to impede floodwater flows during major storm events. Compensatory storage would be developed as necessary to meet local and state permit requirements. With these improvements, and because the floodplains are characterized by shallow flooding over a somewhat large area, the Proposed Development Project is not expected to result in a measurable increase in flood elevation.

The Proposed Development Project's floodplain encroachment would not cause of loss of human life and it would not cause future damage that could be substantially costly or widespread, including loss of a vital transportation facility. The encroachment would not have a notable adverse impact on natural and beneficial floodplain values. As a result, the Proposed Development Project does not appear to exceed thresholds established for significant floodplain impacts.

5.15. SURFACE/GROUNDWATER RESOURCES

5.15.1. SUMMARY OF IMPACTS

A qualitative evaluation of potential water quality impacts was performed by reviewing federal, state, and county regulations; reviewing SWFWMD permit files for the Airport; and analyzing the current drainage system.

Construction

The general drainage patterns and drainage systems for the Proposed Development Project drainage area would remain as described in **Section 4.13**. Additionally, as part of the stormwater design improvements, floodplain values will be maintained to comply with applicable state regulations. Changes to the existing drainage system within the DSA would occur as a result of the Proposed Development Project. Within the 80.9-acre DSA, approximately 49.2 acres of new impervious area would be constructed at the Airport.

Approximately 81 acres of land, including floodplains, would be disturbed by clearing, excavation, and construction activities associated with the Proposed Development Project. Therefore, short-term and temporary water quality impacts may result from construction activities. The potential impacts may increase 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. Therefore, the Proposed Development Project has the potential to exceed applicable state of Florida water quality standards. However, commonly-accepted measures and BMPs would be employed during construction to minimize erosion, sedimentation, and release of pollutants into the airport's drainage system and surface waters.

Operations

The pollutants associated with stormwater runoff from industrial sites include oils, greases, heavy metals and other industrial compounds. Most of the stormwater runoff resulting from the Proposed Development Project will be from paved areas associated with air cargo operations (aircraft parking, maintenance support, and fueling) and paved vehicle and truck parking areas. BMPs will be carried out to minimize the accidental release of pollutants and meet applicable water quality standards for stormwater discharge (see **Section 5.14.2**). In addition, the construction of the proposed stormwater drainage improvements will be designed to treat and attenuate the stormwater runoff generated from the new impervious surfaces associated with the Proposed Development Project. In addition, overland flow on the Airport's grassed infield areas and vegetated upland buffers may effectively treat runoff from the runway and taxiway pavement.[38] The fuel farm design will include leak and spill prevention features.

The closest water/wastewater treatment plant is the Glendale Wastewater Reclamation Facility (WWRF) located approximately seven miles east of LAL, which has a permitted wastewater capacity of 10.8 mgd. Effluent from the WWRF is pumped to a 1,600-acre Wetlands Treatment System in Mullberry, Florida and ultimately flows to the Alafia River. The Proposed Development Project would increase water consumption and wastewater volumes at LAL compared to existing conditions, due to the addition of employees, although it is not expected that these increases would be significant in terms of existing supplies and infrastructure availability. Overall, based on available information,

[38] FDOT Aviation and Spaceports Office. *Statewide Airport Stormwater Best Management Practices Manual*. January 28, 2016.

substantial changes to water supply/demand and wastewater discharge capacity would not occur due to the Proposed Development Project.

5.15.2. CONCLUSION

The Proposed Development Project has the potential to exceed applicable water quality standards during construction and during operation of the facility post-construction. However, applying project-specific BMPs, use of erosion and sedimentation control measures, and maintaining compliance with applicable permit requirements would minimize potential water quality impacts. As a result of these control measures, significant and long-term water quality impacts resulting from construction activities associated with the Proposed Development Project are not anticipated.

There is a possibility of the release of contaminants to groundwater during construction. However, project-specific BMPs and Stormwater Pollution Prevention Plans (SWPPPs) to be designed for the Proposed Development Project would prevent or minimize the potential release of contaminants into groundwater. The BMPs and SWPPPs would require measures to prevent spills, offer swift response to accidental spills, and define acceptable on-site storage of fuel and lubricants. Given the availability of regionally-accepted BMPs and the design of project-specific plans, the Proposed Development Project would not have a substantial impact on groundwater resources.

Based on the analysis, the Proposed Development Project is not likely to contaminate surface waters or aquifers used for public drinking water supply such that public health may be adversely affected. It will not adversely affect natural and beneficial surface water or groundwater resource values to a degree that substantially diminishes or destroys such values. Therefore, the Proposed Development Project would not significantly impact surface water or groundwater resources.

5.16. CUMULATIVE EFFECTS

Cumulative impacts to environmental resources result from the incremental effects of the Proposed Development Project when combined with other past, present, and reasonably foreseeable future projects in the project's vicinity. Cumulative impacts can result from individually minor, but collectively substantial, actions undertaken over a period of time by various agencies (Federal, state, and local) or individuals. FAA Order 1050.1F does not identify a specific significance threshold for the assessment of cumulative impacts. The scope and extent of the cumulative effects analysis depend on the project type, geographic location, potential to impact resources, and other factors such as the current condition of potentially affected resource. Cumulative impacts could be significant if the combined impacts from the Proposed Development Project and other known or reasonably foreseeable actions would cause unique problems or impacts of extraordinary magnitude for a given resource.

A qualitative cumulative impacts analysis was performed for reasonably foreseeable development actions at LAL and within a five-mile buffer of Airport property, either at the same time or within approximately five years of the Proposed Development Project. Where impacts are known to have occurred in past projects and have been quantified, those impact quantities are disclosed. Future impacts associated with some projects were estimated where known, if data were available. The analysis considered the potential cumulative impact of these projects when combined with the potential impact of the Proposed Development Project on each environmental resource category. Each project was evaluated according to the following qualitative or quantitative criteria: (1) will result in appreciable impact to the resource; (2) is an enabling or dependent action for, or otherwise connected to, the Proposed Development Project; and (3) degree of potential cumulative effect. Potential impacts are unique to each resource type; therefore, the scope and extent of the cumulative impacts analysis varies between resources.

A thorough search of city and county planning documents, capital improvement plans, construction permit records, transportation agency databases, and other resources was performed to identify projects within approximately five miles of LAL, to include in the assessment. The past, present, and reasonably foreseeable actions at LAL and off-airport whose potential impacts could interact with potential impacts from the Proposed Development Project are presented in **Table 5.16-1**. The table briefly describes each identified action, presents the proponent or jurisdiction of each action, and the timeframe (e.g., past, present, future), and indicates which resources potentially interact with the Proposed Development Project. Each individual project's cumulative impact is assigned a qualitative low, medium or high rating, and known impacts to physical resources like habitat, wetlands and floodplains are referenced based on available data.

Table 5.16-2 summarizes the analysis of potential for cumulative effects of the Proposed Development Project when combined with potential impacts from the other regional actions described in **Table 5.16-1**. In **Table 5.16-2**, impacts were classified as either 1) minor to moderate, adverse or beneficial, temporary impact(s); 2) moderate, less than significant impact(s) of short to medium term duration, or impact(s) that would become less than significant with mitigation or BMPs; and 3) significant and unavoidable impact(s), that are high in intensity or are long term/permanent, even after mitigation/BMPs. As shown, although there is the potential for cumulative impacts to certain environmental resources, no reasonably foreseeable cumulative effects would be considered unique or of extraordinary magnitude.

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Table 5.16-1 Regional Projects Considered for Cumulative Impacts Analysis

Proponent/ Location	Project/ Description	Timeframe [1]	Potential for Cumulative Impact													
			Air Quality	Biological Resources	Climate	Coastal Resources	Hazardous Materials	Cultural Resources	Land Use	Natural Resources/ Energy	Noise	Socio-economics/ EJ	Light Emissions/ Visual	Wetlands	Floodplains	Water Resources
On-Airport Projects																
LAL	Turf Runway Improvements: Stabilized and extended existing grass strip landing area.	Past (2016)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	New Air Traffic Control Tower: Constructed new air traffic control tower (ATCT) 2,800 feet northwest of the former ATCT, removed existing ATCT, and constructed new ATCT access road.	Past (2016)	Low	Low (1.16 acres of habitat impacted)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	New Fuel Farm Development: Installed one 12,000-gallon aviation gasoline aboveground tank, one 15,000-gallon Jet-A aboveground tank, pad and infrastructure for three future 15,000-gallon aboveground fuel tanks, new aircraft parking ramp, and site drainage improvements.	Past (2015)	Low	Low	Low	Low	Moderate	Low	Low	Moderate	Low	Low	Low	Low	Low	Low
LAL	Solar Power Development: Constructed a 26-acre solar facility, including approximately 12,600 raised photovoltaic solar panels.	Past (2012 and 2016)	Low	Low (31 acres cleared, 2.7 acres of habitat impacted)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low (0.1 acre impacted, mitigation not required)	Low	Low
LAL	Infield Taxiway Improvement Project: Removed Taxiways G and L and reconstructed Taxiway G on a new alignment. Rehabilitated and overlaid a portion of Taxiway A and connectors A1, A4 and A5. Extended Taxiway D, and constructed high speed exits between Runway 9/27 and Taxiway A.	Past (2016)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Moderate
LAL	AERO Center FBO Lakeland: Construct new General Aviation/Fixed Base Operations (FBO) facility, with 3,000-square foot FBO terminal building, 15,000-square foot storage hangar, 10,000-square foot storage/light maintenance hangar, access road, new taxilane access, and 2.75-acre FBO apron.	Present (2022)	Low	Low	Low	Low	Low	Low	Low	Moderate	Low	Low	Low	Low	Low	Low
LAL	Runway 27 Runway Protection Zone (RPZ) Clearing: Cleared obstructions (trees and vegetation) from approximately 15.07 acres of Runway 27 RPZ	Past (2018)	Low	Moderate (15.07 acres of habitat impacted)	Low	Low	Low	Low	Low	Low	Low	Low	Moderate	Low	Low	Low
LAL	Special Authorization Category II (SA CAT II) Upgrade: Upgraded the Category I Instrument Landing System (ILS) to SA CAT II with new localizer, and glide slope upgrades. Installed new Runway Visual Range equipment.	Past (2020)	Low	Moderate	Low	Low	Low	Low	Low	Low	Low	Low	Moderate	Low	Low	Low
LAL	Runway 9/27 Rehabilitation, Strengthening and Upgrades: Rehabilitated and strengthened Runway 9/27 pavement, installed centerline and Touchdown Zone (TDZ) lighting, and installed conduit for future CAT III upgrade.	Past (2020)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	Terminal Ramp Rehabilitation and Strengthening: Rehabilitated and strengthened terminal aircraft parking apron pavement.	Past (2020)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	Taxiways A, B, C, and K Rehabilitation: Rehabilitated Taxiways A, B, C, and K pavements.	Past (2021)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	Air Cargo/ MRO Facility (Phase I): Constructed one aircraft maintenance hangar, two additional aircraft maintenance	Past (2020)	Moderate	Moderate	Moderate	Low	Low	Low	Low	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate

Proponent/ Location	Project/ Description	Timeframe [1]	Potential for Cumulative Impact													
			Air Quality	Biological Resources	Climate	Coastal Resources	Hazardous Materials	Cultural Resources	Land Use	Natural Resources/ Energy	Noise	Socio-economics/ EJ	Light Emissions/ Visual	Wetlands	Floodplains	Water Resources
	hangars, and one air cargo building, totaling 220,000 sf of building space. Constructed 78,400 sy of aircraft parking apron and installed facility access roads, vehicle parking, and cargo truck court.			(48.59 acres impacted)										(4.76 acres impacted and mitigated)	(2.5 acres impacted and mitigated)	
LAL	New Hangar and Apron: Constructed a new 290 ft by 200 ft aircraft hangar and associated aircraft parking apron, and vehicle parking lot.	Past (2017)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	Taxiway E Rehabilitation: Rehabilitate approximately 3,460 linear feet of existing Taxiway E and approximately 1,100 linear feet of existing Taxiway E1. Includes combination of milling and asphalt overlay, and full depth reconstruction. Widen both taxiways from current width of 50 feet to 75 feet.	Present (2022)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Moderate
LAL	Land Acquisition Southwest Corner 15.98 Acres: Purchase approximately 15.98 acres in southwest corner of LAL to accommodate future Runway 10R-28L and associated taxiways.	Present (2022)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	Taxiway P Relocation: Shift approximately 5,000 feet of Taxiway P south, rehabilitate and widen three taxiway connectors to Runway 9/27. Widened taxiway will be 75 feet wide with 30-foot shoulders. Taxiway relocation will accommodate future ILS CAT III upgrade.	Future (2023)	Low	Moderate (1.0 acre habitat impacted)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Moderate (1.0 acre impacted)	Low	Moderate
LAL	Hangar Expansion: Design and construct new hangar (approximately 290' x 200'), aircraft parking apron, vehicle parking lots southeast of Taxiway E.	Future (2025)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	ILS Category III (CAT III) Upgrade: Relocate the Approach Lighting System and upgrade the Sequenced Flashing Lights (ALSF) to support ILS SA CAT III operations. Installed centerline lighting fixtures, TDZ light cans and airfield vault. Relocate glide slope equipment.	Future (2025)	Low	Moderate (0.92 acres habitat impacted)	Low	Low	Low	Low	Low	Low	Low	Low	Moderate	Moderate (0.5 acre cleared, 0.42 acre impacted and mitigated)	Low	Low
LAL	Taxiway A Shoulders and Runup Apron: Construct approximately 356,100 square feet of paved shoulders on Taxiway A, and approximately 168,000 square feet of runup apron adjacent to Taxiway A.	Future (2024)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Moderate
LAL	Shift Taxiway D: Shift Taxiway D to the north in order to align with the recently relocated Taxiway P, on the south side of Runway 9/27. Reconstruct to 75 feet wide with 30-foot shoulders	Future (2027)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	Construct Connectors on Taxiway D and A4: Construct approximately 64,600 square feet of taxiway connectors between relocated Taxiway D and Runway 9/27, including paved shoulders.	Future (2027)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Moderate
LAL	Internal Roads: Construct internal access roads on airport property.	Future (2024)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Moderate
LAL	Land Acquisition Southwest Corner 55 Acres: Purchase approximately 55 acres in the southwest corner of LAL to accommodate future parallel Runway 10R-28L, the future arrival and departure surfaces, and future perimeter road.	Future (2023)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	Extend Runway 9/27 and Taxiway A and Taxiway P: Extend existing Runway 9/27 (re-designated as Runway 10/28) by 1,501 feet to the west. Extend Taxiway A and Taxiway P to provide access to new runway end. [*Although the project is*	Future (2024)	Low	Moderate (1 to 2 acres)	Low	Low	Low	Low	Low	Low	High	Low	Low	Moderate (1 to 2 acres)	Moderate	Moderate

Proponent/ Location	Project/ Description	Timeframe [1]	Potential for Cumulative Impact													
			Air Quality	Biological Resources	Climate	Coastal Resources	Hazardous Materials	Cultural Resources	Land Use	Natural Resources/ Energy	Noise	Socio-economics/ EJ	Light Emissions/ Visual	Wetlands	Floodplains	Water Resources
	identified in the airport's CIP, implementation is dependent on an operator that can justify the need for the extension. At present, the City does not plan to extend the runway.]															
LAL	Relocate VOR: Relocate Very High Frequency Omni Directional Range (VOR) aircraft navigation system due to construction of future parallel Runway 10R-28L.	Future (2025)	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
LAL	Maintenance, Repair and Overhaul Facility Development (Northeast Corner of Airport): Construct two 100,000-square foot and one 30,000-square foot Maintenance, Repair, and Overhaul facilities in the northeast quadrant of the airport. Facilities would be developed on the northern and eastern edges of the northeast quadrant in order to maintain visual-only operations for Runway 5-23.	Future (2024)	Moderate	Low	Low	Low	Low	Low	Low	Moderate	High	Low	Moderate	Low	Low	Moderate
Off-Airport Projects																
Publix Supermarkets	Publix Headquarters Expansion: Ongoing expansion of Publix Supermarkets, Inc. headquarters facility. Includes addition of 190,000 SF to existing building.	Past, Present	Moderate	Low	Low	Low	Low	Low	Low	Moderate	Low	Moderate	Moderate	Low	Low	Moderate
Drummond Co.	Oakbridge Development of Regional Impact: Multi-use subdivision consisting of retail, hotel, office, recreation, and commercial space. Includes 2,672 housing units (single-family, multi-family, townhouse, and senior units).	Past, Present	Moderate	Moderate	Low	Low	Low	Low	Moderate	Moderate	Moderate	Moderate	Low	Low	Low	Moderate
Not Specified	Wainwright Subdivision – Housing Development: Subdivision on 12.12 acres located 400 feet north of the intersection of Kathleen Road and Griffin Road.	Present, Future	Moderate	Moderate	Low	Low	Low	Low	Moderate	Moderate	Low	Moderate	Moderate	Moderate	Moderate	Moderate
Not Specified	Housing Development: Construction of six Cottage special building type dwelling units on property located at 448 South Central Avenue.	Future	Low	Low	Low	Low	Low	Low	Moderate	Low	Moderate	Low	Low	Low	Low	Low
Not Specified	Housing Subdivision Development: 240 multi-family units on approximately 17.79 acres located north of Town Center Drive and west of Harden Boulevard.	Future	Moderate	Moderate	Low	Low	Low	Low	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Orlando Health	Hospital and Office Center Development: Construct a 30,000-SF free-standing emergency room, a 20,000-SF ambulatory surgical center, 240,000 SF of medical office uses, a 150-room hotel, 20,000-SF of retail uses, and a 730,000-SF hospital with up to 360 beds, on approximately 79.6 acres located south of SR 570 (Polk Parkway), east of Lakeland Highlands Road, and north of Winter Lake Extension Road.	Future	Moderate	Moderate	Low	Low	Low	Low	Moderate	Moderate	Low	Moderate	Low	Low	Low	Low
City of Lakeland Public Works	County Line Road at U.S.-92 Improvements: Increase capacity of the intersection of County Line Road and U.S. 92 by adding a northbound right turn lane and adding pavement for a future second northbound left turn lane. The full median opening at County Line Road and Old Highway will also be closed making Old Tampa Highway a right-in-right-out connection.	Present	Moderate	Moderate	Moderate	Low	Low	Low	Moderate	Moderate	Moderate	Moderate	Low	Low	Low	Moderate
City of Lakeland Public Works	Wabash Avenue South Extension: Extend Wabash Avenue from the intersection of Harden Boulevard at Beaker Boulevard \north to the intersection of Wabash Avenue at Ariana Street. Includes connections to Lakeside Village Shopping Center, Village Center Drive, Grasslands Boulevard, and Faye Street.	Present	Low	Moderate	Low	Low	Low	Low	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Low	Moderate
City of Lakeland Public Works	U.S.-92 at Wabash Avenue: Construct additional eastbound left-turn lane. Provides eastbound traffic with dual left-turn lanes, dual thru-lanes, and a right-turn lane. Signalization improvements and reconstruction.	Present	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low

Proponent/ Location	Project/ Description	Timeframe [1]	Potential for Cumulative Impact													
			Air Quality	Biological Resources	Climate	Coastal Resources	Hazardous Materials	Cultural Resources	Land Use	Natural Resources/ Energy	Noise	Socio-economics/ EJ	Light Emissions/ Visual	Wetlands	Floodplains	Water Resources
City of Lakeland Public Works/Polk County	Wabash Avenue North Extension: Construct 0.85 mile of two-lane roadway, 6-foot wide sidewalks on both sides of the street, street lighting, a new railroad crossing, stormwater drainage system, and an improved intersection at 10th Street.	Present	Low	Moderate	Low	Low	Low	Low	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
FDOT	County Road 580 (Sam Allen Road): Widening from west of SR 39A (Paul Buchman Highway) to east of Park Road The current two-lane rural road will be widened to a four-lane divided roadway with a raised median, curb and gutter, sidewalks, bicycle lanes, underground drainage pipes, and off-site ponds.	Present	Moderate	Moderate	Moderate	Low	Low	Low	Moderate	Moderate	Moderate	Moderate	Low	Moderate	Moderate	Moderate
FDOT	SR 572 from north of the Rooms to Go entrance to Drane Field Road: Project limits extend from north of the Rooms to Go entrance to Drane Field Road. Replace asphalt on Airport Road. Reconstruct shoulders. Resurface side street entrances. Add southbound left and right turn lanes onto the Polk Parkway. Drainage improvements. Add and replace sidewalk.	Present	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
FDOT	U.S. 92 from County Line Road to Wabash Avenue: Widen U.S. 92 (New Tampa Highway) from two to four lanes between County Line Road and Wabash Avenue in Polk County. Pedestrian and bicycle improvements.	Past, Present, Future	Moderate	Low	Moderate	Low	Low	Low	Moderate	Moderate	Moderate	Moderate	Low	Moderate	Moderate	Moderate
Polk County Public Schools	Kingsford Elementary School Replacement: Construct replacement for Kingsford Elementary School.	Present, Future	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low

Notes:
[1] Timeframe for on-airport projects includes the completion year for past projects and estimated completion years for present and future projects.

Table 5.16-2 Cumulative Impacts Summary

Resource Area	Proposed Project	Other Cumulative Projects	Cumulative Effects	Cumulative Impact Evaluation
Air Quality	◘	◘	◘	Temporary construction and permanent operational emissions within the airshed would be generated by the FAA Proposed Action and overall Proposed Development Project and most of the other cumulative projects. On- and off-airport light industrial and commercial development and transportation projects are expected to increase vehicle traffic in the cumulative impact study area, which would increase air emissions. Emissions from the Phase I facility development at LAL are included in the No-Action Alternative for this EA. Other past on-airport projects, including the FBO facility development, resulted in a minimal or moderate change in operations and associated surface traffic and aircraft emissions and air quality impacts. Past reconfiguration of taxiways was intended to improve aircraft ground movement efficiency at LAL and had a minor beneficial impact on air emissions. Over time, the airport development projects, transportation projects, and other area development projects would generate temporary impacts to air quality during construction and demolition activities. Airport projects that incrementally increased airport use and employment, such as the AERO Center FBO project likely resulted in a small increase in surface traffic and aircraft operations, and their associated air emissions. Development of new residential and commercial areas including The Oakbridge, South Central Avenue, and Harden Boulevard/Towne Center Drive developments near the airport would also increase local vehicular traffic air emissions. Roadway improvement and expansion projects including the County Line Road at U.S.-92 Improvements, Wabash Avenue South Extension, U.S.-92 at Wabash Avenue, Wabash Avenue North Extension, County Road 580 (Sam Allen Road) Widening, and U.S. 92 from County Line Road to Wabash Avenue projects, may also increase vehicular traffic and emissions, which may be partly offset by the projects' associated traffic flow improvements. Based on the cumulative projects evaluated and the County's attainment status, significant cumulative effects would not occur when the emissions from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative air impacts are expected to occur.
Biological Resources	◘	◘	◘	Possible loss of individual birds and terrestrial and aquatic animals, as well as incremental habitat loss, would likely occur from the construction of the FAA Proposed Action and the overall Proposed Development Project and the individual cumulative projects. Past projects at LAL have cumulatively converted land use and vegetative cover that could have been used for wildlife habitat. The Air Traffic Control Tower replacement, Runway 27 Runway Protection Zone clearing, Solar Farm, and Air Cargo/MRO Facility (Phase I) projects collectively altered approximately 67.52 acres of uplands that potentially could have been used as wildlife habitat, and cleared vegetation over an additional 31 acres. Impacted uplands consisted of various forms of cropland or rural land use with minimal wildlife habitat value, previously cleared areas, and shrubby or forested areas. Approximately 4.86 total acres of wetlands were impacted by the Solar Farm and Air Cargo/MRO Facility (Phase I) projects. Impacted wetlands consisted of interior non-forested wetland, shrubby wetland, mixed forested wetlands, upland-cut ditches, and stormwater ponds. Most of the impacted wetlands were determined to have minimal functional value. Wetland mitigation was provided as required to offset wetland function and habitat impacts. Based on available environmental data, the proposed Runway 9/27 Extension, Taxiway P Relocation, and ILS CAT III projects listed on T**able 5.16-1** could potentially impact between 2.92 and 3.92 acres of wildlife habitat and between 2.42 and 3.42 acres of additional wetland area. Other planned projects on-airport would not cause appreciable impacts to habitat areas due to the fact they occur on developed/disturbed lands. Through wildlife and habitat impact avoidance, minimization, and mitigation strategies in coordination with reviewing agencies, significant cumulative impacts would not occur when the impacts to biological resources from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative impacts to biological resources are expected to occur.
Climate	◘	◘	◘	Temporary construction GHG emissions and permanent operational GHG emissions within airshed would be generated by the FAA Proposed Action and overall Proposed Development Project and most other projects. Ongoing GHG emissions from Phase I facility operation and other aircraft operations at LAL are included in the No-Action Alternative. Given the enormity of GHG emissions worldwide, the contributions of one project, or several geographically related projects are negligible. Each project listed on **Table 5.16-1** would incrementally contribute to the total GHG emissions in Lakeland/Polk County However, based on the cumulative projects evaluated, significant cumulative effects would not occur when the GHG emissions from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant climate impacts are expected to occur.
Coastal Resources	○	◘	◘	The entire state of Florida is within the Coastal Zone under the state's Coastal Zone Management Program. Because Polk County is not a coast-adjacent county, projects within the county generally do not require a formal Federal Consistency Determination, but rather coordination and findings at the state level, through the State Clearinghouse. The FAA Proposed Action and overall Proposed Development project is consistent with the FCMP. Final consistency is determined for each project, as needed, during the environmental permitting process (state-issued Environmental Resource Permit). Based on the cumulative projects evaluated and the distance between the Lakeland-Winter Haven area and the east and west coasts of Florida, significant cumulative effects would not occur when impacts to the resources managed under the FCMP from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative coastal resources impacts are expected to occur.
Hazardous Materials, Pollution Prevention, and Solid Waste	○	◘	◘	Individual cumulative projects may affect contaminated sites. Potential cumulative increases to waste generation from project construction and operations could occur. The Proposed Development Project includes a planned fuel storage and distribution facility. Past actions at LAL have also developed fuel storage facilities. In accordance with Federal and state regulations, the Sponsor and City would ensure that pollution prevention plans are prepared for the fuel storage facility and other facilities in accordance with these requirements. Construction and operation of the FAA Proposed Action and overall Proposed Project and cumulative projects would adhere to all applicable federal, state and local environmental laws and regulations. It is assumed that past

Resource Area	Proposed Project	Other Cumulative Projects	Cumulative Effects	Cumulative Impact Evaluation
				projects complied with the relevant laws and regulations and no release of hazardous materials, pollution or solid waste occurred. Reasonably foreseeable projects would be required to adhere to all applicable federal, state, and local environmental laws. The Proposed Development Project and identified cumulative projects have the potential to generate construction wastes and municipal solid wastes, resulting in increased demand for landfill use. However, each project is expected to recycle materials to the extent possible, and the demand would not exceed local capacity. Based on the cumulative projects evaluated, adherence to federal and state hazardous materials regulations, and waste minimization efforts, significant cumulative effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative hazardous materials, pollution prevention, and solid waste impacts are expected to occur.
Historical, Architectural, Archeological and Cultural Resources	○	◘	◘	The FAA Proposed Action and overall Proposed Development Project would not affect cultural resources. Other past, present and reasonably foreseeable future projects may incrementally affect these resources; however, federally and state-funded projects with such potential impacts upon historic properties would require coordination with the SHPO, documentation of any adverse impacts, and mitigation measures if warranted. Based on the cumulative projects evaluated and the required coordination with SHPO for federally and state-funded projects, significant cumulative effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative historical, architectural, and cultural resource impacts are expected to occur.
Land Use	○	◘	◘	The FAA Proposed Action and overall Proposed Development Project would not require land acquisition and would be located entirely on LAL property. Some of reasonably foreseeable projects would continue to convert agricultural, forested, or other land use types to urban or suburban land use. It is assumed that the other past, present and reasonably foreseeable actions are either consistent with the relevant planned land uses and zoning or would seek rezoning or a variance as part of the project approval process. Within the next five years, The City intends to acquire approximately 70.98 acres of off airport land adjacent to the southwest corner of LAL for future development of a planned parallel Runway 10R-28L. Based on available soils data, the airport projects would not impact or convert prime farmland. Farmland conversions would be verified during the environmental review process for the projects and if necessary, coordinated with the U.S. Department of Agriculture Natural Resources Conservation Service. Other off-airport projects may have required land acquisition or may require future land acquisition, but that data is not known. Based on the cumulative projects evaluated and the required land use and zoning approvals for projects, significant cumulative effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative land use impacts are expected to occur.
Natural Resources and Energy Supply	◘	◘	◘	Cumulative energy and water demand increases from the FAA Proposed Action and overall Proposed Development Project and multiple other on- and off-airport project operations could occur. These additional demands would not cause cumulatively significant impacts to these resources, when combined with the effects of other past, present and reasonably foreseeable actions. The Proposed Development Project would use commonly available natural resources during construction (e.g., steel, wood, concrete, asphalt). None of the building materials that would be employed by the Proposed Project or any of the cumulative projects is considered to be unusual or in short supply. The Proposed Development Project would not generate excessive demands on local energy supplies, and no substantial issues related to natural resource and energy supplies were identified for the Proposed Development Project and the cumulative projects. Past development at LAL includes installation of a 3.15 megawatt solar farm to offset energy use at the Airport and provide power to Lakeland Electric customers. Based on the cumulative projects evaluated and the regional natural resources and energy supply available compared to demand, significant cumulative effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative natural resources and energy supply impacts are expected to occur.
Noise and Noise Compatible Land Use	◘	◘	◘	The FAA Proposed Action and overall Proposed Development Project would result in an expansion of the DNL 65 dB noise contour. Noise generated by the operation of the Phase I development are included and accounted for in the EA's No-Action Alternative. Other past, present and reasonably foreseeable future projects may incrementally increase these impacts, particularly at the local level during construction. As noted on **Table 5.16-1**, the planned Runway 9/27 extension and MRO facility construction projects have the highest potential of all LAL projects listed to expand the noise contour, which could have significant noise impacts, which would require mitigation. These projects would require a separate environmental review/NEPA document prior to implementation, where specific impacts would be addressed. The transportation cumulative projects in the study area would alter the noise environment to varying degrees. This may occur where vehicles may be operating closer to noise-sensitive receptors and/or would accommodate higher volumes of traffic. The Federal and state agencies sponsoring the transportation projects would consider potential noise impacts and mitigate those determined to be significant Three planned developments would construct a total of 2,918 housing units within approximately two miles of the northeast corner of LAL (Oakbridge, South Central Avenue, and Harden Boulevard/Towne Center Drive developments). The new residential developments would be located well outside the DNL 65 dB noise contour. The noise levels would be compatible with residential land use; however, these residential areas may experience noise impacts from individual aircraft overflights. Based on the cumulative projects and any future mitigation that may be required for individual projects, significant cumulative effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative noise impacts are expected to occur.
Socioeconomics, Environmental Justice, and	◘	◘	◘	Beneficial impacts from FAA Proposed Action and overall Proposed Development Project and multiple other projects generating temporary (construction) employment and long-term employment. Overall increases to local and regional surface traffic may occur from the combined projects. Some local and regional traffic impact mitigation provided by Proposed Development Project and local and regional traffic capacity expansion and intersection efficiency

Resource Area	Proposed Project	Other Cumulative Projects	Cumulative Effects	Cumulative Impact Evaluation
Children's Health and Safety Risks				projects. Potential individual and incremental environmental justice, children's health and safety risks from other projects, on a case-by-case basis. Environmental effects of Phase I development are included in the impact analysis by way of being accounted in the No-Action Alternative. Other reasonably foreseeable cumulative projects identified in the region have low potential to generate extensive residential and business relocations, alter or degrade local transportation patterns, or disrupt established or planned communities. Based on the cumulative projects, the nature of the development projects, and development policies and controls of the City of Lakeland and Polk County, significant cumulate effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant socioeconomic, Environmental Justice, and children's health and safety risk impacts are expected to occur.
Light Emissions and Visual Effects	○	○	○	The FAA Proposed Action and overall Proposed Development Project would require lighting, both exterior and interior that would be present 24 hours a day, 7 days a week. This would introduce a new source of light emissions; however, as stated in **Section 5.12.1**, conceptual design of the lighting for the Proposed Development Project would be consistent with Phase I cargo facility lighting. Proposed airport projects on **Table 5.16-1,** such as the planned Runway 9/27 extension and ILS upgrades, could cumulatively increase light emissions on airport. There is also potential for individual impacts to visual effects and light emissions from off-airport projects, particularly if development occurs in previously undeveloped areas. However, such projects and developments are expected to comply with design and visual components of local, county, or regional zoning regulations, thus reducing these impacts. Based on the cumulative projects evaluated and expected compliance with design and visual components of zoning regulations, significant cumulative effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative light emissions and visual effects impacts are expected to occur.
Wetlands	◘	◘	◘	As stated in **Section 5.13.1**, the FAA Proposed Action and overall Proposed Development Project impacts 24.2 acres of wetlands (as well as 1 acre of secondary impacts) which would be mitigated using credits from the ARMB. Approximately 4.86 total acres of wetlands and 6.38 acres of other surface waters were impacted by the Solar Farm and Air Cargo/MRO Facility (Phase I) projects. Impacted wetlands consisted of interior non-forested wetland, shrubby wetland, mixed forested wetlands, upland-cut ditches, and stormwater ponds. Wetland mitigation was provided in the in the form of wetland creation south of LAL within the Alafia River Watershed. Based on available environmental data, the proposed Runway 9/27 Extension, Taxiway P Relocation, and ILS CAT III projects listed on **Table 5.16-1** could potentially impact between 2.42 and 3.42 acres of additional wetland area, and clear approximately 0.5 acre of additional wetland vegetation. Other planned projects on-airport would not cause appreciable impacts to wetlands. Other past, present and reasonably foreseeable future projects off-airport may also directly or indirectly impact additional wetlands in the watershed. However, each individual project would need to demonstrate mitigation through the design/permitting process. Based on the cumulative projects evaluated and the required in-watershed wetland mitigation required for individual projects, significant cumulative effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative wetland impacts are expected to occur.
Floodplains	◘	◘	◘	As stated in **Section 5.14.2**, the FAA Proposed Action and overall Proposed Development Project impacts 28.4 acres of floodplains, which would be mitigated with drainage system improvements that are part of the project will need to comply with local floodplain management policies and regulations. Within the same area, construction of the existing air cargo facility (Phase I) has already resulted in impacts to 2.5 acres of floodplains. Based on available environmental data, the proposed Runway 9/27 extension project listed on **Table 5.16-1** could potentially impact between two and three acres of additional Zone A floodplain area. Other planned projects on-airport would not cause appreciable impacts to floodplains. Other past, present and reasonably foreseeable future projects off-airport may impact additional floodplains in the region. However, both the Proposed Development Project and each individual project would need to demonstrate compliance with local floodplain management policies and regulations, such as permitting, stormwater management design, and compensatory storage within the same floodplain area. Impacts to natural and beneficial floodplain values such as wildlife habitat would be similarly avoided, minimized and mitigated through permitting and design in coordination with reviewing agencies. Based on the cumulative projects evaluated and project permitting, compliance with floodplain ordinances, floodplain avoidance and impact minimization strategies, and impact mitigation, significant cumulative effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative floodplain impacts are expected to occur.
Surface/Groundwater Resources	◘	◘	◘	Construction and operation of the FAA Action and overall Proposed Development Project would have the potential for water quality issues such as increased surface runoff, downstream erosion, and potential discharges of pollutants, such as accidental spills. However, through a combination of design measures to control stormwater runoff included in the drainage design, and adherence to required stormwater permits and the SWPPP that must be prepared for construction of the FAA Proposed Action and Overall Proposed Development Project, no significant water quality impacts would occur. Water quality impacts associated with Phase I development due to the addition of impervious surfaces have already occurred and were addressed in the ERP permitting, and local land development permitting process. The Infield Taxiway Improvement project, AERO Center FBO project, and Solar Farm project collectively impacted approximately 2.0 acres of on-airport, mostly manmade, non-jurisdictional surface water and drainage features, and 0.1 acre of wetlands with minimal functional value that did not require mitigation. There is potential for regional cumulative effects from additional impervious surfaces and construction-related runoff associated with off-airport projects. Required water quality and stormwater Best Management Practices were followed for past projects, and reasonably foreseeable projects would implement the same practices to minimize potential for water quality impacts. Disturbed areas of construction sites that are not developed are expected to be seeded and/or sodded to prevent ongoing erosion and sedimentation of local surface water

Resource Area	Proposed Project	Other Cumulative Projects	Cumulative Effects	Cumulative Impact Evaluation
				and stormwater features, per standard BMPs and permit requirements. Based on the cumulative projects evaluated and project permitting, development of individual SWPPPs, and use of construction BMPs, significant cumulative effects would not occur when the effects from the FAA Proposed Action and Proposed Development Project are considered in addition to the effects of other past, present, and reasonably foreseeable actions in the area. No significant cumulative surface and groundwater resource impacts are expected to occur.

Notes: ○ = Minor to moderate, adverse or beneficial, temporary impact(s); ◘ = Moderate, less than significant impact(s) of short to medium term duration, or impact(s) that would become less than significant with mitigation or application of BMP

● = Significant and unavoidable impact(s), that are high in intensity or are long term/permanent, even after mitigation/BMP

CHAPTER 6 COORDINATION AND PUBLIC INVOLVEMENT

6.1. INTRODUCTION

Early agency coordination and a public involvement program were carried out to ensure information regarding the proposed airport development and potential environmental impacts were made available to the general public and public agencies and that input from interested parties was received and considered in the development of this Environmental Assessment (EA). The primary components of the agency and public participation program for this EA include:

- Early Agency coordination at the beginning of the National Environmental Policy Act (NEPA) process,
- Publication of the Draft EA for public and public agency review,
- Public meeting on the Draft EA, and
- Public notice of the Federal Aviation Administration (FAA)'s decision of whether to issue a Finding of No Significant Impact (FONSI) or to prepare an Environmental Impact Statement (EIS).

The following summarizes the public involvement and review process.

6.2. AGENCY EARLY COORDINATION

The Florida State Clearinghouse was given notice of the Proposed Development Project and preparation of this EA on May 4, 2020. The notice included a description of Proposed Development Project and graphics depicting the location and conceptual layout of the proposed facility. Notification was also sent to regional, county, and local agencies and utilities on July 10, 2020. Comments on the early notice were received between May 26, 2020 and August 11, 2020 and are contained, along with copies of the notifications and a list of agencies contacted, in **Appendix A**.

6.3. DRAFT EA AVAILABILITY FOR REVIEW

The Draft EA was made available for review by the general public and interested parties. Notification of the Draft EA's availability was accomplished through legal advertisements in local newspaper *The Lakeland Ledger* and on the Airport's website. The Notice of Availability was published twice in April of 2021, 35 days and 32 days prior to the Public Hearing and Public Information Workshop held on May 27, 2021**. Appendix J** contains a copy of the Notice of Availability. The Draft EA was also made available for review at the locations listed below, and electronically for viewing or download from the airport web site at https://www.flylakeland.com/airport-projects.

- Larry R. Jackson Branch Library, 1700 N Florida Avenue, Lakeland, FL 33805
- eLibrary South Lakeland, 4740 S Florida Avenue, Lakeland, FL 33813
- Lakeland Linder International Airport, Airport Terminal, 3900 Don Emerson Drive, Suite 210, Lakeland, FL 33811

Copies of the Draft EA were also distributed to federal, state, and local agencies that had expressed an interest or have regulatory oversight. A list of agencies receiving the Draft EA is given in **Appendix A.** Anyone wishing to comment on the information and conclusions in the Draft EA was invited to do so at any time during the advertised public review and comment period, which extended through May 31, 2021. Comments were accepted at the combined Public Information Workshop and Public Hearing, as well as via email and postal mail to the Airport Director (Gene Conrad, 3900 Don Emerson Drive, Suite 210, Lakeland, Florida 33811; Gene.Conrad@lakelandgov.net).

6.4. PUBLIC INFORMATION WORKSHOP AND PUBLIC HEARING

A combined Public Information Workshop and Public Hearing was held on May 27, 2021 at the RP Funding Center, Sikes Hall, located at 701 West Lime Street, Lakeland, Florida 33815. The purpose was to consider the social, economic, and environmental effects of the Proposed Development Project, and to receive comments from the public and government agencies.

Information, maps, and diagrams explaining the Proposed Development Project and potential impacts to the environment were made available for inspection during the workshop portion of the meeting (**Appendix J**). Airport representatives and their consultant were on hand to discuss the Proposed Development Project and answer questions. Comment forms and court reporters were available for the public to submit written comments or provide verbal comments during the proceedings.

The combined Public Information Workshop and Public Hearing began with an informal review of informational display boards followed by a brief introduction and overview of the hearing's purpose from a Public Hearing officer and a formal presentation describing the Proposed Development Project, EA process and EA findings. Members of the public then provided oral and written comments. The combined Public Information Workshop and Public Hearing was attended by 177 members of the public, covered by local newspaper and local news television affiliates, livestreamed on the local news website LKLDNOW (https://www.lkldnow.com/), and separately video recorded by the City. The City's video recording is available to the public upon request and can be found on the to the City's Lakeland Government Network (LakelandGov) video page at https://vimeo.com/channels/1360321. Additionally, a court reporter was present to transcribe the hearing's presentations, public verbal comments given, and private verbal comments given directly to the reporter. Twenty public verbal statements were made, two private verbal statements were made directly to the court reporter, and 15 comment forms were completed during the proceedings.

6.5. COMMENTS ON THE DRAFT EA

As noted above, the Draft EA comment period began on April 23, 2021 and closed on May 31, 2021. During this period a total of 192 public comment submittals were received, including 20 public statements, 15 comment forms, and two private statements provided to the court reporter at the combined Public Information Workshop and Public Hearing; and one comment letter by mail, 152 by email, and two by social media. A total of 343 specific comments were identified in the comment submittals. These comments are summarized by topic category in **Table 6.5-1** below and are included individually in **Appendix J**.

No comments were received from federal, state or local agencies. As previously discussed, the Seminole Tribe of Florida provided a letter of "no objection" to the Proposed Development Project, and the Muscogee (Creek) Nation provided concurrence of no effects to any known historic properties.

6.6. FINAL EA

The FAA and the City considered all comments received from the public during the preparation of the Final EA. The comments received, and responses to the comments are included in **Appendix J**. As necessary, the EA has been amended to address substantive comments or provide additional analysis or explanation.

The FAA will review the Final EA to determine its adequacy under NEPA, CEQ's regulations implementing NEPA (40 Code of Federal Regulations [CFR] Part 1500), and FAA Orders 1050.1F and 5050.4B. Based on the information and analyses in the Final EA, the FAA will decide whether to either issue a Finding of No Significant Impact or prepare an Environmental Impact Statement.

Table 6.5-1 Public Comments Summarized by Topic

Topic	Count
Air Quality	6
Airspace/Air Traffic	31
Biological Resources	5
Coordination and Public Involvement	8
Floodplains	2
In Opposition to the Project	15
In Support of the Project	19
Noise and Noise Compatible Land Use	133
Other Considerations	5
Purpose and Need	1
Quality of Life	20
Safety	20
Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety	75
Surface/Ground Water Resources	1
Wetlands	2
Grand Total	**343**

Source: AECOM, 2021.

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CHAPTER 7 LIST OF PREPARERS

As required by FAA Orders 1050.1F and 5050.4B, the names and qualifications of the principal persons contributing information to this EA are identified. It should be noted, under § 1502.6 of the CEQ regulations, the efforts of an interdisciplinary team, consisting of technicians and experts from various fields of study were required to accomplish this study. Specialists involved in this EA included those in such fields as airport planning; biology; historic/archaeological; water resources; and other disciplines.

AIRPORT SPONSOR

Gene Conrad – Airport Director, Lakeland Linder International Airport, City of Lakeland

AECOM - PRIME CONSULTANT

Kevin Gu – Traffic Engineer, PE, PTOE, M.S. Civil Engineering. Responsible for traffic analysis using SYNCHRO/SIMTRAFFIC and contributed to report documentation.

Mark Martinkovic – Senior Archaeologist, M.A. and B.A. Archaeology and Historical Archaeology. 15 years of experience. Responsible for archaeological evaluation and preparation of CRAS.

Marvin Brown – Senior Architectural Historian and Historian. B.A. and M.A. American Civilization, J.D. Law. 35 years of experience. Responsible for historic and architectural-historic evaluation and Section 106 coordination.

Paul Sanford – Project Manager/Airport Environmental Planner. B.S. Environmental Science and Policy. 11 years of experience in environmental assessment and impact analyses. Responsible for project management, agency and public coordination, GIS mapping, document production, technical writing, noise modeling and environmental impact analysis

Robert Morris – Senior CAD Specialist. 34 years of experience. Responsible for CAD, project drawings, and analysis.

Sam Hartsfield – Aviation Environmental Planner. M.S. Environmental Science and Management. B.S. Biology. 14 years of experience in aviation environmental planning, air emission inventories, and air quality studies. Responsible for air quality analysis, socioeconomics and environmental justice evaluation, agency and public coordination, technical writing, and environmental impact analysis.

Tia Norman – Aviation Environmental Planner. B.S. Environmental Science and Policy. 12 years of experience. Responsible for biological resources evaluation, mitigation strategies, air quality analysis, wetland evaluation, GIS mapping, agency and public coordination, technical writing, document production, and environmental impact analysis.

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