Draft Environmental Assessment for Phase II Air Cargo Facility Development

Volume 1: Chapters 1-8

Lakeland Linder International Airport
Polk County, Florida

April 2021

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

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April 2021

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

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Responsible FAA Official 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 is being 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 will support 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, 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,

[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 FAA to issue Airport Operating Certificates to airports that serve scheduled and unscheduled air carrier aircraft with more than 30 seats. LAL meets this requirement. To maintain this certificate, LAL must meet certain operational and safety standards.

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 Phase I air cargo facility development 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. 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.

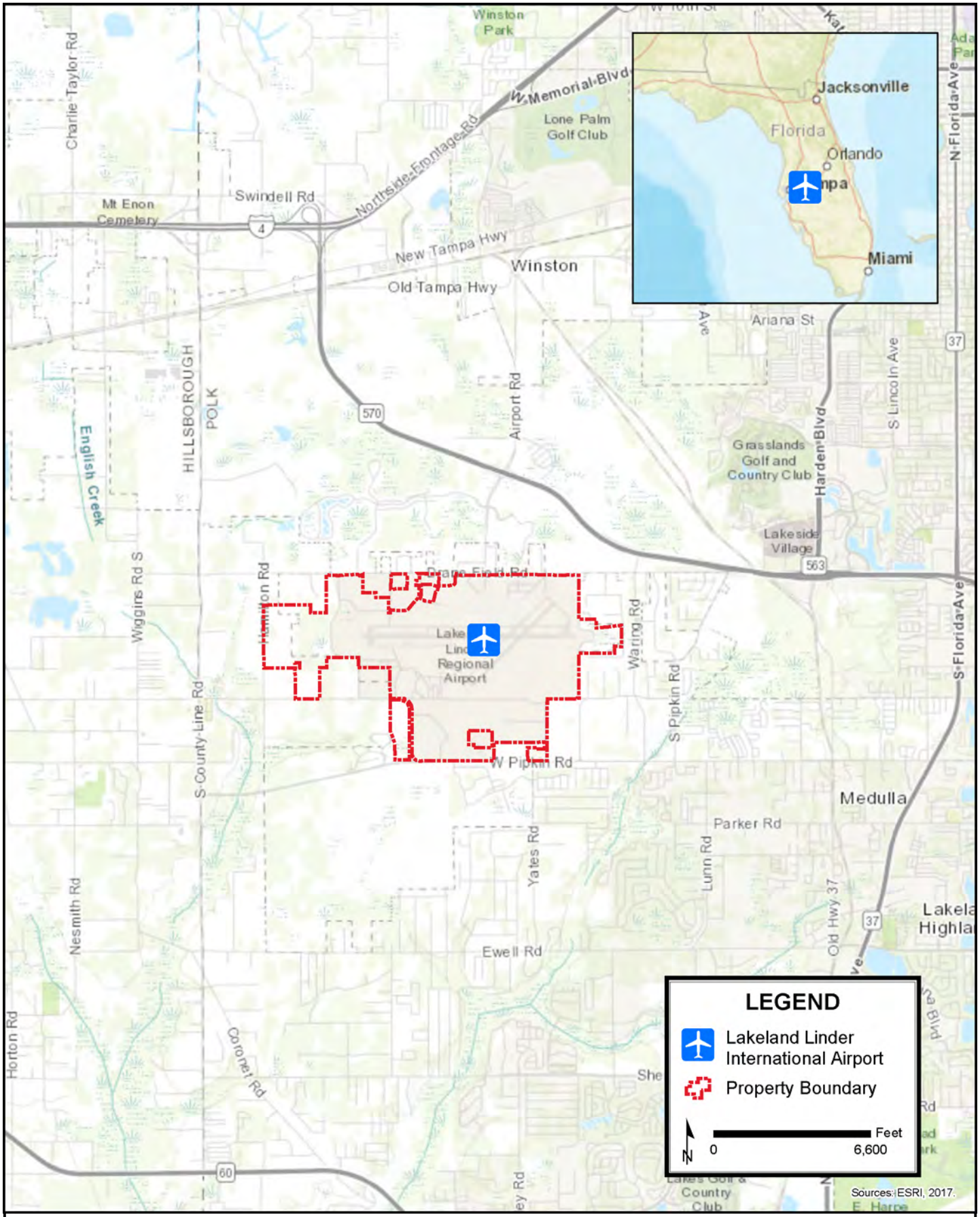
1.1.1. AIRSIDE FACILITIES AT LAL

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 taxiway system made up of 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.



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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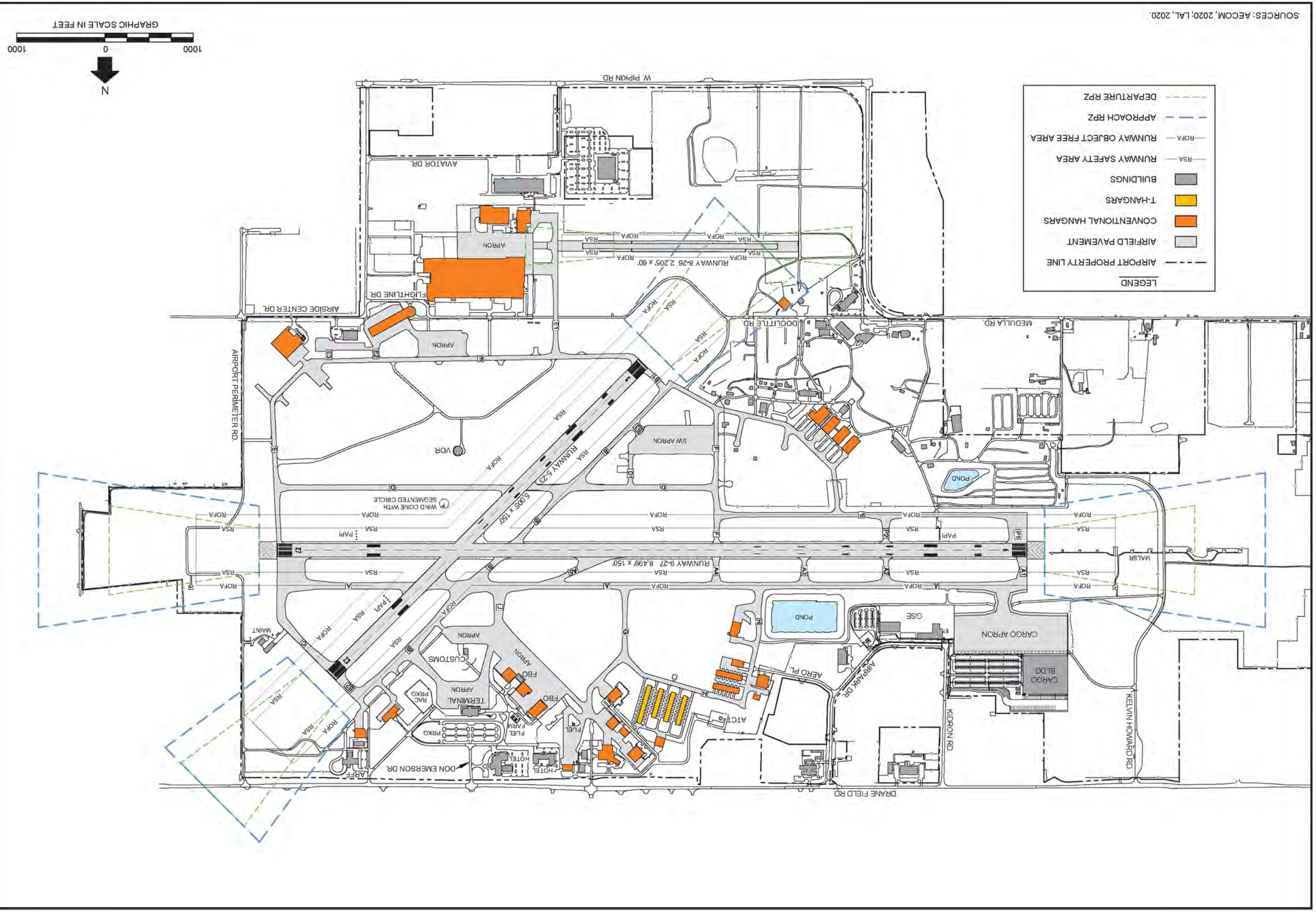
EXISTING AIRPORT FACILITIES

LAKELAND LINDER INTERNATIONAL AIRPORT
PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

FIGURE 1.1-2



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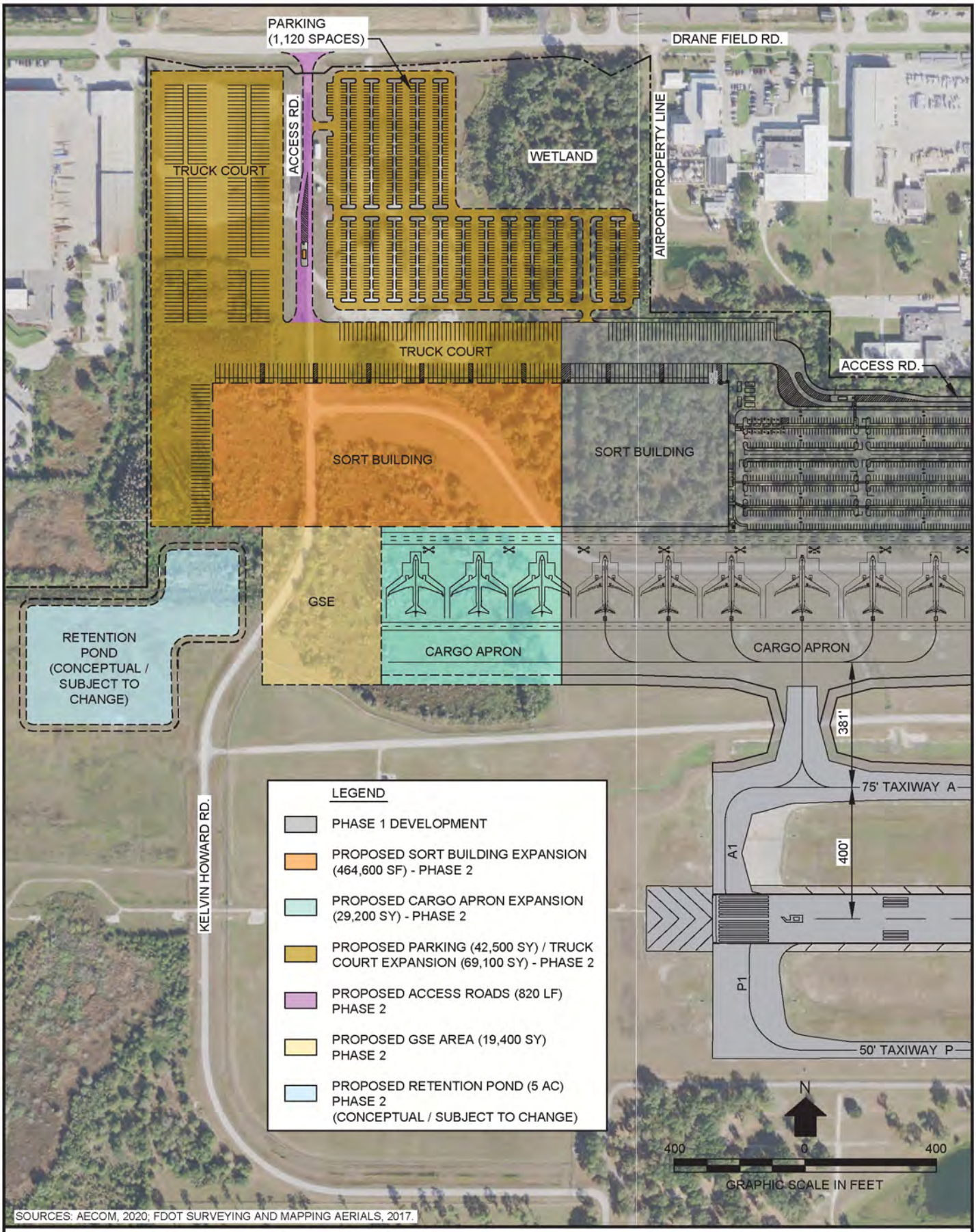
1.2. DESCRIPTION OF THE PROPOSED DEVELOPMENT PROJECT

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 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 464,600-square foot (SF) expansion of the Phase I sort and office building;
- Construct up to approximately 69,100 square yards (SY) of paved truck court to accommodate up to 370 additional truck bays;
- Construct up to approximately 42,500 SY of paved vehicle parking lot to accommodate up to 1,120 additional parking spaces;
- Construct up to approximately 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions;
- Construct up to approximately 19,400 SY of pavement for aircraft ground support equipment (GSE) staging and periodic aircraft parking;
- 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

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**). Current projections reveal 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).



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

PROPOSED DEVELOPMENT PROJECT

FIGURE 1.2-1a

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

PROPOSED DEVELOPMENT PROJECT FUEL FARM

FIGURE 1.2-1b

1.3. TIMEFRAME FOR PROPOSED DEVELOPMENT PROJECT

Construction activities associated with the Proposed Development Project are anticipated to begin in 2021 and completion is expected in 2022. 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 will also be 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.[3] 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 T**able 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.

[3] 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.

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 29,200 SY of concrete aircraft parking apron to accommodate three additional Boeing 767-300 aircraft parking positions	Yes	No	Yes
Construct up to approximately 19,400 SY of pavement for aircraft GSE staging and periodic aircraft parking	Yes	No	Yes
Modifications to the Airport's stormwater management system, including construction of swales and retention ponds	Yes	No	Yes
Construct up to 464,600- 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 42,500 SY of paved vehicle parking lot to accommodate up to 1,120 additional parking spaces	No	No	No
Construct up to approximately 69,100 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 no component triggers FAA land use approval requirements. 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. Additionally, some components are subject to a request for federal funding approval, which is an additional trigger for inclusion of project elements in the FAA Proposed Action.

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

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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 FAA Proposed Action. FAA facilitates airport development by providing federal financial assistance, and reviews and approves or disapproves certain revisions to Airport Layout Plans 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 NEPA because it has the authority to provide funding for, or approval on the airport layout plan of, certain components of the Proposed Development Project which are identified in this EA as the FAA Proposed Action. The FAA's approvals and NEPA compliance are a prerequisite to construction for those relevant project components described (see Chapter 1 of this EA) as the FAA Proposed Action. This chapter bases the Purpose and Need on the City's entire Proposed Development Project.[4] 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, 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 LAL.

2.1.2. NEED

T**able 2.1-1** projects air cargo aircraft operations at LAL if the Proposed Development Project was constructed. The operations would be conducted by the Boeing 767-300 and 737-800 aircraft. The No-Action Alternative is inclusive of Phase I operations, which average ten daily

[4] 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 of 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 project components subject to FAA approval, defined in Chapter 1 of this EA as the FAA Proposed Action. As currently drafted, this purpose and need chapter exceeds the minimum requirements of the CEQ regulations. 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.

arrivals/departures. T**able 2.1-2** presents the estimated number of vehicle 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-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 further demand increases, it is estimated that approximately 464,600 additional SF of building is necessary, including additional sorting, processing, logistical and technological features.

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.

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.

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 29,200 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 19,400 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.

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 SY and offers enough space to handle existing peak volumes. However, an additional 69,100 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 ASTs 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.

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 project components).

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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.[5] 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 EA compared to those dismissed. As required by the CEQ 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 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.

[5] 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.

Alternatives that are found to not be reasonable or 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.

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. Incudes 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 GA apron.

Project Component	Alternative	Description
	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.

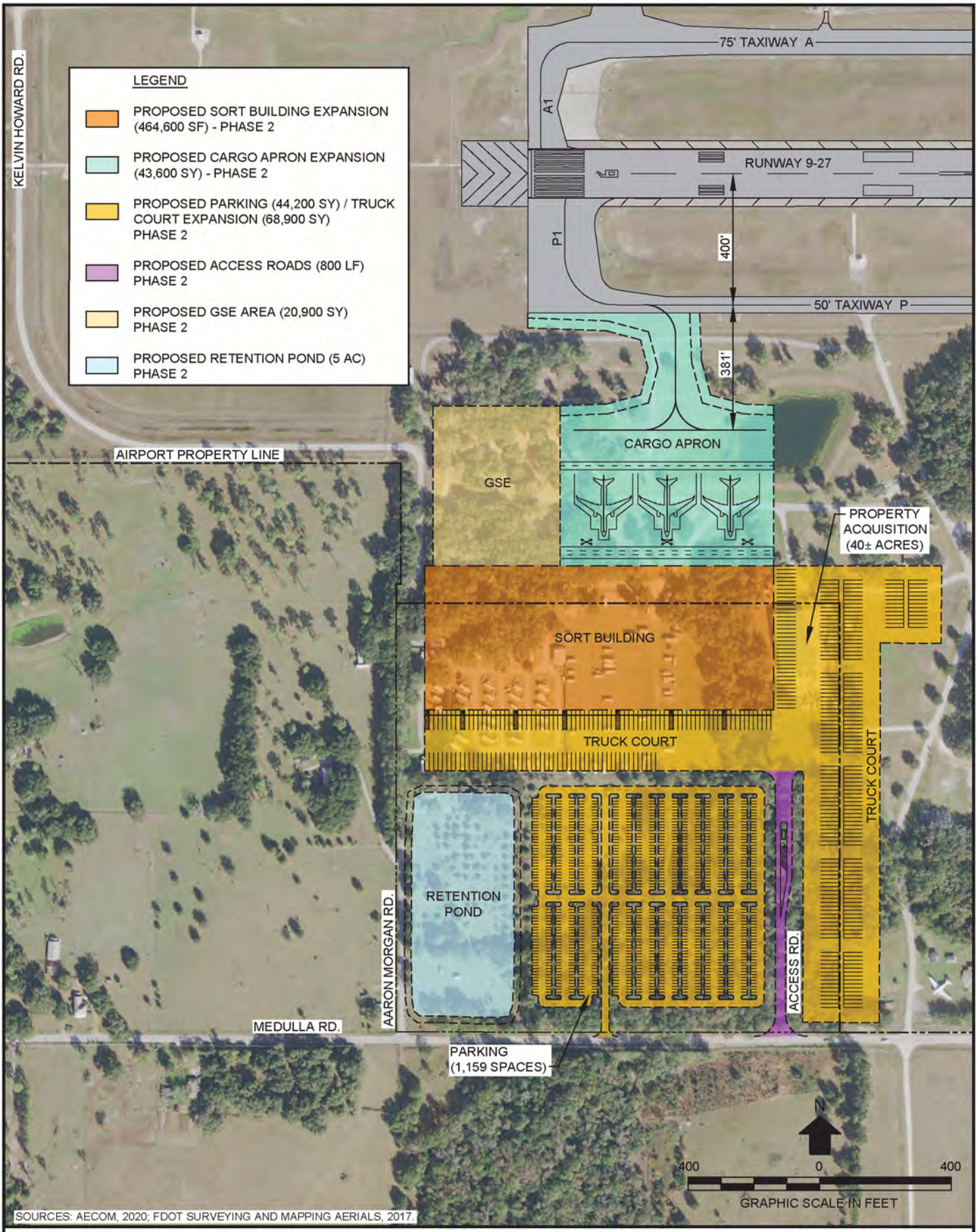
3.3. ALTERNATIVES EVALUATION RESULTS

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 LAL. Immediate adjacency to the current Phase I air cargo facility offers 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 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.

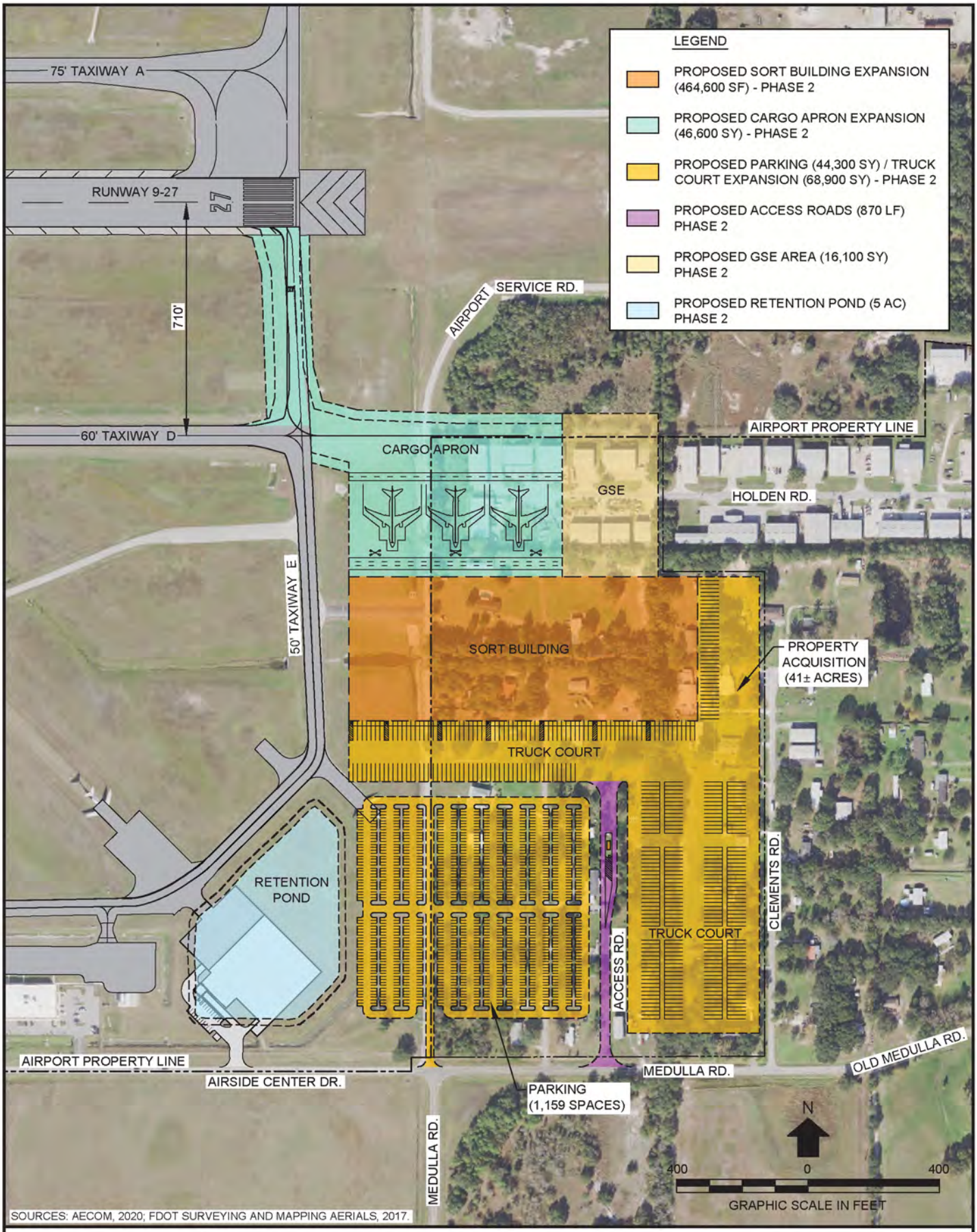


LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

PHASE 2 DEVELOPMENT (ALTERNATIVE 1)

FIGURE 3.2-1



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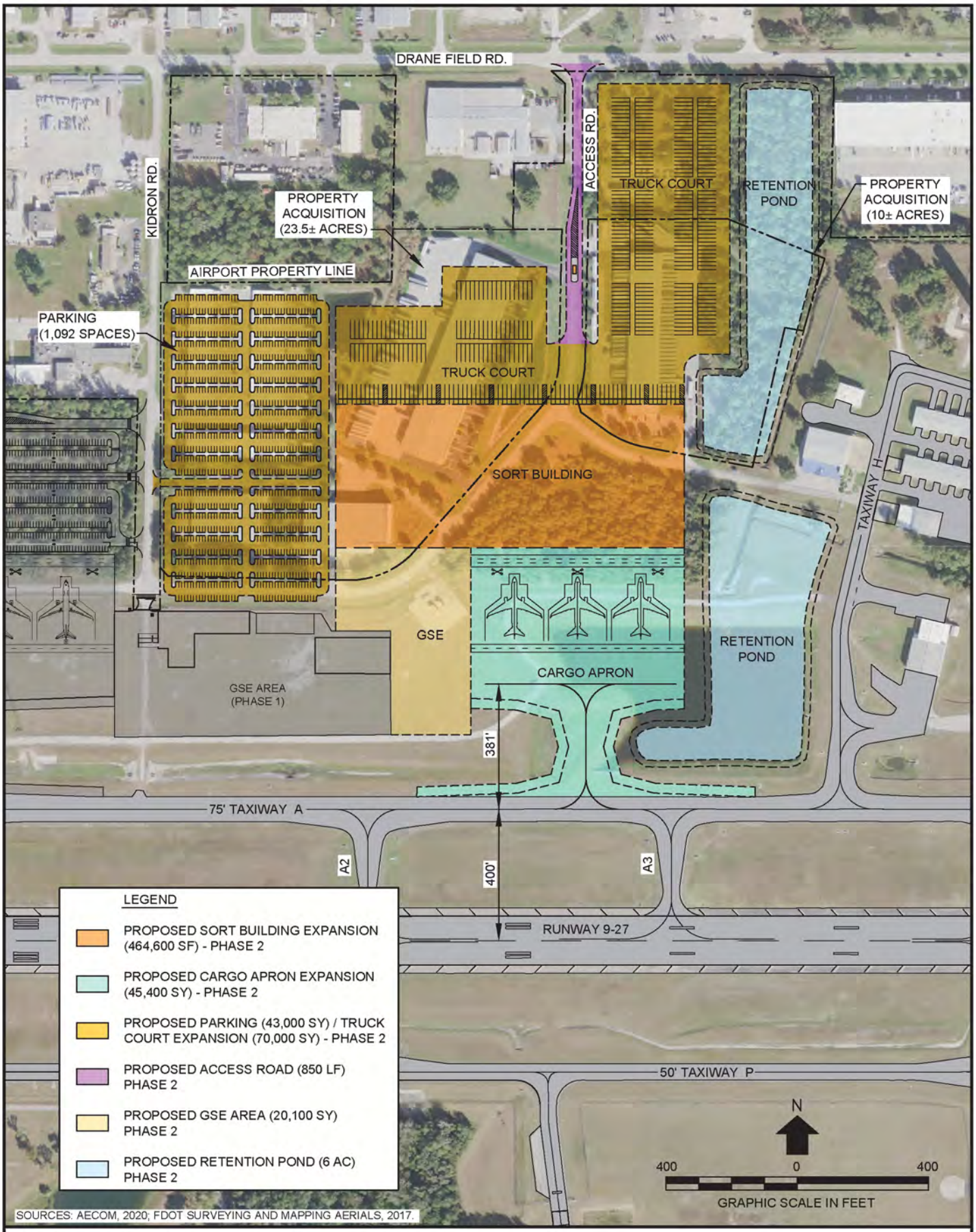
PHASE 2 DEVELOPMENT (ALTERNATIVE 2)

FIGURE 3.2-2



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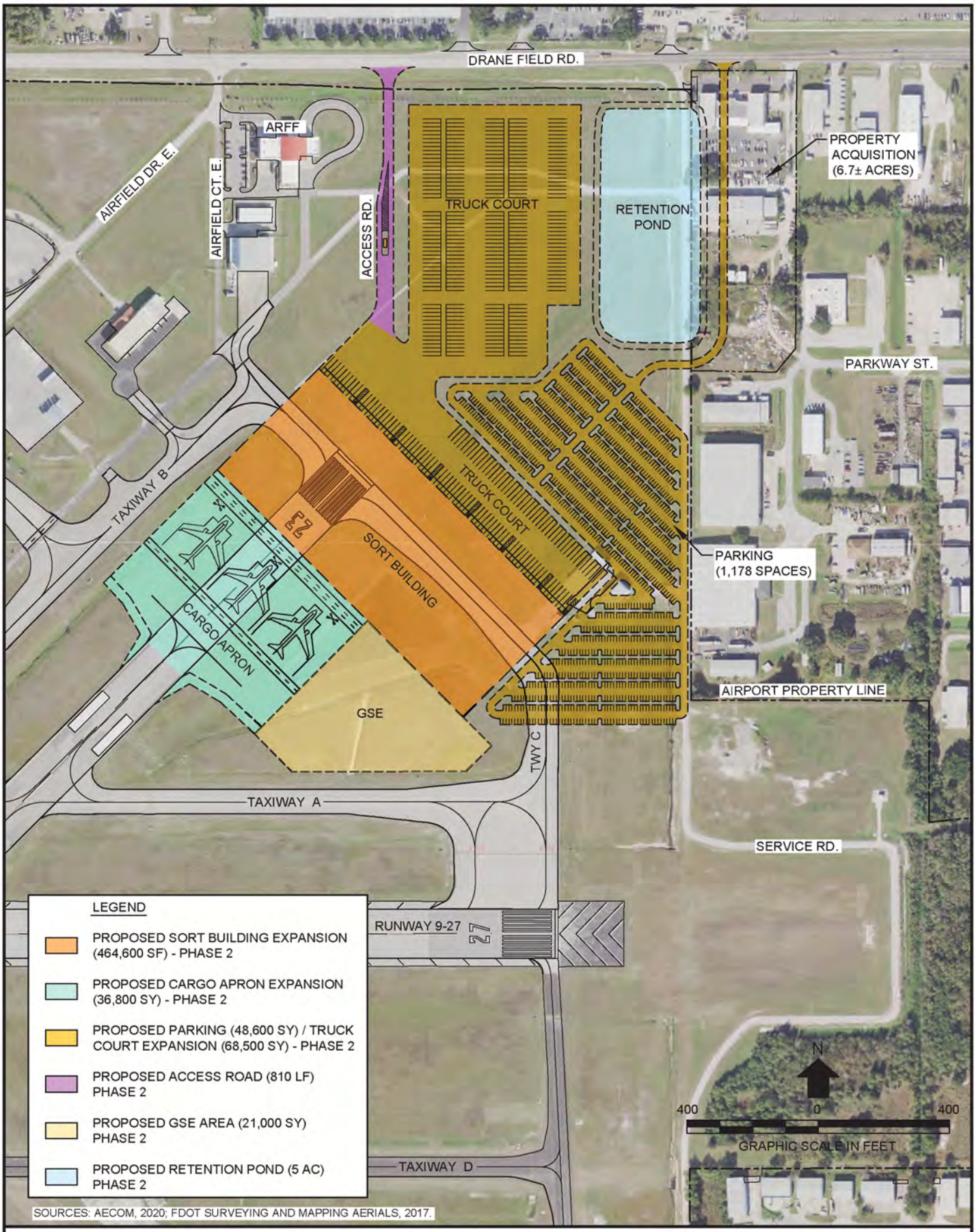
PHASE 2 DEVELOPMENT (ALTERNATIVE 3)

FIGURE 3.2-3



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PHASE 2 DEVELOPMENT (ALTERNATIVE 4)

FIGURE 3.2-4

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FUEL FARM ALTERNATIVE 1

FIGURE 3.2-5

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FUEL FARM ALTERNATIVE 2

FIGURE 3.2-6

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FUEL FARM ALTERNATIVE 3

FIGURE 3.2-7

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 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, a non-profit organization that supports science, technology, engineering and mathematics-related and aerospace education.

For these reasons, Alternative 1 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)	687,600	687,600	687,600	687,600	687,600	223,000
Truck Yard Size (SY)	81,500	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
GSE Staging (SY)	42,400	43,900	39,100	43,100	44,000	23,000
Employee Parking Lot Size (SY)	68,700	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.

3.3.1.3. 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 10-28, 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.

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.[6] The southern corner of the proposed air cargo

[6] 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.

sortation building would be 200 feet above mean sea level (msl) (**Figure 3.3-1**). Anything over 164 feet msl in this area is 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.

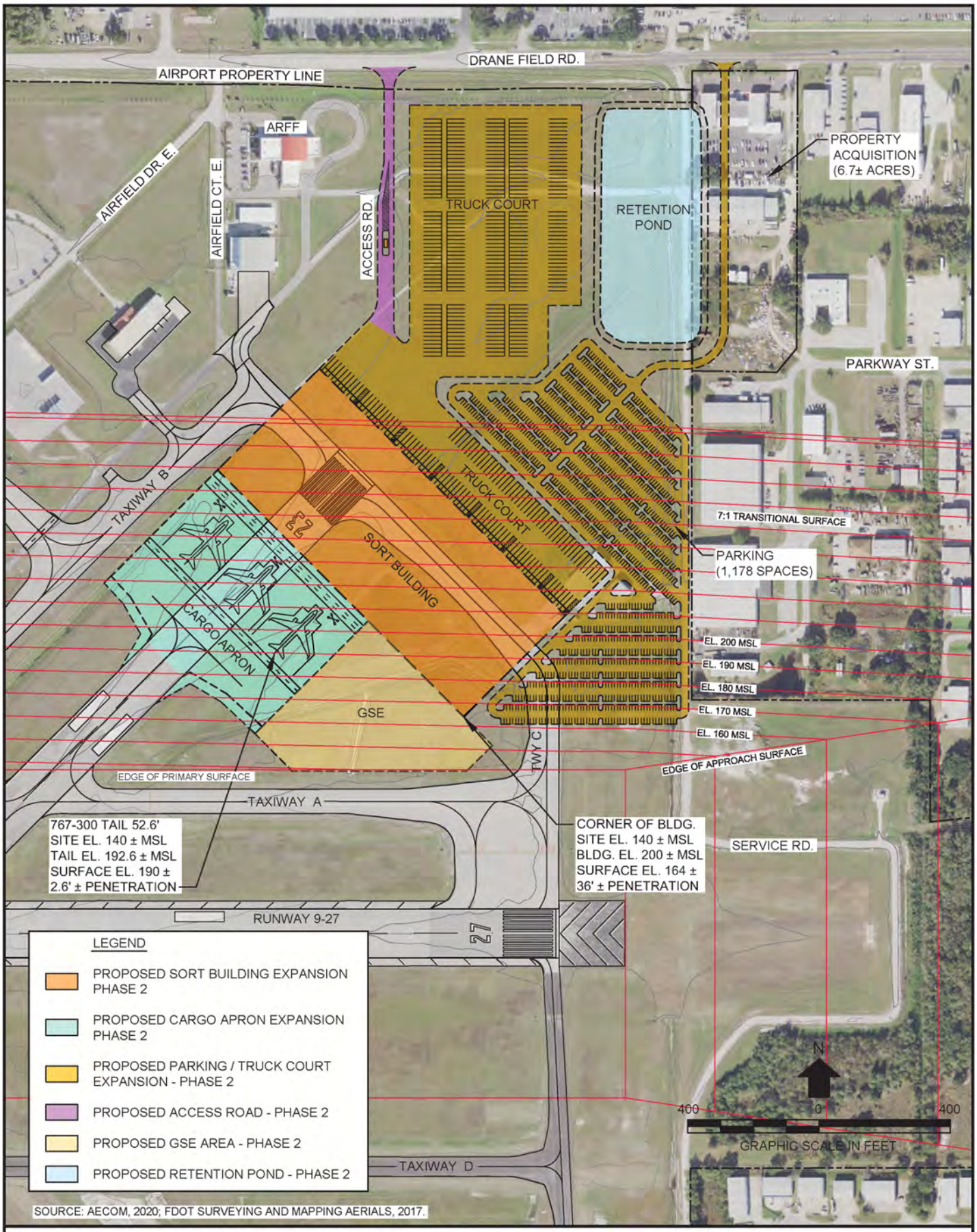
3.3.1.7. AIR CARGO FACILITY ALTERNATIVES SUMMARY

The results of the alternatives analysis are summarized on T**able 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 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

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 environmental impacts of the alternatives retained for detailed evaluation are discussed in **Chapter 5.0** of this 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. Each of these will be used for Endangered Species Act of 1973 (ESA) coordination and Section 106 National Historic Preservation Act (NHPA) coordination, respectively.

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 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.

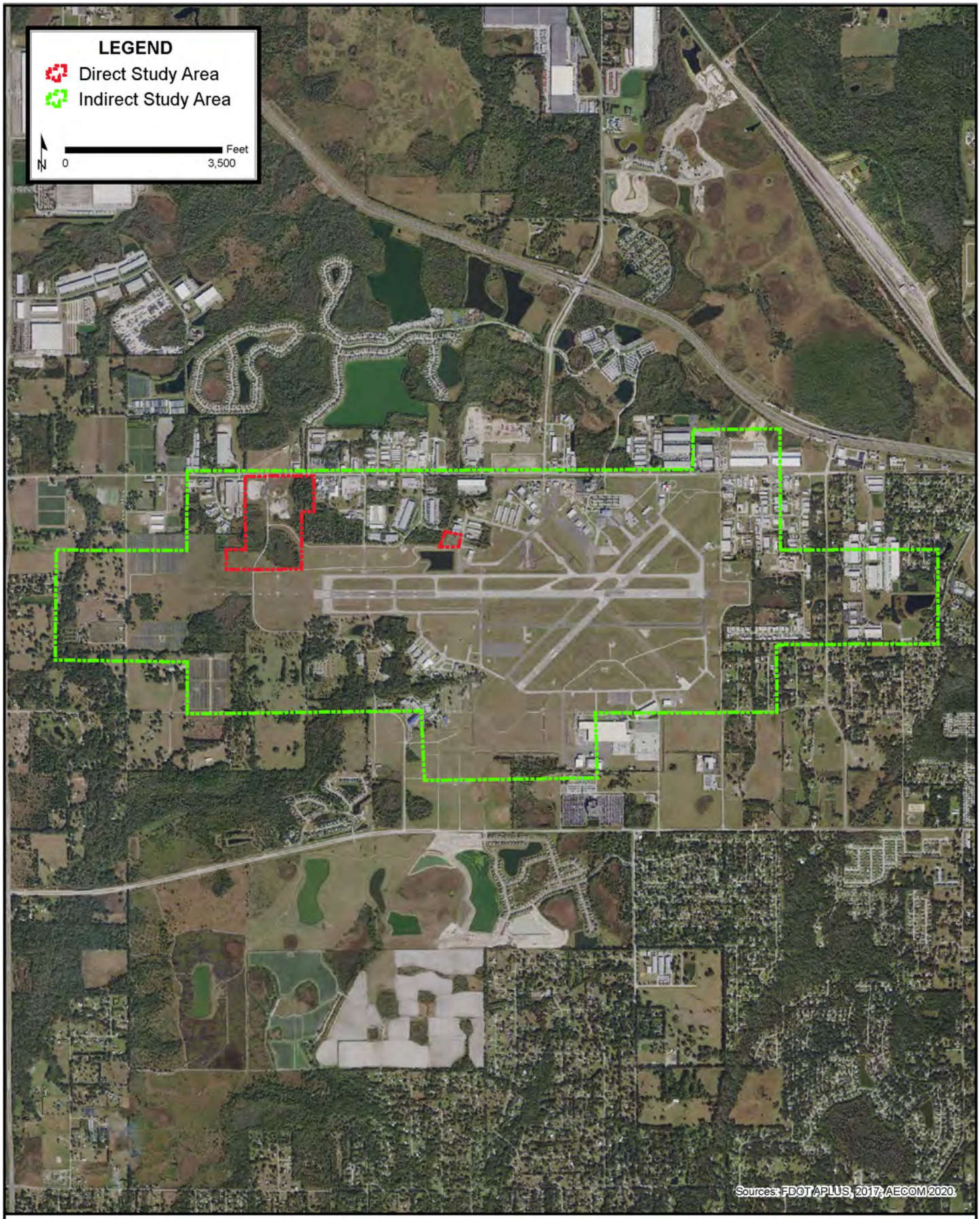
Finally, a Socioeconomic Study Area (SSA) was established to broadly characterize relevant socioeconomic and environmental justice conditions around the Airport. The SSA is comprised of U.S. Census Block Groups that comprise and bound the Airport property boundary.[7]

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 5.0**. **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.

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



Path: C:\Users\tia.norman\Desktop\LAL P2 EA\GIS\mxd\Draft EA\Figure 4-1-1 Direct and Indirect Study Areas_rev2.mxd, Date Saved: 9/23/2020 3:47:54 PM

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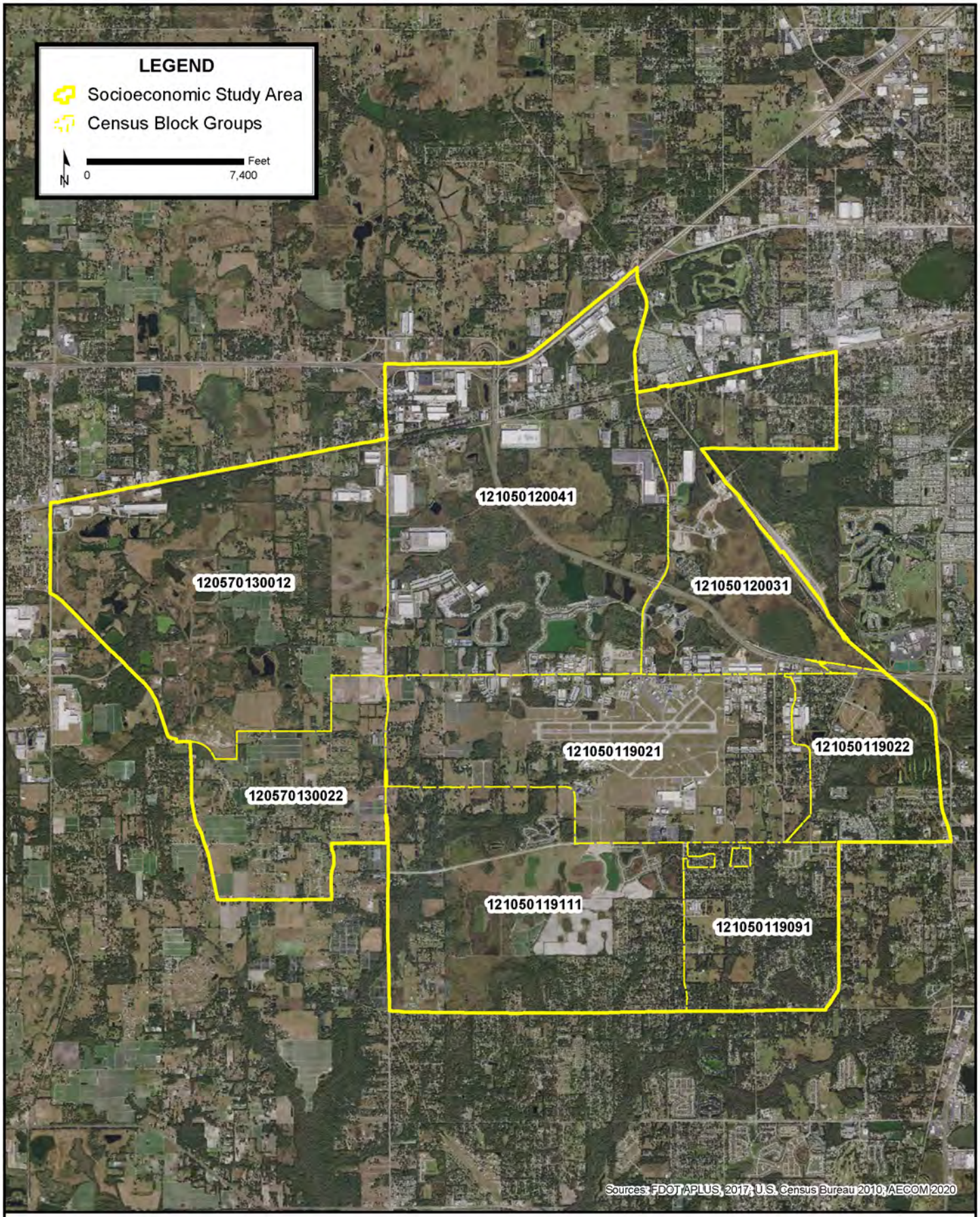
PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

DIRECT AND INDIRECT STUDY AREAS

FIGURE 4.1-1



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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)	*No Section 4(f) eligible properties were identified within the EA study areas.*				
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: 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

4.1.2. STUDY YEARS

2019 will be studied to establish an environmental and operational baseline at LAL. Construction activities associated with the Proposed Development Project are anticipated to start in 2021 and is anticipated to be completed by 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 (CAA), 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, 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).[8]

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.[9]

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, 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 is shown on **Table 4.2-1**, showing that aircraft emissions are the bulk of the "offroad" emissions generated at the airport . Emissions of greenhouse gases (GHG) 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 separately on **Table 4.2.-2** below.

See **Sections 4.4** and **5.4** of this EA for further discussion of GHG emissions.

[8] EPA. National Ambient Air Quality Standards as of January 28, 2020.
[9] EPA. Nonattainment Areas of for Criteria Pollutants (Green Book). https://www.epa.gov/green-book. Accessed January 28, 2020

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; 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.

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 was 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 USE 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 uses 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. A summary description of each land use/vegetative cover type is given in the BA (**Appendix D**).

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

Classification	Vegetative Community/ Land Use	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	5.9
			Subtotal Uplands	***43.9***
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	**72.5**

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

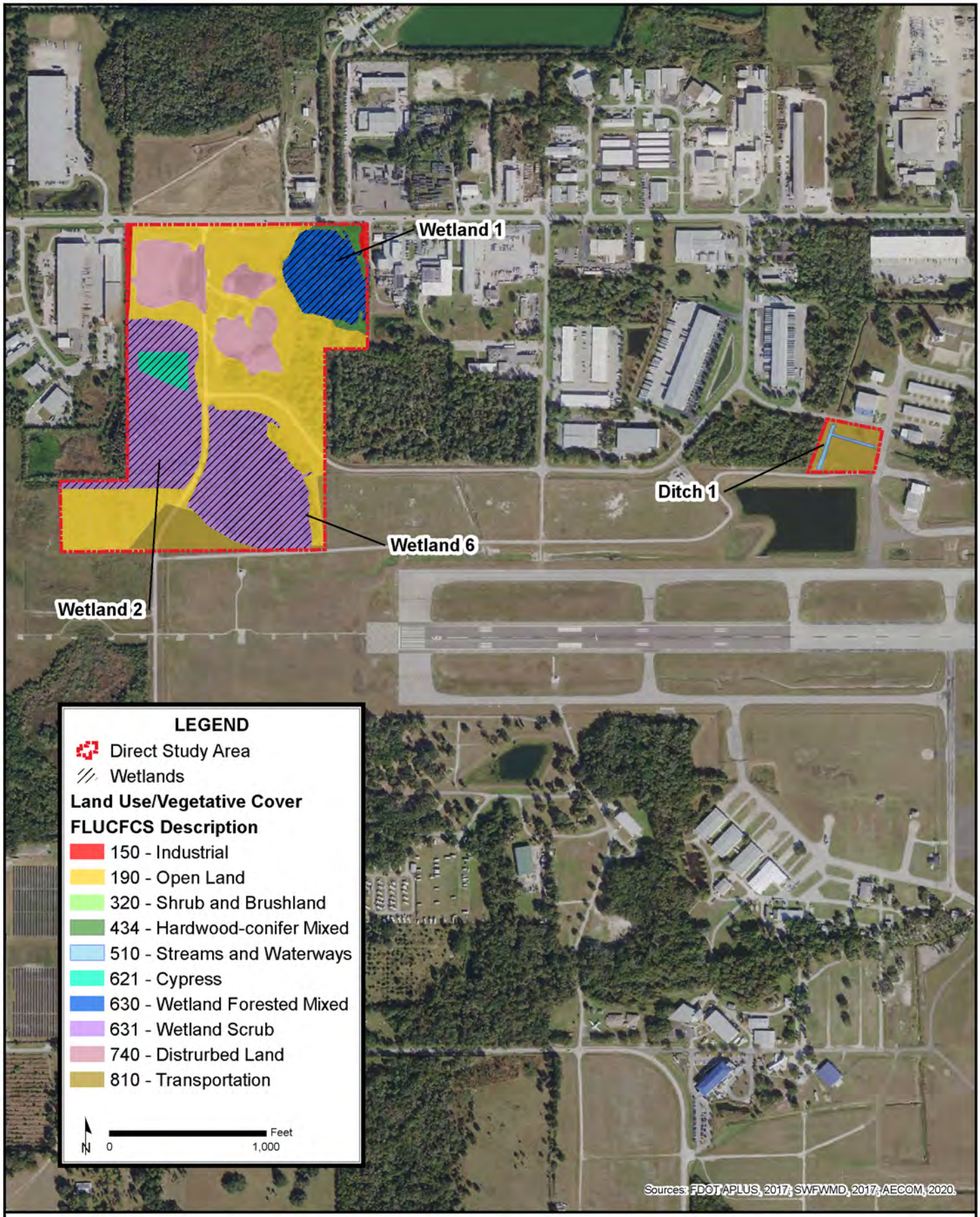
[2] Cowardin, Lewis M., *et al. U.S. Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States*. 1979.

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.



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LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EXISTING LAND USE/ VEGETATIVE COVER

FIGURE 4.3-1

An 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 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.

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

Category	Scientific Name	Common Name	Federal Status[2]	State Status[3]
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 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, 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 (NPL) for cleanup activities is located 4.5 miles away from the Proposed Development Project site.

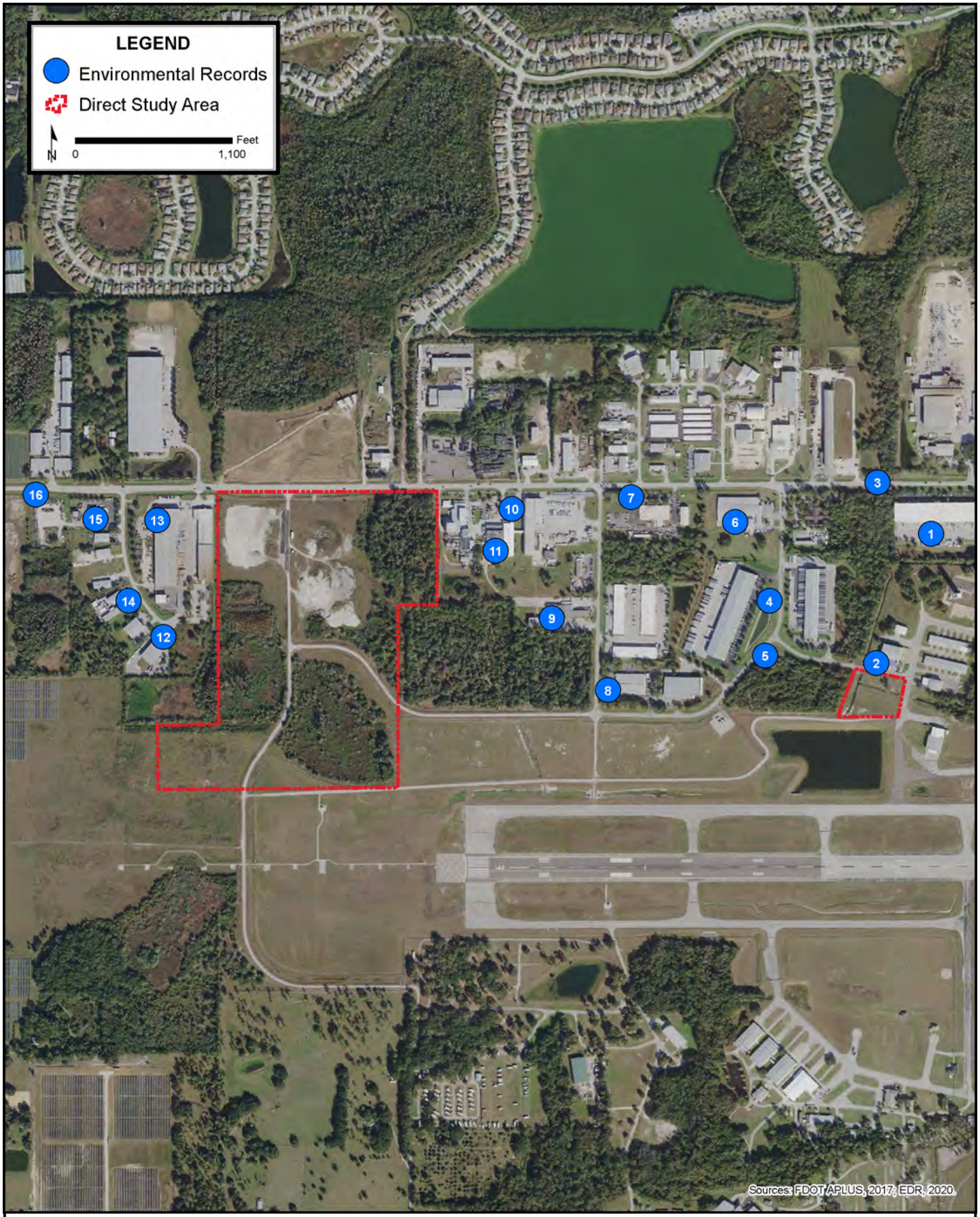
4.7. HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

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 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 T**able 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.



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ENVIRONMENTAL RECORDS

FIGURE 4.6-1

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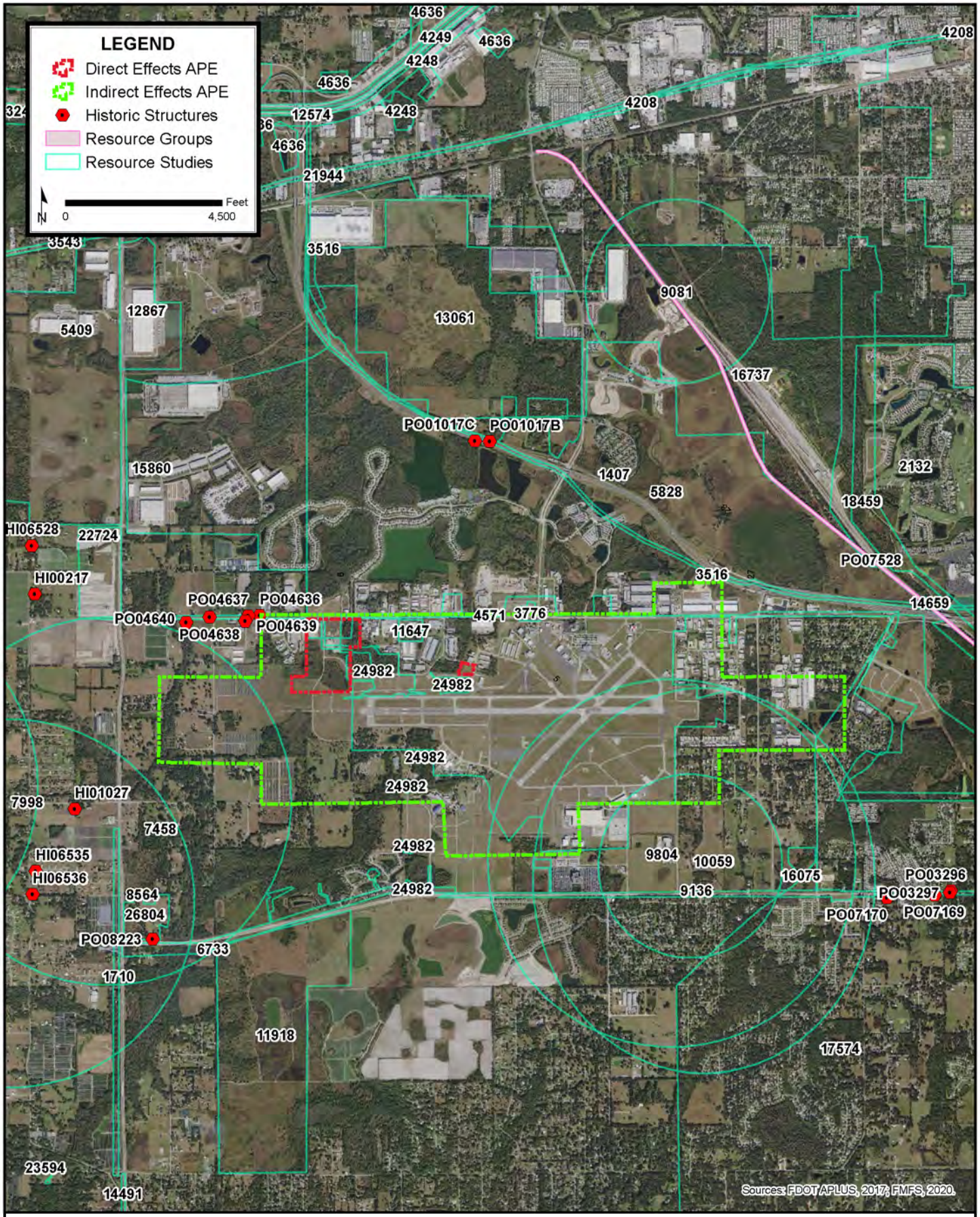

Path: C:\Users\tia.norman\Desktop\LAL P2 EA\GIS\mxd\Draft EA\Figure 4-7-1 Previously Recorded Cultural Resources_with Studies_rev3.mxd, Date Saved: 3/12/2021 3:50:56 PM

LAKELAND LINDER INTERNATIONAL AIRPORT

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PREVIOUSLY RECORDED CULTURAL RESOURCES

FIGURE 4.7-1

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.

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 **Table 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**.

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.

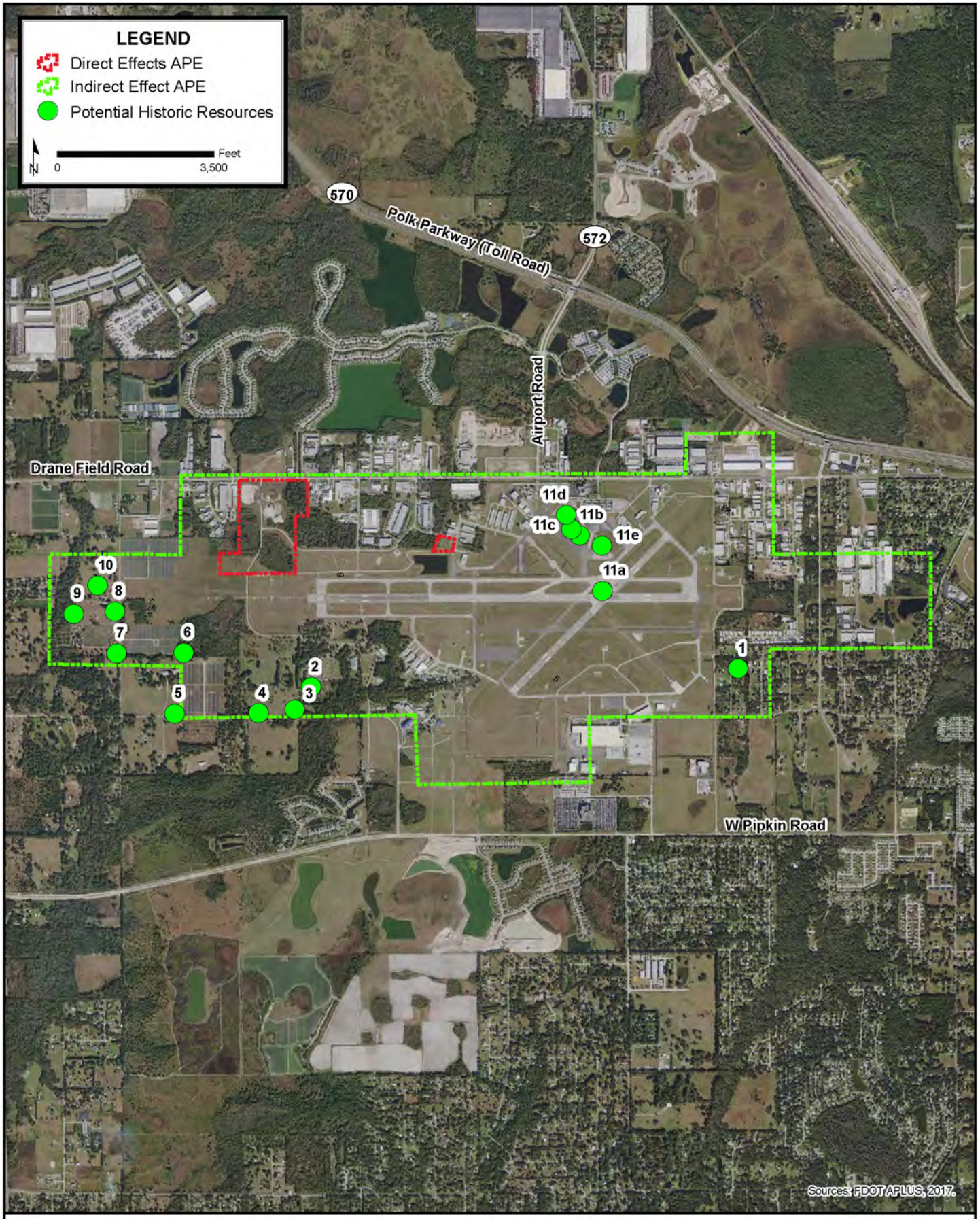
Y = Recommended eligible under given criterion; N = Recommended ineligible under given criterion

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.



Path: C:\Users\tia.norman\Desktop\LAL P2 EA\GIS\mxd\Draft EA\Figure 4.7-2 Architectural Hist Resources Locator_rev2.mxd, Date Saved: 1/25/2021 12:47:33 PM

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POTENTIAL HISTORIC RESOURCES LOCATION MAP

FIGURE 4.7-2

4.8.1.1. EXISTING LAND USE

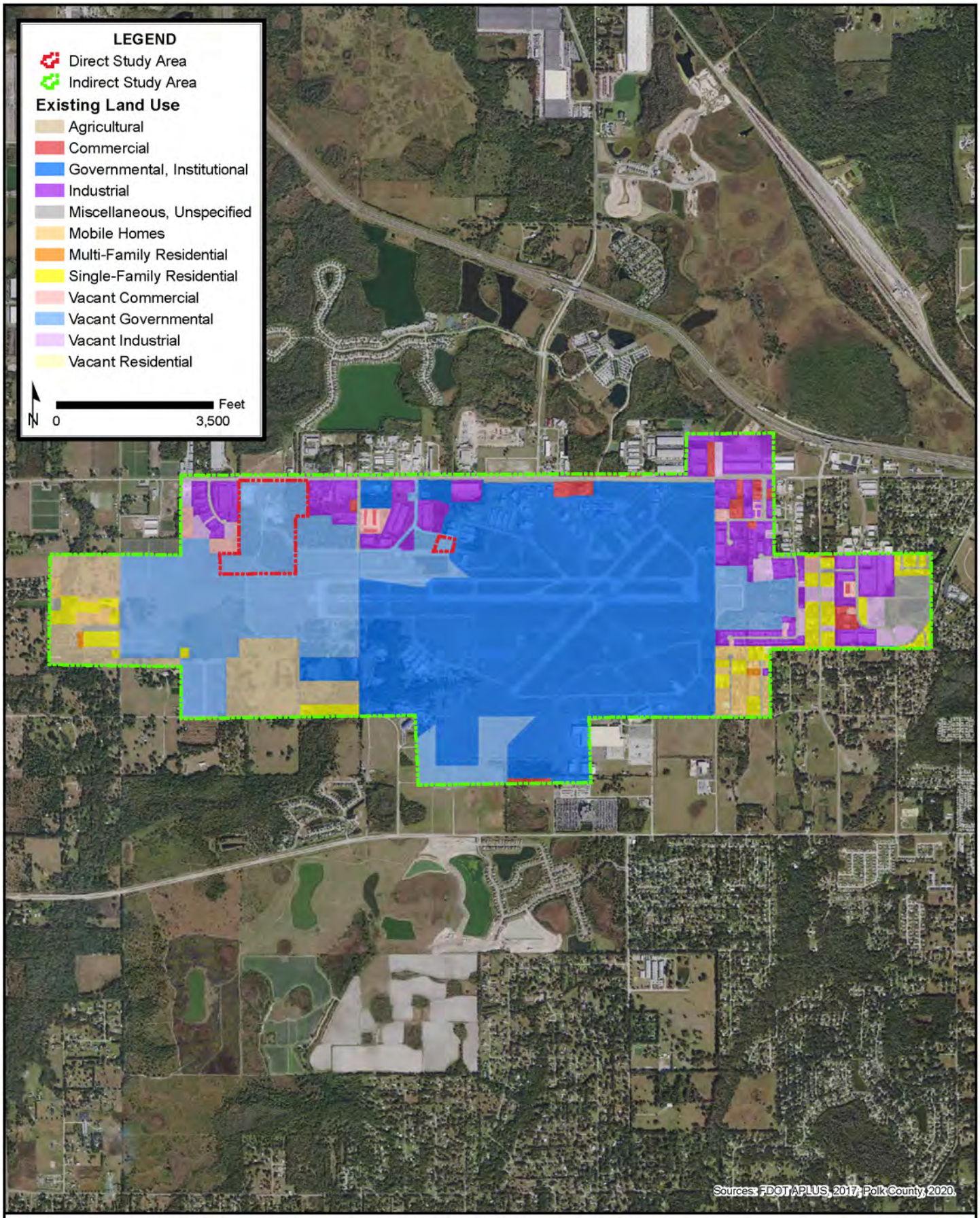
As shown in **Table 4.8-1** and **Figure 4.8-1**, land use within the DSA is entirely on Airport property which is largely classified by Polk County Property Appraiser as Vacant Governmental (70.7 acres of the 72.5 acre total), although 1.4 acres of unspecified land use (mostly paved roadways and drives) is also documented. There is also a substantial amount of land use classified by 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 around the Airport. 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	70.7	521.6
Vacant Industrial	0.0	39.8
Vacant Residential	0.0	1.8
Grand Total	**72.5**	**2,150.8**

DSA = Direct Study Area; ISA = Indirect Study Area
Source: Polk County Property Appraiser GIS data accessed from https://www.polkpa.org/FTPPage/ftpdefault.aspx?url=\GISData April 2020.



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EXISTING LAND USE

FIGURE 4.8-1

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.

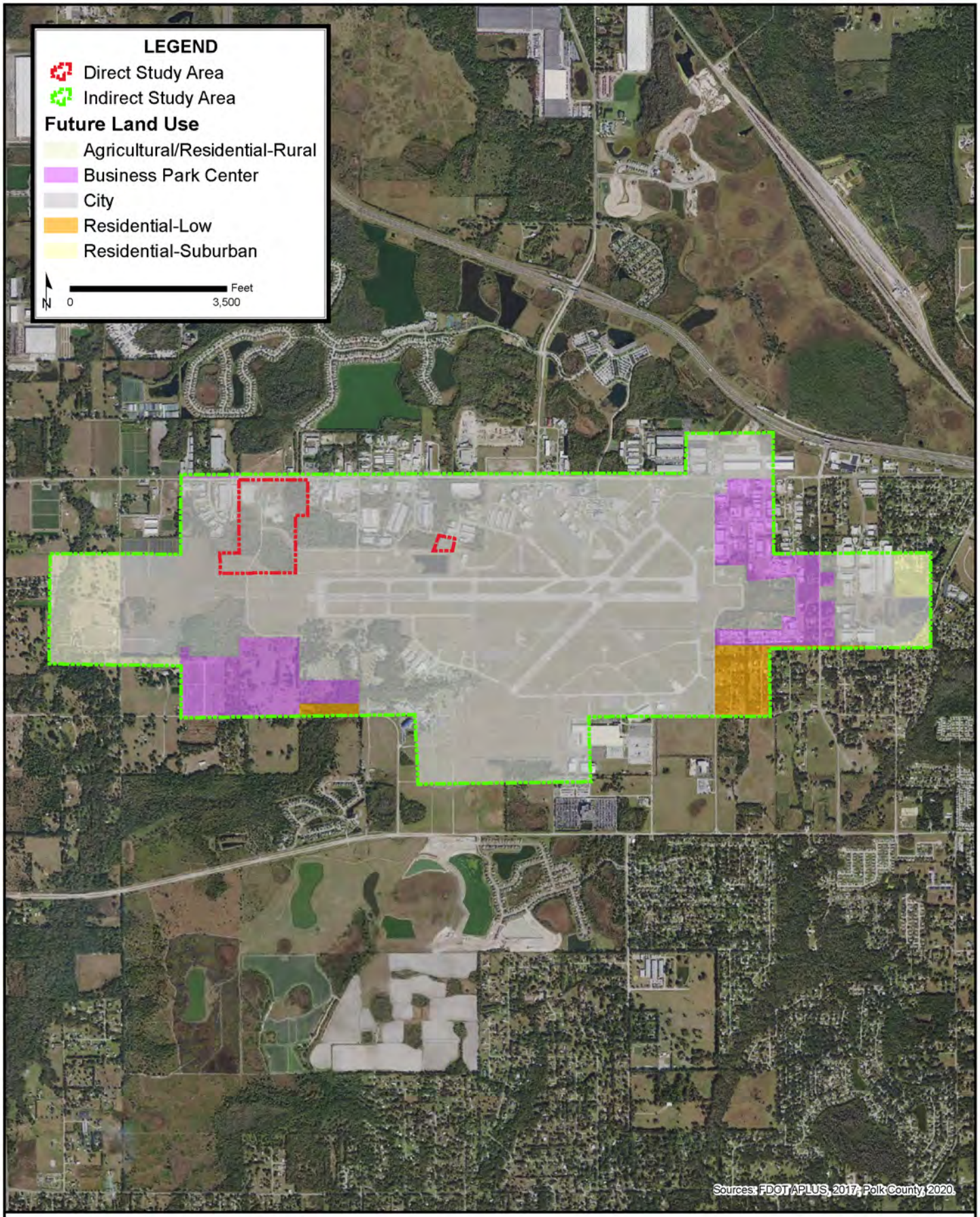
Polk County and the City each publish a Comprehensive Plan for land use to help organize and coordinate the complex relationships between different land uses. The Polk County Comprehensive Plan[10] contains a Future Land Use Element[11] to guide regional development and designate future land use patterns 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[12] 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.

Future land use information from Polk County's Comprehensive Plan is summarized on **Figure 4.8-2** and T**able 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 (72.5 acres for the DSA and 1,743.3 acres for the ISA). 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.

[10] Polk County. Polk County Comprehensive Plan. November 18, 1992, with multiple section updates.
[11] Polk County. Polk County Comprehensive Plan, Chapter 2 – Future Land Use Element Update. Updated July 2019.
[12] City of Lakeland. Lakeland, FL Comprehensive Plan 2010 – 2020. August 16, 2010. Updated December 31, 2018.



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PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

FUTURE LAND USE

FIGURE 4.8-2

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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	72.5	1,743.3
Residential-Low	0.0	55.4
Residential-Suburban	0.0	24.6
Grand Total	**72.5**	**2,150.8**

Direct Study Area; ISA = Indirect Study Area
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. 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 penalizes or weights events occurring during the nighttime periods by 10 dBA.

Title 14 CFR Part 150, Appendix A gives federal compatible land use guidelines for several land uses as a function of DNL values. Compatible or non-compatible land use is determined by comparing the predicted or measured DNL values at a site to the values listed at Title 14 CFR Part 150 (see **Appendix G** of this EA).

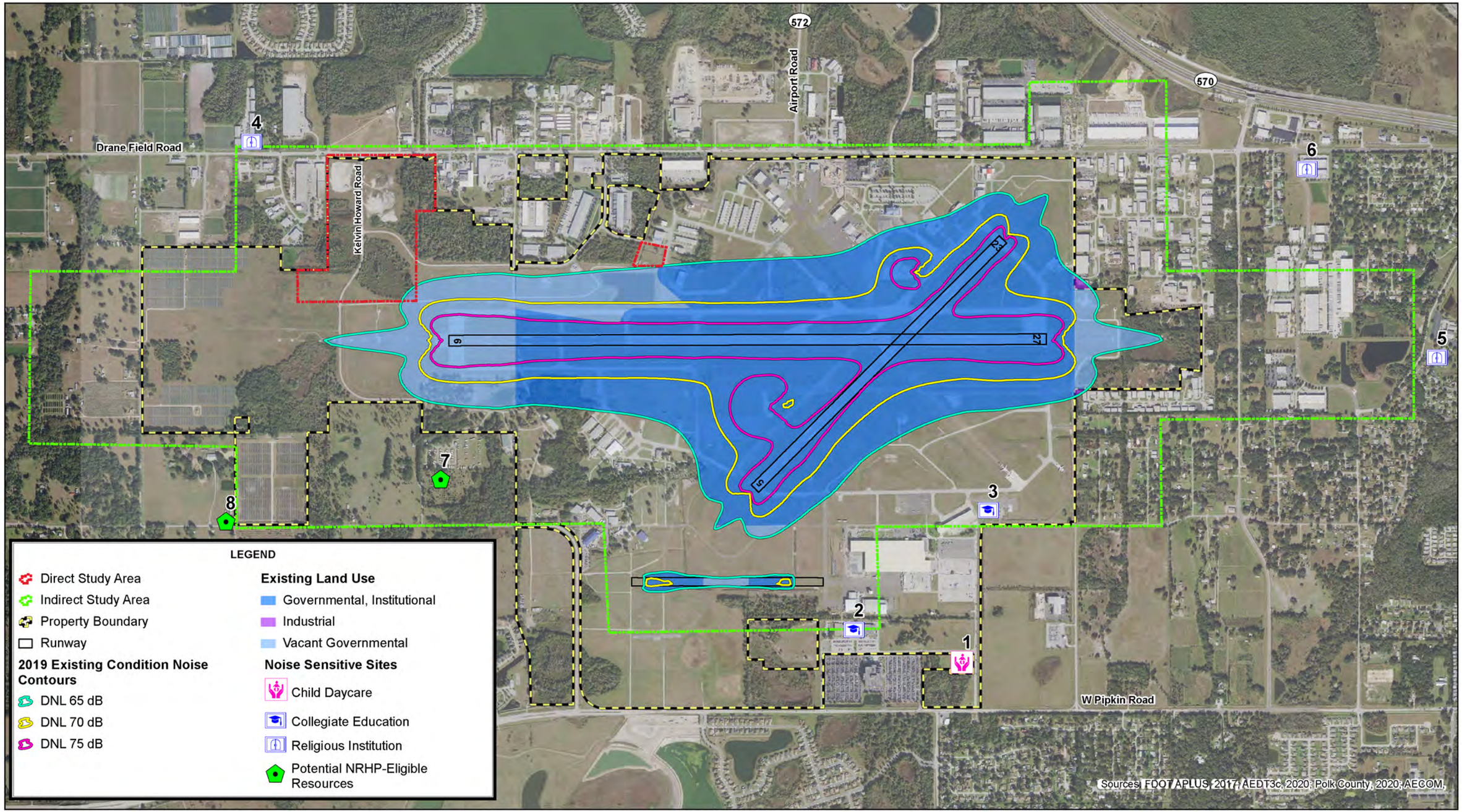
However, Title 14 CFR Part 150 land use compatibility guidelines are not a federal determination that a specific land use is acceptable or unacceptable under federal, state, or local laws. The responsibility for determining acceptable land uses rests with the local authorities through its zoning laws and ordinances.

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 F**igure 4.9-1**.



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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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 T**able 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.

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 at 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).[13]

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.[14]

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
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

[13] U.S. Census Bureau, 2015-2019 ACS, B01003
[14] U.S. Census Bureau, 2015-2019 ACS, B15003

Subject	SSA Total	SSA Percent	Counties Total	Counties Percent	Florida Total	Florida Percent
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.[15]

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.[16] Also, in 2019, the per capita income was estimated at $24,864 and $32,343 in Polk and Hillsborough counties, respectively.[17] 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.[18]

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

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

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**.

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) has authority to regulate activities in Waters of the U.S., including certain wetlands, under three laws: the Clean Water Act, the Rivers and Harbors Act of 1899, and the Marine Protection, Research, and Sanctuaries Act of 1972, as amended. The USACE's regulations define wetlands as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

The 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.

Path: C:\Users\tia.norman\Desktop\LAL P2 EA\GIS\mxd\Draft EA\Figure 4-10-1 Traffic Configurations_rev1.mxd, Date Saved: 3/12/2021 12:24:58 PM

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

EXISTING ROADWAY CONFIGURATIONS

FIGURE 4.10-1

Each individual wetland and other surface water is listed in **Table 4.11-1** and shown on F**igure 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.

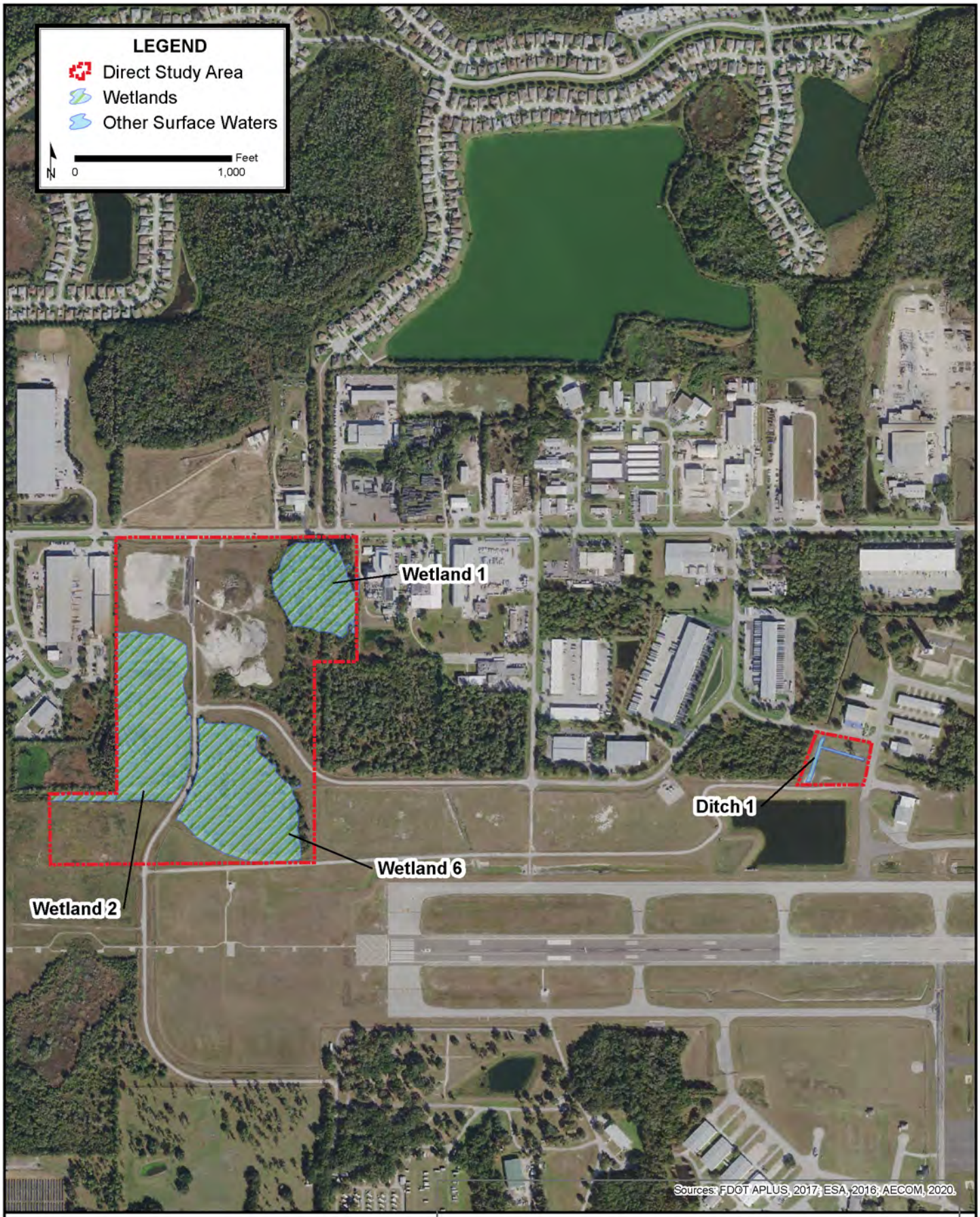
4.12. FLOODPLAINS

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

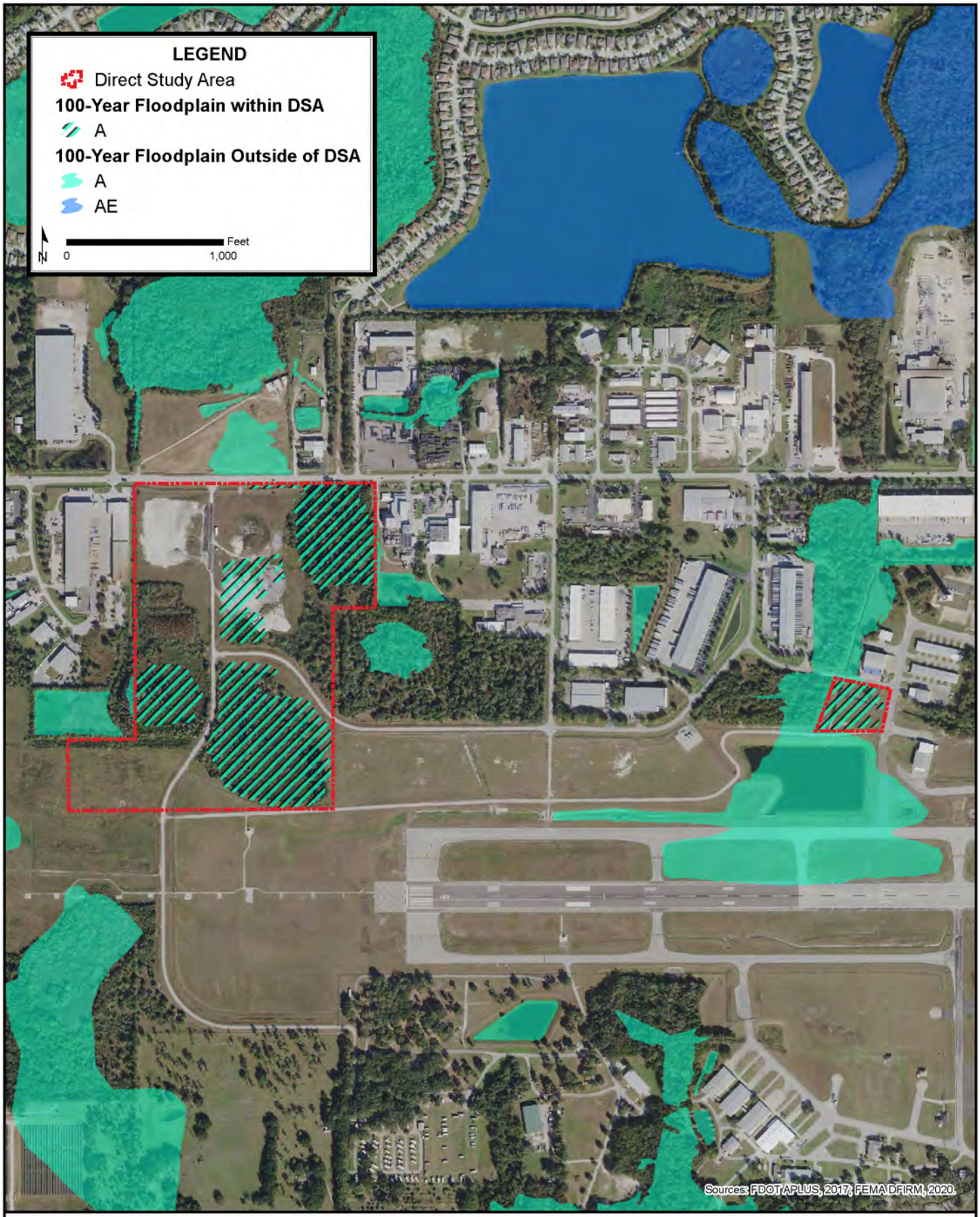
The Federal Emergency Management Agency (FEMA) helps implement the National Flood Insurance Program (NFIP) by developing Flood Insurance Rate Maps (FIRM). These delineate the extent of floodplains across the U.S. The current effective FIRM for the LAL area is map number 12105C, panel 0460G with an effective 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 F**igure 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.



Path: C:\Users\tia.norman\Desktop\LAL P2 EA\GIS\mxd\Draft EA\Figure 4-11-1 WLs_rev1.mxd, Date Saved: 3/12/2021 12:25:52 PM

LAKELAND LINDER INTERNATIONAL AIRPORT **PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT**	**WETLANDS AND OTHER SURFACE WATERS**	FIGURE 4.11-1



LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

FLOODPLAINS

FIGURE 4.12-1

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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.[19]

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.

Based on a study published by U.S. Geological Survey in 2007[20], 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.[21]

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

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

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

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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 CYs 2022 and 2027.

5.1.1 AVIATION FORECAST USED IN THIS STUDY

For reference, a summary of air operations per 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: LAL Master Plan Update, 2020; adjusted for EA by AECOM, 2020.
Note: values reflect rounding.

The No-Action Alternative forecast in this 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. 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

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.**

5.2.1.1. Construction Emissions

Table 5.2-1 discloses the construction period criteria pollutant emissions computed for the Proposed Development Project. All construction activities and associated pollutant emissions are expected to occur in 2021. Because the area is considered attainment/unclassifiable of all NAAQS, there are no applicable significance thresholds (CAA General Conformity *de minimis*

thresholds) to which these emissions increases can be compared. Because construction emissions are temporary in 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 2021 Construction Emissions Inventory for Criteria Pollutants

Project Component	CO (tons)	NO_x (tons)[1]	$PM_{2.5}$ (tons)	PM_{10} (tons)	SO_x (tons)	VOC (tons)[1]
Offroad Equipment	25.5	12.4	1.0	1.0	0.1	2.0
Onroad Vehicles	16.6	3.1	0.5	0.2	<0.1	1.0
Asphalt Paving	0.0	0.0	0.0	0.0	0.0	20.9
Fugitive Dust	0.0	0.0	43.7	4.4	0.0	0.0
Total	**42.1**	**15.5**	**45.2**	**5.6**	**0.1**	**23.9**

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

5.2.1.2. Operational Emissions

Operational emissions associated with the No-Action and Proposed Development Project were computed using AEDT (version 3C) and are shown on **Tables 5.2-2** and **5.2-3**. 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.

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)
No-Action	Aircraft	867.2	42.9	1.1	1.1	5.1	36.9	12,580.9
	APU	3.1	3.0	0.3	0.3	0.4	0.2	1,617.1
	GSE	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 $PM_{2.5}$).
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.

5.2.2. IMPACT AVOIDANCE, MINIMIZATION AND MITIGATION

Mitigation to reduce impacts below the threshold of significance is not required. However, traffic delay mitigation (see **Section 5.10.1.4)** 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;
- 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.

5.2.3. CONCLUSION

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,

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, so the likelihood for any localized increases in air concentrations due to the Proposed Development Project to affect the general public is unlikely. As all monitored ambient air concentrations are well below the NAAQS, it is unlikely that the Proposed Development Project would cause a NAAQS violation.

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.

5.3. BIOLOGICAL RESOURCES

5.3.1. SUMMARY OF IMPACTS

The 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 USFWS, as required by Section 7 of the 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 (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. T**able 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**

[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 (discounting the industrial, disturbed, and transportation land uses). Portions of the 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.

To offset the loss of wetland functions and values, all wetland impacts will be mitigated to satisfy all mitigation requirements of 33 U.S.C. 1344 and Part IV, Chapter 373, Florida Statutes. 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	5.9	61.5
			Subtotal Uplands	***43.9***	***62.3***
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	**72.5**	**72.5**

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 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 with potential to be found in the 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 on June 10, 2020 for review. 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**).

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 USFWS and/or 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 to secure any and all approvals regarding this specie; 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.

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. 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 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.

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 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 11,238 metric tons, all of which is expected to occur in 2021 (**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 when the

proposed Phase II cargo facilities are constructed and become operational. As shown on T**ables 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.

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, which would in turn reduce the level of GHG emissions occurring due to the Proposed Development Project.

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 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 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 ASTs 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 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.

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 significantly 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.

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.

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 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 NRHP. The Section 106 process generally requires four 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 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 is recommended for the Direct Effects APE.

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.

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 started 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; the Muscogee (Creek) Nation; the Seminole Nation of Oklahoma; and the Seminole Tribe of Florida.

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 0.75 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.

No objections to the proposed APE were received. The Seminole Tribe of Florida concurred with the designated APEs 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. 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 APEs , but they would not be adversely affected. Further evaluation of archaeological resources within the APEs 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, will be given to the Seminole Tribe of Florida and Muscogee (Creek) Nation as requested for review and comment.

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, no significant impacts to cultural resources have been identified to date. 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 permitted 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 not adversely affect the two potentially NRHP-eligible resources within the Indirect Effects APE and will have no effect on any 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 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 111,760 SY of asphalt, 19,476 CY of aggregate (subbase), 54,584 CY of concrete, 15,712 CY of topsoil, and 135,682 CY of fill material. 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: AvGas 100LL 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.[22] 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.

[22] 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.

5.10. NOISE AND NOISE COMPATIBLE LAND USE

5.10.1. SUMMARY OF IMPACTS

The noise exposure analyses conducted for this EA identifies potential impacts for noise-sensitive areas that would be exposed to noise levels of 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 of noise. FAA's land use compatibility guidelines contained in Appendix A of Title 14 CFR Part 150 were used to evaluate aircraft related noise associated with the Proposed Development Project and effects on land use compatibility. For any incompatible land uses introduced into the noise contour due to the Proposed Development Project, the analysis quantifies those land uses, identifies potential parcels affected, and estimates the number of households affected and whether or not impacts exceed FAA's significance criteria for noise exposure,

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 I-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**, additional air cargo aircraft operations generated by the Proposed Development Project would be conducted by the Boeing 767-300 and 737-800 aircraft. T**able 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 T**ables 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**.

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 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.

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**

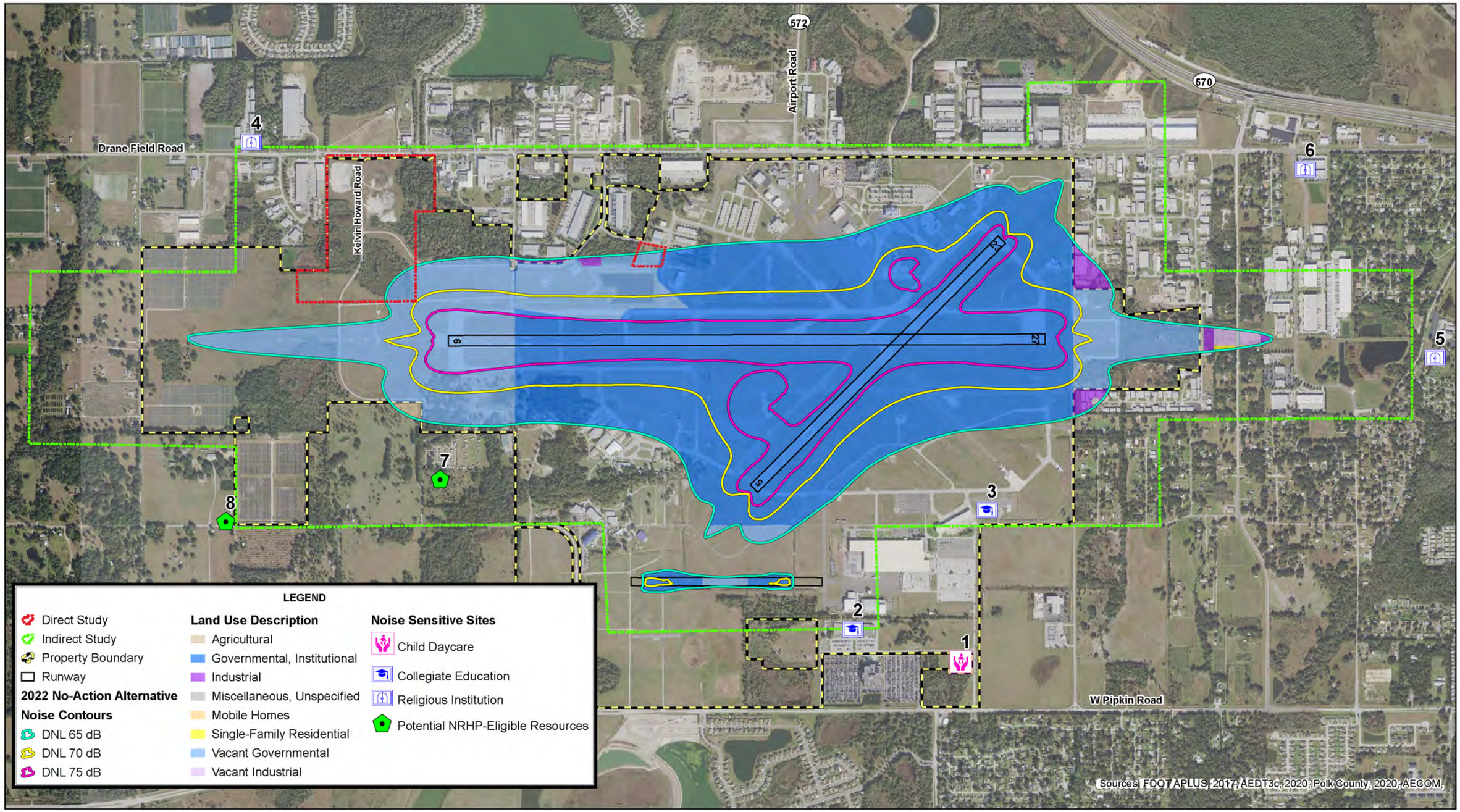
Source: AEDT 3c, 2020; AECOM, 2020.

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 SSA by the number of households within the contour.



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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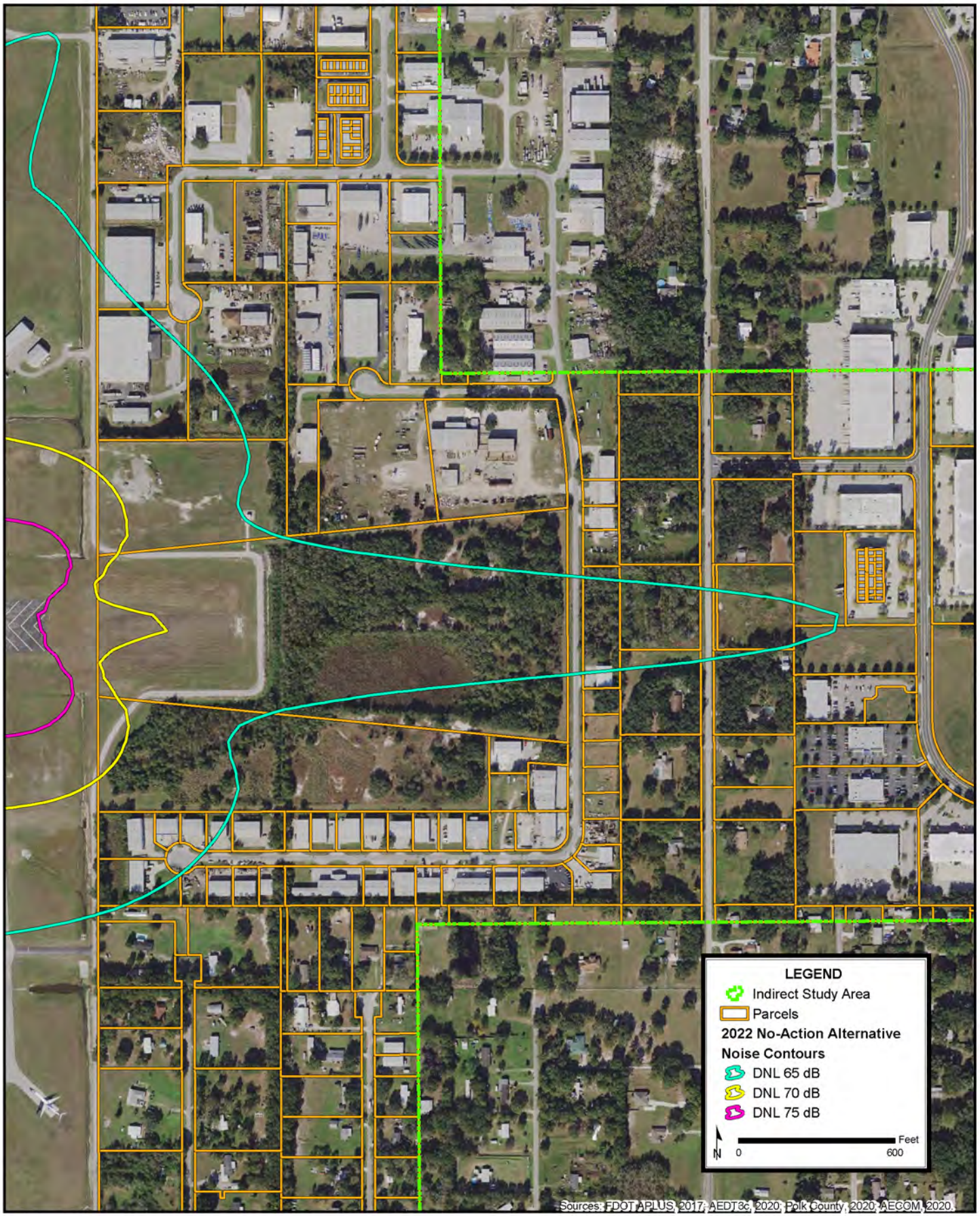

LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2022 NO-ACTION NOISE CONTOURS (2 OF 2)

FIGURE 5.10-2

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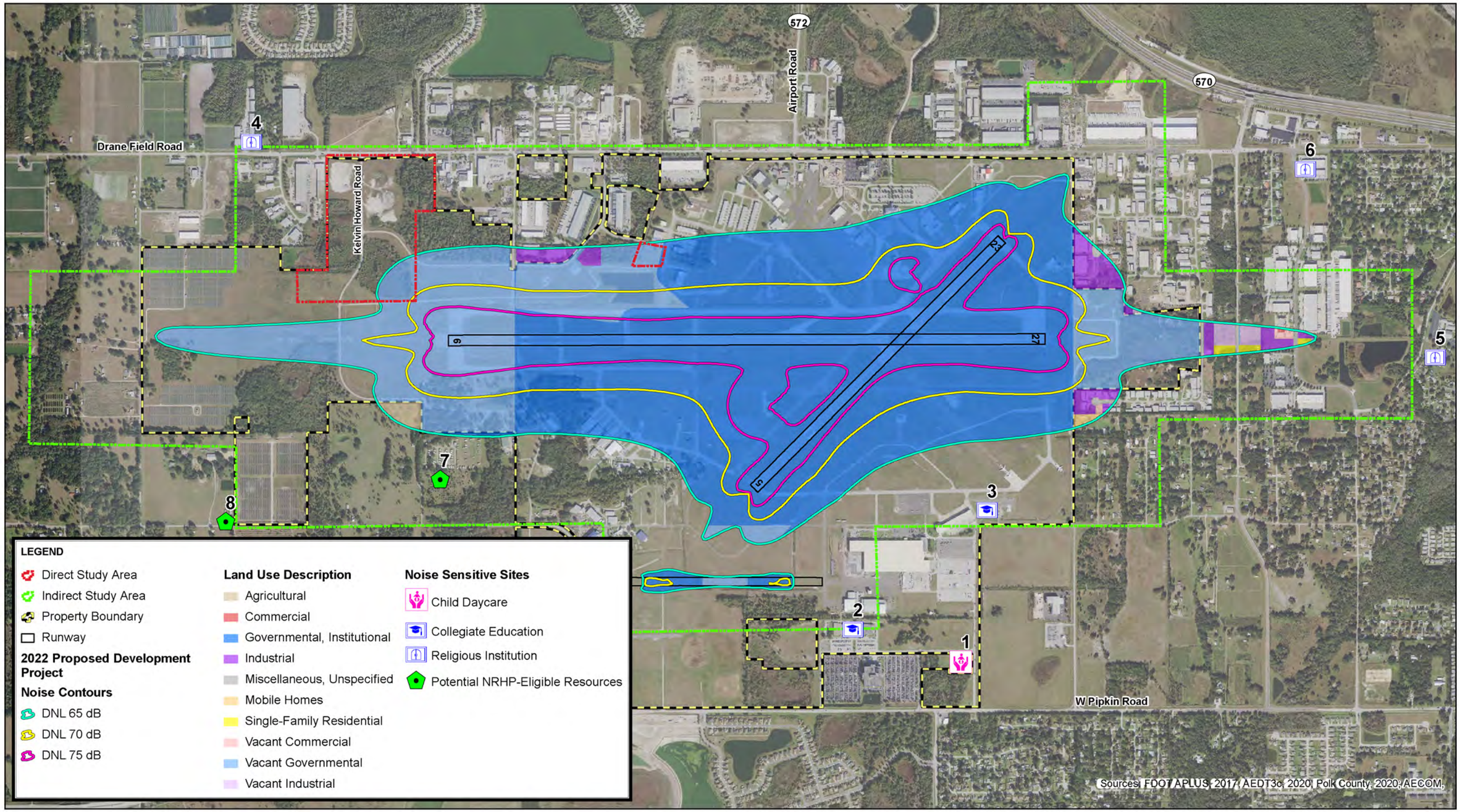

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LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2022 PROPOSED DEVELOPMENT PROJECT NOISE CONTOURS (1 OF 2)

FIGURE 5.10-3

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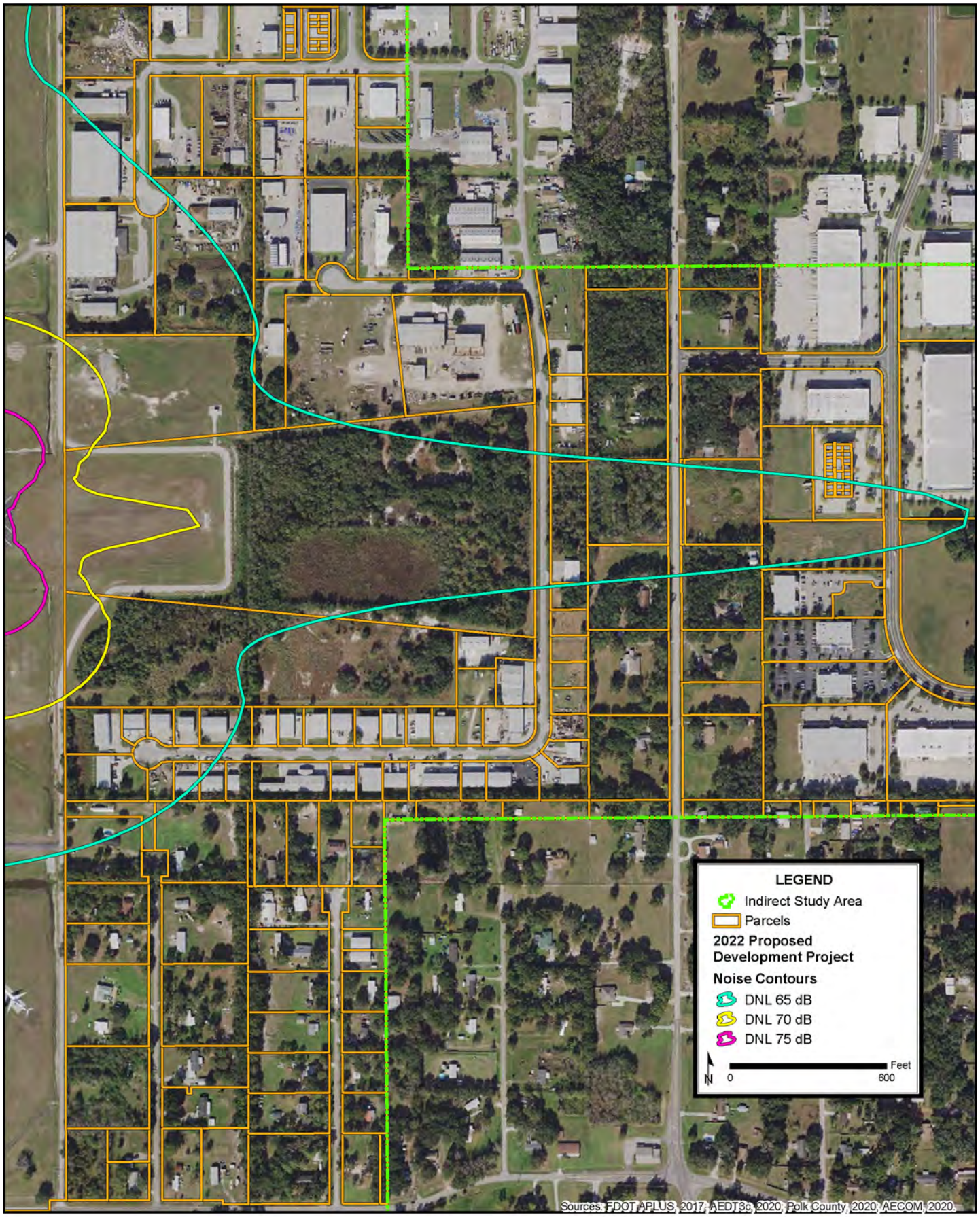

Path: C:\Users\tia.norman\Desktop\LAL P2 EA\GIS\mxd\Draft EA\Figure 5-10-4 2022 PP Noise Contour_ZOOM_rev3.mxd, Date Saved: 4/7/2021 8:15:04 AM

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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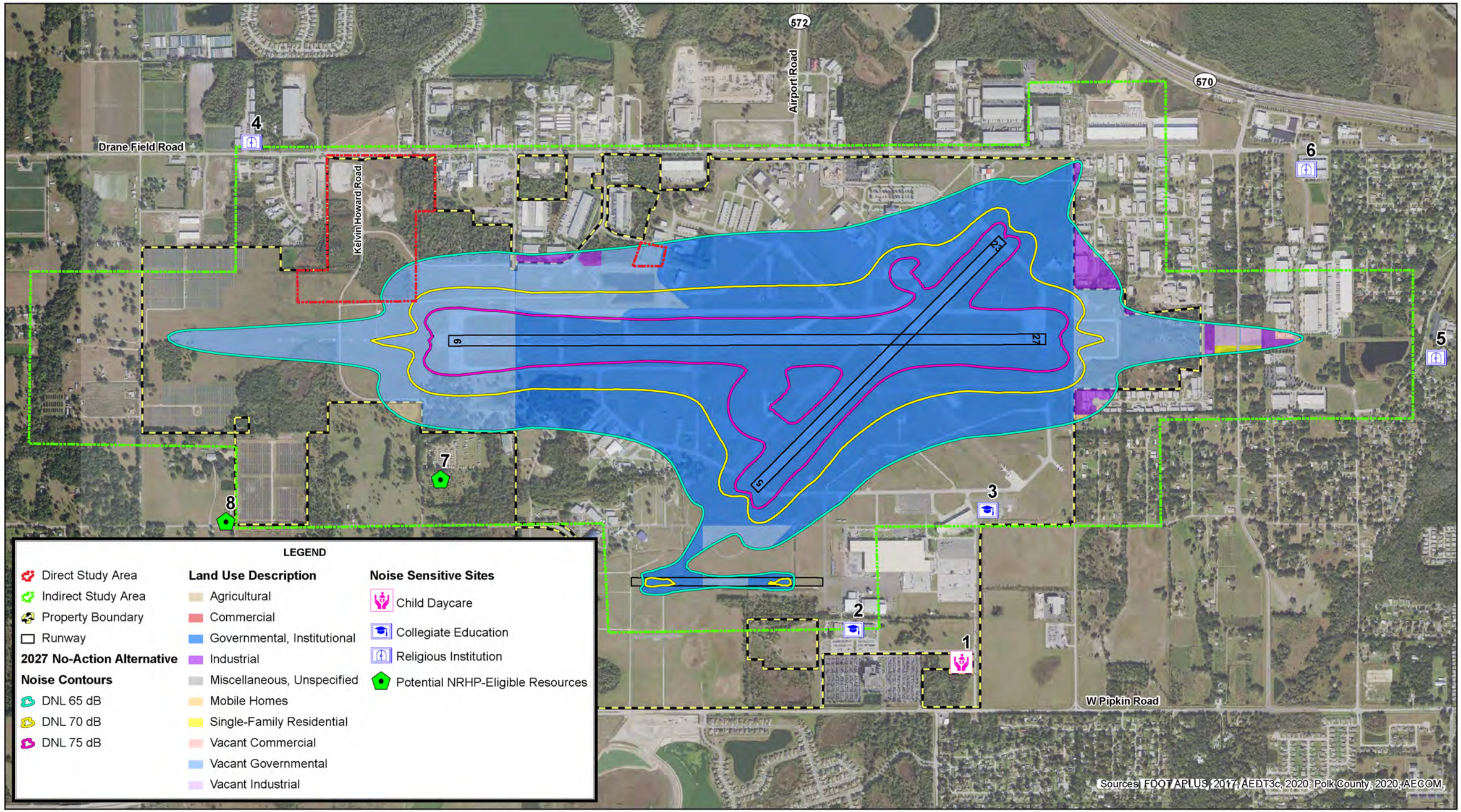

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LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2027 NO-ACTION NOISE CONTOURS (1 OF 2)

FIGURE 5.10-5

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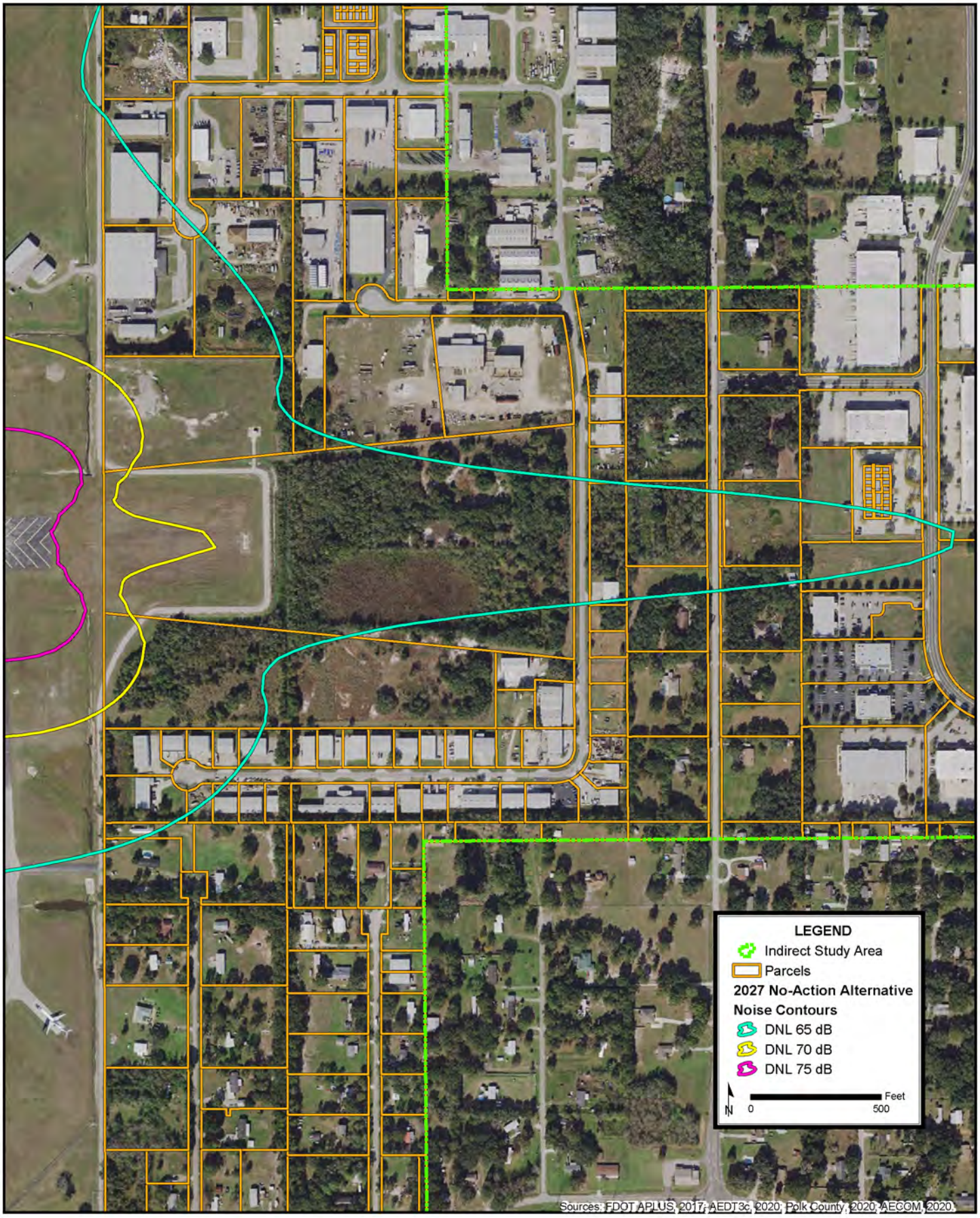

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PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2027 NO-ACTION NOISE CONTOURS (2 OF 2)

FIGURE 5.10-6

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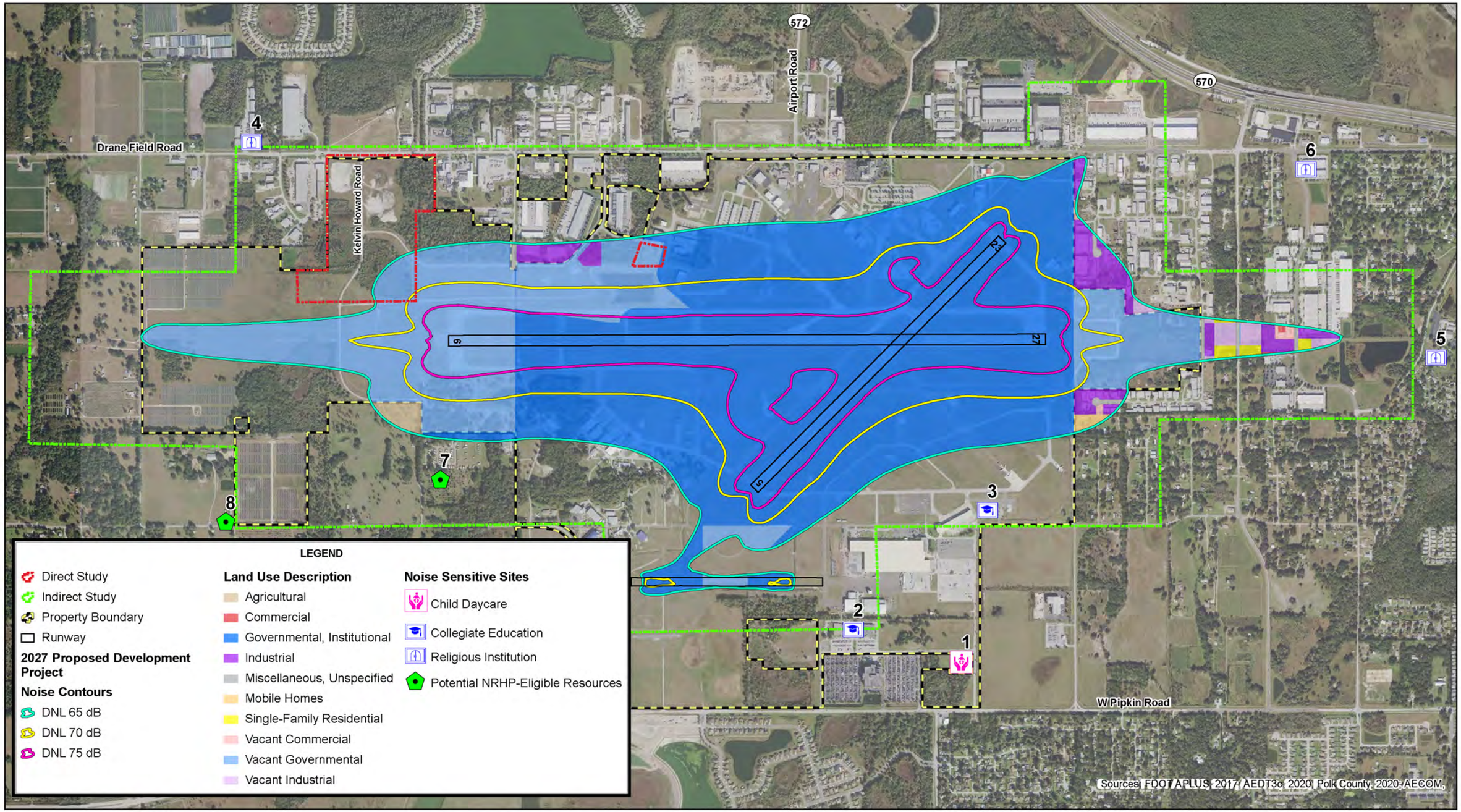

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LAKELAND LINDER INTERNATIONAL AIRPORT

PHASE II AIR CARGO DEVELOPMENT ENVIRONMENTAL ASSESSMENT

2027 PROPOSED DEVELOPMENT PROJECT NOISE CONTOURS (1 OF 2)

FIGURE 5.10-7

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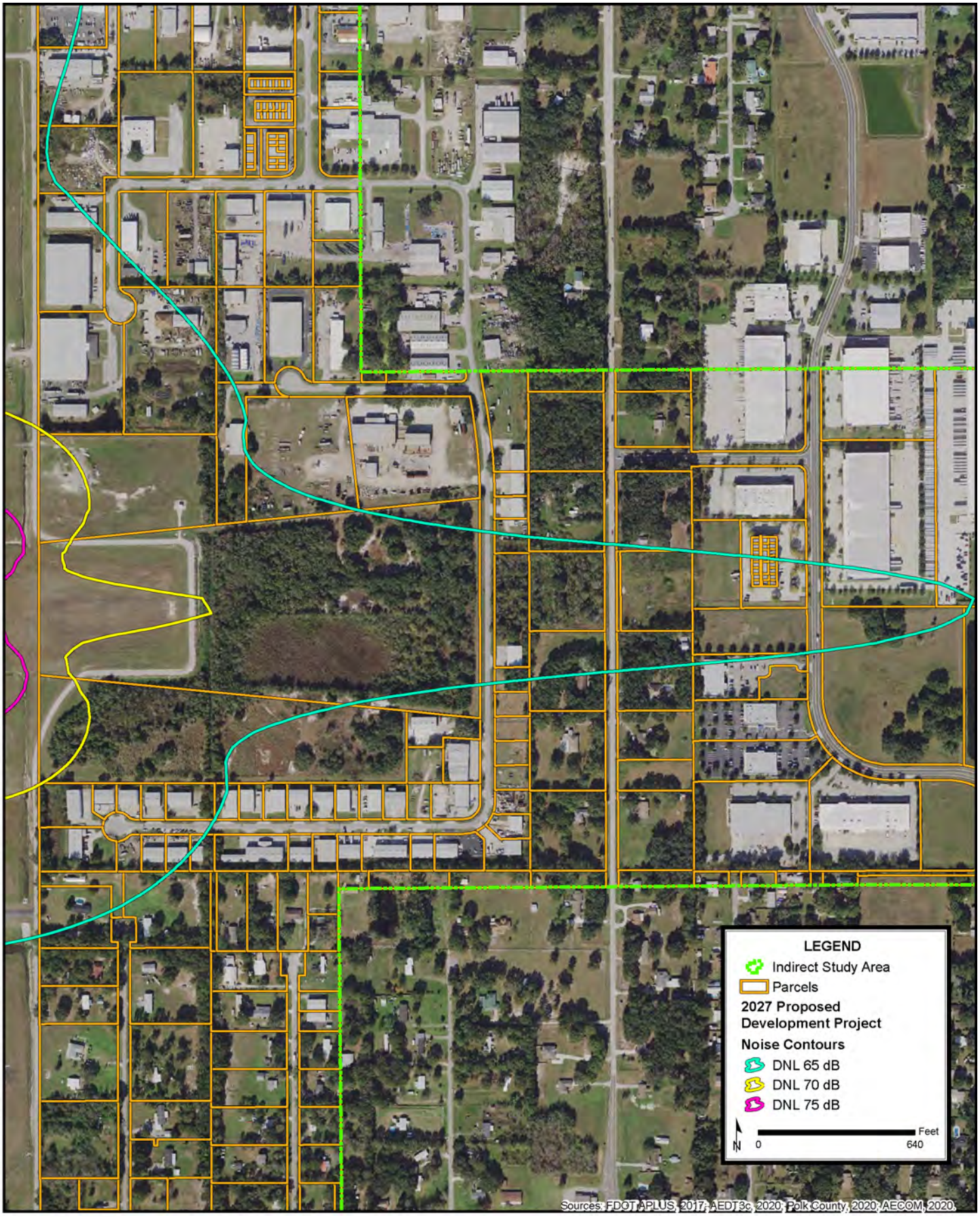

Path: C:\Users\tia.norman\Desktop\LAL P2 EA\GIS\mxd\Draft EA\Figure 5-10-8 2027 PP Noise Contour_ZOOM_rev3.mxd, Date Saved: 4/7/2021 8:21:55 AM

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 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

According to FAA significance thresholds, an action has a significant 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.

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 LOS on area roadways, and loss in community tax base.

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. 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 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 Draft 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, child care centers, or other similar facilities. No schools or child care 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 during portions of 2021 and 2022 and are not expected to be significant.

Traffic volumes in the vicinity of LAL are expected to increase over time. If carried out, 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**. T**able 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.[23]

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 T**able 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.

[23] Florida Department of Transportation. *2020 Quality/Level of Service Handbook*. June 2020.

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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 control 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.

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, 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.[24] 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

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

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 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 T**able 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. On December 17, 2020, the 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 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 jurisdiction 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 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.

T**ables 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 T**able 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.

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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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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 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.

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 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.

Based on 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 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 in 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 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 72.5-acre DSA, approximately 44.5 acres of new impervious area would be constructed at the Airport.

Approximately 73 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 erosions, 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.[25] 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, substantial changes to water supply/demand and wastewater discharge capacity would not occur due to the Proposed Development Project.

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

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.

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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 EA. The primary components of the agency and public participation program for this EA include:

- Early Agency coordination at the beginning of the NEPA process,
- Publication of the Draft EA for public and public agency review,
- Public meeting on the Draft EA, and
- Public notice of the 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**.

This Draft EA will be 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 in April of 2021. A Public Hearing and Public Information Workshop is scheduled to be held on May 27, 2021. The public comment period on the Draft EA will then extend until May 31, 2021. **Appendix J** contains a copy of the Notice of Availability. The Draft EA will also be 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 will also be distributed to federal, state and local agencies that have expressed an interest or have regulatory oversight. A list of agencies receiving the Draft EA is given in **Appendix A.**

6.3. HOW TO COMMENT

Anyone wishing to comment on the information and conclusions in the Draft EA may do so in writing at any time during the advertised public review and comment period. All comments should be mailed to:

- City of Lakeland, Attention: Gene Conrad, Airport Director, 3900 Don Emerson Drive, Suite 210 Lakeland, FL 33811

Please note that comments can only be accepted with the full name and address of the all persons or entities commenting. Before including an address, phone number, e-mail address, or other personal identifying information in comments, be advised that the entire comment – including personal identifying information – may be made publicly available at any time. While individuals can ask the FAA to withhold from public review personal identifying information, it cannot be guaranteed that it will be withheld.

6.4. PUBLIC INFORMATION WORKSHOP AND PUBLIC HEARING

A Public Information Workshop and Public Hearing will be held from no less than 30 days after the Notice of Availability of the Draft EA is published. The purpose is 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 will be made available for inspection during the workshop portion of the meeting.

6.5. FINAL EA

All comments received will be reviewed and considered by the FAA and the City. As necessary, the Draft EA may be 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 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. The City and the FAA will consider all comments received from the general public, agencies, and organizations in development of the Final EA. Summaries of comments received, responses, and any necessary revisions to the EA will be incorporated into the Final EA. The City will submit the Final EA to the FAA for review and the FAA's decision of whether to issue a FONSI or to prepare an EIS.

CHAPTER 7 LIST OF PREPARERS

As required by FAA Order 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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