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

Department of Transportation

Federal Aviation Administration
Orlando Airports District Office
Orlando, Florida

FINDING OF NO SIGNIFICANT IMPACT
AND
RECORD OF DECISION

Environmental Assessment for
Concourse B
at
Jacksonville International Airport

Jacksonville, Florida

May 9, 2024

BACKGROUND: The Jacksonville International Airport (JAX) is a commercial service airport owned and operated by the Jacksonville Aviation Authority (Authority or Airport Sponsor), which supports a range of aviation services and activities. The airport is located approximately 12 miles north of downtown Jacksonville, in Duval County. In addition to commercial service, JAX supports the general aviation community with two fixed-based operators (FBO), includes several cargo operators and freight forwarders, and it supports the Florida Air National Guard (FANG) 125th Fighter Wing (JAA, 2020).

The Authority proposes to design and construct a new Concourse B to support additional commercial service at the airport, referred to as the Proposed Action. The Proposed Action is subject to review under the *National Environmental Policy Act of 1969* (NEPA). Accordingly, an Environment Assessment (EA) was prepared by the Airport Sponsor to comply with the requirements of NEPA, Council on Environmental Quality (CEQ) regulations implementing NEPA, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*.

This Finding of No Significant Impact (FONSI) and Record of Decision (ROD) provides the FAA's environmental determination, approval, and conditions for agency actions necessary to implement the Proposed Action. This FONSI/ROD is based on information and analyses contained in the *Environmental Assessment for Replacement Concourse B*, which is incorporated by reference, and other related documents available to the Agency. The ROD is issued in accordance with CEQ regulations at 40 CFR §1505.2.

PROPOSED DEVELOPMENT PROJECT: The Airport Sponsor's Proposed Project is the construction and operation of a new 190,000 square-foot, three-level Concourse B and associated components. The Proposed Project would be constructed between existing Concourses A and C, in the same location as the original Concourse B, which was demolished in 2009. Construction activities are anticipated to begin fall 2024.

The Proposed Project includes the following elements:

1. Construction of a 190,000 square-foot, three-level Concourse B

    - Floor Level 1: support the airport and airline operations and contain the building's mechanical and electrical rooms (approximately 52,000 square feet).

    - Floor Level 2: predominantly consists of passenger circulation and holdroom space (approximately 119,000 square feet) to accommodate six additional gates. The concourse level would also include concession space, mother's nursing rooms, men's and women's restrooms, and a pet relief area.

    - Floor Level 3: located at the hub (east end) and would be approximately 19,000 square feet, which can be subdivided as needed for club areas and/or a potential restaurant.

2. Expansion of the apron by an additional 29,061 square yards.

3. Relocation of Taxiway V approximately 600 feet west of the current location.

4. Construction of an approximate 5,200-gallon above-ground diesel storage tank for Concourse B backup generators

The Proposed Project also requires raising the existing Airport Surveillance Radar (ASR) by 20 feet, relocating the existing Remote Transmitter Receiver (RTR) to approximately one acre of land close to the existing windsock. Furthermore, relocating the existing Surface Weather Station (SWS) systems to the west and adjacent to the new Taxiway V, and demolishing an unused on-airport building to avoid potential conflicts with these navigational aids.

FAA PROPOSED ACTION: The Airport Sponsor's Proposed Project described above and in Section 1.3 of the EA represents the Airport Sponsor's intended development at the airport. The FAA has determined approval authority over the entire project.

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

1. Unconditional approval of the Airport Layout Plan (ALP) to depict the proposed improvements, pursuant to 49 USC § 40103(b) and 47107(a)(16).

PURPOSE AND NEED: Section 1.4 of the EA describes the purpose of and need for the Proposed Action, as identified by the Airport Sponsor.

The Jacksonville Airport Authority (JAA) is proposing improvements at the airport that are intended to maintain its current level of service and proactively prevent near-future congestion. Concourse B was a part of the JAA's original modernization program, which started in 1998. The original Concourse B was scheduled to be demolished and replaced in 2009. However, due to the global economic recession, Concourse B was demolished but never reconstructed. Then, the 2020 Airport Master Plan (AMP) concluded that the existing terminal holdroom space and gates were at capacity in 2019. The 2020 AMP highlighted the need to finally replace the concourse and triggered the current project. Additional gates would ensure that JAX can meet latent demand and maintain its current level of service (LOS) in terms of passenger experience. Additional gates are needed to provide additional holdroom space and contact gates to load and unload passengers, maintain the airport's current LOS, and continue safe passenger operations.

ALTERNATIVES: Chapter 2 of the EA evaluated a range of reasonable alternatives to the Proposed Action, including the No-Action Alternative. The alternative evaluation criteria considered whether an alternative met the purpose and need and the ability for the alternative to keep all, or most, existing gates open and operational during construction of the new gates.

Alternative 1: Expand Concourse C

For Alternative 1, Concourse C would be expanded further south to include six new gates for 26 gates. This alternative would require the temporary closure of four existing aircraft gates during construction, substantially reducing the airport's existing gate capacity. This alternative would also require the existing apron to be increased to provide dual taxilanes around the end of extended Concourse C. Losing four existing gates during construction would negatively impact airport operations and passenger LOS. Without these gates, the airport could have disrupted schedules and constrained operations. In addition, flexibility to shift aircraft positions as needed around the facility for new aircraft types would not be achievable. The airport is subject to unpredictable severe weather events (e.g., significant thunderstorms/rainfalls) that can affect air traffic and require aircraft to remain grounded at gates longer than scheduled. A temporary reduction in overall contact gates during construction under Alternative 1 could result in additional ground delays. Alternative 1 would provide new aircraft gates but would reduce the overall functionality of the airport. For these reasons, Alternative 1 was eliminated from further consideration in the EA.

Alternative 2: Expand Concourse A

For Alternative 2, Concourse A would be expanded further north to include six new gates (including two spare gates) for 26 gates total. This alternative would require the closure of four aircraft gates during construction, temporarily reducing the airport's existing gate capacity. This alternative would also require the existing apron areas to be increased to provide dual taxilanes around the end of extended Concourse A. Without the four existing gates during the construction of this alternative, flexibility to safely shift aircraft positions as needed around the existing facility would be eliminated. In addition, the airport is subject to unpredictable severe weather events that can affect air traffic and require aircraft to remain grounded at gates longer than scheduled. A temporary reduction in overall contact gates during construction under Alternative 2 could result in additional ground delays. Alternative 2 would provide new aircraft gates but would reduce the overall functionality of the airport. Alternative 2 would not allow the airport to continue to operate efficiently. For these reasons, Alternative 2 was eliminated from further consideration in the EA.

No-Action Alternative

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

ENVIRONMENTAL IMPACTS: The No-Action Alternative and Proposed Action were evaluated for potential impacts on the environmental resource categories identified in FAA Order 1050.1F. The Affected Environment and Environmental Consequences sections of the EA (Chapter 3) provide a description of existing conditions and an analysis of direct, indirect, and cumulative impacts. Under the No-Action Alternative, the Proposed Action would not be implemented, and the environmental impacts associated with the proposed facility and infrastructure improvements would not occur. The Proposed Action is to be constructed at the location of the previous Concourse B. The area currently consists of existing apron (pavement). No wetlands or protected species are to be impacted. There are no floodplains mapped within the area. The Proposed Action is expected to generate additional aircraft activity that would influence the noise environment, but the impact is expected to be minimal. Once implemented, the Proposed Action will increase aircraft operations at JAX. When compared to the No-Action Alternative, the Proposed Action would generate an additional 7,737 aircraft operations in 2026 and 23,971 aircraft operations in 2031.

Air Quality – The airport is in Duval County, which is designated by the Environmental Protection Agency (EPA) as in "attainment" with respect to all current National Ambient Air Quality Standards (NAAQS). Accordingly, the General Conformity Regulations do not apply to the Proposed Action, and a detailed analysis and Conformity Determination were not required. Nevertheless, annual emissions inventories of construction and operational emissions associated with the Proposed Project were provided for disclosure purposes.

Operational emissions associated with the Proposed Action were computed for study years using FAA's Aviation Environmental Design Tool (AEDT). The emissions inventory in Table 3-3 of the EA compares the difference between emissions from the No-Action Alternative and Proposed Action for both study years. The additional aircraft operations associated with the Proposed Action would increase air emissions at JAX; however, the increase in emissions would be minor and would not constitute a significant impact.

Table 3-2 discloses the temporary emissions associated with construction of the Proposed Action. All construction activities and associated pollutant emissions are expected to occur in 2024-2026. Since 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.

The Proposed Action occurs in an area classified as Attainment for all criteria air pollutants, and there is no State Implementation Plan or numeric significance threshold applicable to the Proposed Action. No significant air quality impacts are anticipated.

Biological Resources (including Fish, Wildlife, and Plants) – The Proposed Action, an approximately 190,000 square-foot building, is being constructed on a previously modified area currently consisting of paved concrete, a drainage ditch, and mowed and maintained airfield turf that is categorized by the FDOT Florida Land Use, Cover and Forms Classification System (FLUCCS) as (8110) airport. No natural habitat nor wetlands occur within the study area, and none will be impacted because of the Proposed Action.

Federally-Listed Species - As described in the EA, due to the lack of natural habitat to be impacted and documented occurrences, the Proposed Action would have No Effect on the Eastern black rail, Red-cockaded woodpecker, Wood stork, Eastern indigo snake, Green sea turtle, Hawksbill sea turtle, Leatherback sea turtle, Frosted flatwoods salamander, or Monarch butterfly. Additionally, the project is not in a critical habitat area for any species.

State-Listed Species – There is no natural habitat and no documented occurrences of listed species in the Proposed Action area. As such there are No Effects anticipated for the Gopher tortoise or other state-listed species.

The Bald eagle is no longer listed under the Endangered Species Act but remains protected by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act. The closest known Bald eagle nests are approximately three miles southeast of the Direct Study Area. Management guidelines and protection measures

apply to projects which occur within 660 feet of a nest location. Due to the highly disturbed nature of the Direct Study Area and the distance to the nest, the Bald eagle will not be adversely affected.

Given the available data, the FAA determined the Proposed Action would not have a significant impact on biological resources, including natural habitats, common species of wildlife, and protected species.

Climate – Temporary greenhouse gas (GHG) emissions associated with the construction of the Proposed Action (2024 to 2026) are expected to be 1,068.19 metric tons of CO_2e in 2024, 3,397.65 metric tons in 2025, and 6,335.09 metric tons in 2026 (Appendix B of the EA). The increased aircraft operations and vehicle trips associated with the Proposed Action would result in an increase in GHG emissions at the airport. The analysis projected an increase of 445 metric tons of CO_2e in 2026 and 1400 metric tons in 2031, when compared to the No-Action Alternative.

Based on recent guidance from the Council on Environmental Quality (CEQ), the project was evaluated for the Social Coasts of Greenhouse Gases (SC-GHGs). This represents the monetary impact associated with catastrophic climate impacts with the increase of these gases. This resulted in a monetary impact of $2,200 to $23,000 in 2024, $600 to $5,800 in 2025, and $600 to $5,900 in 2026 during construction. Once in operation, the potential social costs range from approximately $59,000 to $600,000 in 2026 and $214,000 to over $2,000,000 in 2031. The results represent a range of possibilities and are not guaranteed to occur. Advances in technology and operational practices could lead to lower social impacts than reported.

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. No significance thresholds have been set for SC-GHGs either. Consequently, there is currently no quantitative or qualitative basis for comparison of the GHG emissions or SC-GHG against any limits that would require project considerations or mitigation presented in the EA. Based on the analysis conducted for this EA, GHG emissions associated with the Proposed Action are not anticipated to have a significant effect on climate or climate change.

Coastal Resources – The entire State of Florida is located within a coastal zone. The closest U.S. Fish and Wildlife Service (USFWS) Coastal Barrier Resource System (CBRS) unit, Talbot Islands (P02), is located approximately 15 miles east of the Direct Study Area.

The Proposed Action would not affect coastal resources, create plans to direct future agency actions, or propose rulemaking that alters uses of a coastal zone that are inconsistent with the Coastal Management Program. As such, the Proposed Action would have no significant impact on these resources.

DOT Act, Section 4(f) and Section 6(f) Resources – There are no 4(f) resources within the Direct Study Area. The closest Section 4(f) resource is Oceanway Park, which is approximately four miles southeast of the Direct Study Area and two miles southeast of the Indirect Study Area. The closest Section 6(f) resource is the Timucuan Ecological and Historic Preserve, about five miles northeast of the Direct Study Area and approximately 1.5 miles north of the Indirect Study Area. The Proposed Project would not require the direct (physical) use of Section 4(f) resources. The Proposed Project would not require using any recreational or park land purchased with Section 6(f) Land and Water Conservation Funds. In addition, the Proposed Project would not affect environmental resources (e.g., air quality, noise, etc.) in a manner that would indirectly affect (constructively use) Section 4(f) and 6(f) resources. Therefore, the Proposed Project would have no effect on Section 4(f) or 6(f) resources.

Farmlands – The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) does not show any soil types classified as prime farmland or farmland of statewide importance within the Direct Study Area. Additionally, the Direct Study area is previously disturbed and primarily pavement. Also, the airport is located within the U.S. Census Bureau Designated Urban Area (Jacksonville). It, therefore, is exempt from the Farmland Policy Protection Act (FPPA). The Proposed Action would not affect prime, unique, or state-significant farmland.

Hazardous Materials, Solid Waste, and Pollution Prevention – There are no known superfund sites located in the Direct Study Area. The Proposed Project would include an approximate 5,200-gallon aboveground diesel storage tank for Concourse B backup generators. The tank would comply with state regulations, as applicable, including requirements for aboveground storage tank systems having individual storage tank capacities greater than 550 gallons. Operation of the Proposed Action would increase the use of hazardous materials such as aviation fuel, oils, and solvents but the JAA maintains a Spill Prevention and Countermeasure Control Plan (SPCC) and a Stormwater Pollution Prevention Plan (SWPPP) which should reduce the potential for hazardous material issues.

Because the Proposed Action does not include demolition of existing structures, it is expected that construction activities would generate minimal construction debris. Debris and wastes that could be generated during the construction would be recycled where possible, and whatever could not be recycled will be disposed at a permitted landfill. All materials would be disposed of in accordance with federal, state, and local rules and regulations.

The operation of the Proposed Action will result in additional solid waste. JAX has multiple sustainability initiatives that include recycling efforts, reusing wood and composite pallets, collecting scrap metal, reusing landscaping waste, etc.

The Proposed Action would not generate a considerable amount of hazardous materials or solid waste. Much of the construction waste to be generated could be recycled or

diverted to permitted landfills. The Proposed Action would not enable new activity types and would not result in new types of solid waste or hazardous materials at JAX. Based on the analysis in the EA, the airport's implementation of the SPCC and SWPPP, no significant impacts related to hazardous materials, solid wastes, and pollution are anticipated.

Historical, Architectural, Archeological and Cultural Resources – This project included both a Direct and Indirect Area of Potential Effect (APE). The Direct APE includes the direct impacts that may be associated with the 81-acre project footprint (the ground disturbance area). Because this project has the potential to increase aircraft operations at JAX, the Indirect APE is the proposed 2031 DNL 65 dB noise contour, which totals approximately 5.02 square miles (Figure 3-4 of the EA). This APE includes the indirect impacts to historic and cultural resources that may result from increased aircraft noise.

There are no resources listed on the National Register of Historic Places (NRHP) within or adjacent to the APEs. According to the National Park Service, the nearest National Register-listed resource is the Lewis Mausoleum located about 9.5 miles south of the Direct APE.

According to the Florida Master Site File (FMSF) records, one archaeological resource exists in the Indirect APE. The Florida State Historic Preservation Officer (SHPO) determined that the Jax Raceways Site (site ID 17810) was not eligible for listing on the NRHP (SHPO, 2024). The FMSF also identified seven standing structures within the Indirect APE at the Florida Air National Guard (FANG) 125th Fighter Wing (FW). All FANG 125th FW buildings and structures were surveyed and evaluated as described in the *United States Air Force F-35A Operational Beddown – Air National Guard Final Environmental Impact Statement* (USAF, 2021). The National Guard Bureau determined that the FANG 125th FW's structures were not eligible for listing on the NRHP. The Florida SHPO concurred with the determination of eligibility (USAF, 2021).

The Direct APE consists of a concrete pad and a previously modified and maintained grass area and associated swale that serves as part of the airports permitted stormwater system. The FMSF database did not identify any resources within or near the Direct APE. As such, no archaeological investigation was performed.

Pursuant to Section 106 of the *National Historic Preservation Act*, consultation was initiated with the SHPO. Based on the background research, the SHPO concurred with FAA's determination the proposed undertaking would have no adverse effect on historic properties on April 26, 2024.

Based on the research and consultation conducted, the Proposed Action would not have significant impacts on historic architectural, archaeological, and cultural resources.

Land Use – The Proposed Action would occur entirely on airport property and the existing land use in the Direct Study Area is classified as public buildings and facilities. The

Proposed Action is consistent with future plans, would not cause any incompatibilities or inconsistences with local land use plans or affect other resources that could indirectly affect land use.

Natural Resources and Energy Supply – Construction of the project would require prefabricated building components, aggregate, sub-base materials, and oils. However, it 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. Operationally, the Proposed Action would create additional demand for electricity, water, and fuel at JAX.

The construction and operation of the Proposed Action will cause an increase in electricity consumption. JEA Utility Services provides electricity to JAX and can generate enough to meet the increased needs. The Proposed Project has several sustainability initiatives to reduce demands on natural resources and the energy supply, including an energy-efficient design using building automation, controlled daylight harvesting with LEDs, and intelligent sensing tinted glazing throughout the facility to minimize heat gain and mechanical equipment loads.

JAA has ongoing sustainability goals to reduce water consumption at the airport. For example, the Proposed Project would incorporate a condensate recovery system to reuse the air conditioning system's drained water. As part of the building automation, Concourse B would feature all touch-free automatic shutoff valves in restrooms to prevent accidental water waste, and hot water systems serving restrooms would be provided with recirculating pumps. This feature reduces the amount of water drained while waiting for hot water at the fixture. Finally, the new chilled water plant will have waterside economizers or "free cooling" heat exchangers. This will save water and reduce the required energy necessary to lower makeup water's temperature. Coordination will occur with JEA to upsize the capacity of the lift station, which serves the area to manage additional wastewater. Therefore, the operation of Concourse B is not anticipated to constrain the local water supply.

Construction of the Proposed Project would temporarily increase fuel usage from construction related vehicles accessing the Direct Study Area. JAA will be using electric vehicles to reduce fuel consumption. Airport custodial and maintenance employees use electric vehicles to travel around the concourse/terminal areas. Police officers also use electric "scooters" to patrol the airport. The operation of the Proposed Project will also increase aviation fuel use at the airport. In 2031, the Proposed Project would increase aircraft operations by 23,971 when compared to the No Action alternative. Although the project would result in an increase in aviation fuel, it is not to a level that would significantly impact local fuel supplies.

The implementation of the Proposed Action is not expected to exceed current or future energy supplies. Based on the analysis in the EA, the Proposed Action would not have a significant impact on natural resource or energy supplies.

Noise and Noise-Compatible Land Use – The total current area within the DNL 65 dB and greater contour is 4.49 square miles and is primarily located within the limits of the airport property boundary (Appendix C, Figure 3-6, and Table 3-8 in the EA). The DNL 65 dB encompasses 0.7 square mile of the off-airport property, primarily commercial and industrial compatible land uses. One residence, located near Interstate 95 and Pecan Park Road intersection, is within the contour and is currently exposed to the DNL 65 dB.

The construction and operation of the proposed project will generate increased levels of noise. Construction noise would temporarily increase sound levels in the immediate vicinity of the construction activities. 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. In addition, contractors will follow all local land development codes and noise ordinances during construction of the Proposed Action.

As described in Section 3.2.11.1 of the EA, the effects of the additional operations were assessed for impacts to noise sensitive areas. The Proposed Action will increase annual passenger aircraft operations by 7,737 in 2026 and 23,971 in 2031 (Table 3-9 of the EA). This translates to approximately 21 and 66 additional average daily aircraft operations in 2026 and 2031, respectively, compared to the No-Action Alternative. Using FAA's Aviation Environmental Design Tool (AEDT) model, a noise analysis was prepared to provide information on Existing Conditions and to evaluate noise impacts for the No-Action Alternative and the Proposed Project in 2026 and 2031 (Appendix C of the EA).

Compared to the 2026 No Action alternative, the Proposed Project causes 0.09 additional square miles to be included in the DNL 65+ dB (Table 3-11 of the EA). The total area within the DNL 65+ dB contour is 4.57 square miles for the No Action Alternative and 4.66 square miles for the Proposed Project. The No Action Alternative DNL 65 dB contour encompasses 0.70 square miles of off-airport property, and the Proposed Project encompasses 0.73 square miles of off-airport property. The residence near the Interstate 95 and Pecan Park Road intersection would experience an increase of DNL 0.14 dB as a result of the Proposed Project. The DNL 0.14 dB increase is below the significance threshold of DNL 1.5 dB. Compared to the 2031 No-Action alternative, the Proposed Project causes 0.32 additional square miles to be included in the DNL 65 dB and above noise contour (Table 3-13 of the EA). The total area within the DNL 65+ dB contour is 4.70 square miles for the No Action Alternative and 5.02 square miles for the Proposed Project. The No Action Alternative DNL 65 dB contour encompasses 0.74 square mile of off-airport property, and the Proposed Project encompasses 0.82 square mile. The residence is exposed to DNL 65.62 dB for the 2031 No Action Alternative and DNL 66.01 dB for the Proposed Project, an increase of DNL 0.39 dB as a result of the Proposed Project. The DNL 0.39 dB increase is below the FAA significance threshold of DNL 1.5 dB.

In 2026 and 2031, noise generated by the Proposed Project would have a minimal effect on aircraft noise generated at the airport. The change in noise associated with the Proposed Project would be negligible. Other noise sources associated with the Proposed Project, including traffic noise, would not generate substantial noise near noise sensitive areas.

The Proposed Project would not cause a DNL 1.5 dB increase over noise sensitive land uses within the DNL 65 dB and higher contours. Based on FAA's current guidance for preparing NEPA impact evaluations, significant noise impacts would not occur if the FAA Proposed Action and the overall Proposed Project were implemented. Therefore, mitigation is not required for reducing the impact below the threshold indicating a significant impact. No changes to airport operational conditions or existing flight procedures at JAX were proposed as part of the Proposed Project.

Socioeconomics, Environmental Justice, And Children's Environmental Health and Safety Risks – The Proposed Project would not affect public service demands and would not require the acquisition of land, nor would it displace any residences or businesses. The Proposed Project could increase local employment, but not result in any substantial shift in population or increase in local housing demand. The Proposed Project would not result in the acquisition or relocation of any residences, schools, childcare centers, or other similar facilities. No schools or childcare facilities are in areas that would be affected by the Proposed Project. The nearest school is approximately three miles southeast of the Direct Study Area. Impacts to air quality and traffic are within established impact significance thresholds and are not expected to impact environmental justice populations. As previously discussed, one residence is located within the existing DNL 65 dB contour and remains within the Proposed Project contours for 2026 and 2031. The increase in noise exposure at the residence in both conditions when comparing the No Action Alternative and Proposed Project is less than the FAA's significance threshold for noise. Therefore, there are no significant noise impacts, and there would be no disproportionately affected minority and/or low-income populations. Based on the analysis in the EA, the Proposed Project would not result in any significant socioeconomic, Environmental Justice, and children's health and safety risk impacts.

Surface Transportation – The Proposed Action would result in a temporary increase in local surface traffic volume during construction. Following completion of construction activities, the Proposed Action would result in an ongoing incremental increase in local surface traffic volume. The JAA's 2022 Landside Planning Study analyzed future roadway operating conditions by calculating the volume of roadway links compared to the capacity of the roadway system at that location. The Landside Planning Study included the same forecast of enplaned passengers used for the Proposed Project studied in this EA.

To analyze the future operating conditions along the airport roadway system, the calculated volume for each roadway link was compared to the roadway's capacity at that location. LOS E is the trigger for roadway improvements. According to the 2022 Landside

Planning Study, the LOS of the roadways servicing the airport would remain A, B, or C through 2032 (a year beyond this EA's study years). Therefore, the Proposed Project would not cause significant adverse impacts to surface transportation.

Visual Effects Including Light Emissions – The Direct Study Area is located west of the existing terminal at the former site of the previous Concourse B. The viewshed of the Direct Study Area includes airport facilities such as the terminal, concourses, Airport Traffic Control Tower, and hangar facilities. The distance between the Proposed Action and the nearest residence is approximately 1.7 miles. The residence is west of the project separated by thick vegetation at the end of Ogilvie Road. The Proposed Action occurs entirely on airport and the line of sight between the two will remain obscured by the existing vegetation.

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

Wetlands – Under the Clean Water Act, the U.S. Army Corps of Engineers has the authority to regulate activities in waters of the U.S., including qualifying wetland areas. No wetlands or other surface waters which could be considered Waters of the United States are in the Direct Study Area. The Direct Study Area does include a drainage swale associated with the airport's stormwater system, but this is not a wetland. Due to the lack of wetlands and use of the permitted stormwater treatment system there would be no significant impacts to waters of the United States by the Proposed Action.

Floodplains – Floodplains are lowland areas that are susceptible to flooding. A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) shows that the Direct Study Area is entirely within Zone X and not within the 100-year floodplain. Therefore, the Proposed Project would not cause significant adverse impacts to floodplains.

Surface Waters and Groundwater – The Proposed Action will add approximately 15.66 acres of new impervious surface. The existing stormwater management system will be modified to handle the newly proposed runoff. As a result of constructing Taxiway V, new swales would be constructed in the airfield to convey, store, and treat runoff. Existing pipes under the runways to the airport outfalls have adequate capacity to accommodate the proposed increase. The modifications will be permitted through the St. Johns River Water Management District (SJRWMD) and meet water quality treatment criteria.

A National Pollutant Discharge Elimination System (NPDES) Construction Generic Permit that includes non-contaminated dewatering will be acquired before construction. The contractor is required to meet all relevant requirements of this permit. The implementation of Best Management Practices (BMP) and a Stormwater Pollution Prevention Plan (SWPPP), installing silt fences, and other permit conditions will 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 Action are not anticipated.

There is a possibility of the release of contaminants to groundwater during construction. However, the use of BMPs and a SWPPP to be designed for the Proposed Project would prevent or minimize the potential release of contaminants into groundwater. The BMPs and SWPPP 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 Project would not have a substantial impact on groundwater resources.

Based on the analysis in the EA, the Proposed Action 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 Project would not significantly impact surface water or groundwater resources.

Wild and Scenic Rivers – The closest Wild and Scenic River, the Wekiva River, is approximately 115 miles south of the airport. The closest river segment on the Nationwide River Inventory (NRI) is the St. Mary's River, located approximately 17 miles north of the airport. The Proposed Action would not impact these rivers.

Cumulative Impacts – The past, present, and future cumulative projects identified in Section 3.3 of the EA have generated, or are anticipated to generate, low to no environmental impacts. The projects are subject to different environmental regulatory programs, some of which may require mitigation to reduce impacts below levels considered significant. The impacts associated with the Proposed Action, when considered in addition to other cumulative projects are not expected to exceed thresholds that would indicate a significant impact.

OTHER FEDERAL, STATE, AND LOCAL ACTIONS AND PERMITS:

The JAA are required to obtain all permits and regulatory approvals necessary to implement the Proposed Project. The permits identified in the EA are listed below.

- St. Johns Water Management District – Environmental Resource Permit
- Florida Department of Environmental Protection – NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities

CONSISTENCY WITH APPROVED PLANS OR LAWS: The Proposed Project is consistent with local plans and ordinances, as well as applicable plans, laws, and administrative environmental determinations of Federal, State, and local agencies. Federal, State, and local agencies were notified of the Proposed Project during the public comment period of the EA. No objections or concerns regarding consistency with plans or laws were raised.

MITIGATION MEASURES: Mitigation to reduce impacts below a level indicating a significant impact under NEPA is not required. There were no significant impacts identified by the analysis contained in the EA. The EA describes voluntary measures and Best Management Practices that the JAA will employ to ensure impacts are avoided or minimized, but no mitigation measures were identified.

PUBLIC INVOLVEMENT: Notification letters were sent to select Federal, State, and local agencies to inform them of the proposed Concourse B and preparation of the EA. This included submitting the proposed project to the Florida State Clearinghouse for coordinated state agency review and the Florida SHPO.

The Draft EA was made available for review by the public, government agencies, and interested parties. The Draft EA was available online at the airport's website for viewing and download. Copies of the Draft EA were also available for review at the JAA's administrative office and Highlands Regional Library. A Notice of Availability of the Draft EA was published in the *Florida-Times Union* newspaper on March 19, 2024. The comment period on the Draft EA opened on March 19, 2024 and closed on April 18, 2024. No comments on the Draft EA were received from Federal, State, or local agencies or the public.

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

APPROVED: JUAN C BROWN Digitally signed by JUAN C BROWN Date: 2024.05.09 22:18:17 -04'00'

Juan C. Brown, Manager, Orlando Airports District Office

DATE: May 9, 2024

RECORD OF DECISION AND ORDER

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

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

APPROVED: JUAN C BROWN Digitally signed by JUAN C BROWN Date: 2024.05.09 22:21:48 -04'00'

Juan C. Brown, Manager, Orlando Airports District Office

DATE: May 9, 2024

Judicial Review

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

FINAL
ENVIRONMENTAL ASSESSMENT

REPLACEMENT CONCOURSE B

JACKSONVILLE INTERNATIONAL AIRPORT (JAX)

JACKSONVILLE, DUVAL COUNTY, FLORIDA

Prepared for:

Jacksonville Aviation Authority

and

U.S. Department of Transportation

Federal Aviation Administration

As lead Federal Agency pursuant to the National Environmental Policy Act of 1969

Prepared by:

RS&H, Inc

May 9, 2024

This environmental assessment becomes a federal document when evaluated, signed, and dated by the responsible FAA official.

JUAN C BROWN Digitally signed by JUAN C BROWN
Date: 2024.05.09 22:24:11 -04'00'

(Responsible FAA Official)

TABLE OF CONTENTS

1 Purpose and Need

1.1 Document Organization....1-1

1.2 Airport Overview....1-2

1.3 Proposed Project....1-5

1.4 Purpose and Need....1-8

1.4.1 Need....1-8

1.4.2 Purpose....1-14

1.5 Federal Action....1-16

2 Alternatives

2.1 Overview of the Alternatives Screening Process....1

2.1.1 Screening Criteria for Alternatives....1

2.2 Alternatives Considered and evaluated....3

2.2.1 No Action Alternative....3

2.2.2 Proposed Project....4

2.2.3 Alternative 1 – Expand Concourse C....5

2.2.4 Alternative 2 – Expand Concourse A....5

2.3 Alternatives Retained for Detailed Analysis....2-8

3 Affected Environment / Environmental Consequences

3.1 No Action Alternative....3-1

3.2 Environmental Analysis....3-5

3.2.1 Air Quality....3-5

3.2.2 Biological Resources....3-7

3.2.3 Climate....3-10

3.2.4 Coastal Resources....3-15

3.2.5 Department of Transportation Act, Section 4(f) and 6(f)....3-16

3.2.6 Farmlands....3-18

3.2.7 Hazardous Materials, Solid Waste, and Pollution Prevention....3-19

3.2.8 Historical, Architectural, Archeological, and Cultural Resources....3-22

3.2.9 Land Use 3-25
3.2.10 Natural Resources and Energy Supply 3-29
3.2.11 Noise and Noise-Compatible Land Use 3-32
3.2.12 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks 3-51
3.2.13 Visual Effects 3-59
3.2.14 Water Resources 3-60
3.3 Cumulative Impacts 3-70
3.3.1 Environmental Consequences 3-70
4 Agency and Public Involvement
4.1 Public Involvement and Agency Coordination Approach and Process 4-1
4.2 Distribution of Draft EA 4-2
4.3 Draft EA Agency and Public Comments 4-2
5 List of Preparers
5.1 Jacksonville Aviation Authority 5-1
5.2 RS&H, Inc. 5-1
6 References

Appendix A: Agency and Public Involvement
Appendix B: Air Quality, Climate, and GHG Social Cost Analysis
Appendix C: Aircraft Noise Analysis
Appendix D: FAA ASR-9 and RTR Reports

LIST OF TABLES

Table 1-1: Document Organization 1-1
Table 1-2: Airport operations - FAA Terminal Area Forecast 1-5
Table 1-3: Airport Gate History 1-15
Table 2-1: Alternatives Evaluation 2-9
Table 3-1: Existing Aircraft Operational Emissions 3-5
Table 3-2: Temporary Construction Emissions 3-6
Table 3-3: Future Aircraft Operational Emissions 3-6
Table 3-4: Threatened or Endangered Species Within the Study Areas 3-8
Table 3-5: Social Cost – Carbon Dioxide for the Proposed Project 3-14
Table 3-6: DOT Section 4(f) Resource "Uses" 3-17
Table 3-7: Land Uses Beyond Airport Runway Ends 3-26
Table 3-8: Area Within the 2022 Existing Condition DNL Contours 3-37
Table 3 9: Annual Aircraft Operations for Aircraft Noise Modeling 3-39
Table 3-10: 2026 Aircraft Operations and Fleet Mix 3-37
Table 3-11: Area Within the 2026 DNL Contours 3-39
Table 3-12: 2031 Aircraft Operations and Fleet Mix 3-44
Table 3-13: Area Within The 2031 DNL Contours 3-46
Table 3-14: Population Change Between 2010 and 2020 3-53
Table 3-15: Housing Units 3-53
Table 3-16: Population Below the Poverty Level 3-54
Table 3-17: Minority Population 3-54
Table 3-18: Percentage of Children (Under 18) 3-56
Table 3-19: Wetland Characteristics 3-63
Table 3-20: Cumulative Projects 3-71
Table 3-21: Summary of Potential Cumulative Impacts Analysis 3-74
Table 4-1: Early Agency Coordination 4-2
Table 4-2: Draft EA Available Locations 4-2
Table 4-3: Draft EA Distribution 4-2

LIST OF FIGURES

Figure 1-1: Jacksonville International Airport....1-3
Figure 1-2: Jacksonville International Airport Layout Plan....1-4
Figure 1-3: Proposed Project....1-6
Figure 1-4: Activity Recovery at JAX....1-10
Figure 1-5: Passenger Forecast Comparison....1-11
Figure 2-1: Alternatives Evaluation Process....2-2
Figure 2-2: Alternative 1....2-6
Figure 2-3: Alternative 2....2-7
Figure 3-1: Direct Study Area....3-2
Figure 3-2: Indirect Study Area....3-3
Figure 3-3: FLUCCS of the Direct Study Area....3-9
Figure 3-4: Area of Potential Effects....3-23
Figure 3-5: Land Use Around the Airport....3-27
Figure 3-6: Existing Noise Contours....3-34
Figure 3-7: 2026 No Action Alternative Noise Contours....3-40
Figure 3-8: 2026 Proposed Project Noise Contours....3-42
Figure 3-9: 2031 No Action Alternative Noise Contours....3-47
Figure 3-10: 2031 Proposed Project Noise Contours....3-49
Figure 3-11: U.S. Census Bureau Tracts....3-52
Figure 3-12: Closest School to the Study Areas....3-55
Figure 3-13: Conceptual Illustration....3-61
Figure 3-14: Stormwater System in the Direct Study Area....3-64
Figure 3-15: Floodplains....3-65
Figure 3-16: Cumulative Projects....3-72

1

PURPOSE AND NEED

The Jacksonville Aviation Authority (JAA or Authority) has undertaken an Environmental Assessment (EA) for the construction and operation of a new Concourse B (i.e., Proposed Project) at Jacksonville International Airport (JAX or Airport).

The FAA is the lead federal agency to ensure compliance with NEPA for airport development actions. This EA is prepared pursuant to Section 102(2)(c) of the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality (CEQ) Regulations Title 40 Code of Federal Regulations (CFR) §§ 1500-1508, the implementing regulations for NEPA, and per FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, and FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, as well as applicable Executive Orders (EOs), and other applicable federal, state, and local requirements.

1.1 DOCUMENT ORGANIZATION

This EA is structured to follow the document format described in FAA Orders 1050.1F and 5050.4B. In addition, this document follows the 2020 Council on Environmental Quality (CEQ) National Environmental Policy Act Implementing Regulations regarding an EA not exceeding 75 pages,[1] not including appendices. (CEQ, 2020). ***Table 1-1*** lists the EA's chapters and describes the information contained within each.

TABLE 1-1: DOCUMENT ORGANIZATION

Chapter	Description
Chapter 1: Purpose and Need/Proposed Project	This chapter provides an overview of the Airport and discusses the purpose and need of the project.
Chapter 2: Alternatives	This chapter describes the No Action Alternative and alternatives considered in this EA.
Chapter 3: Affected Environment / Environmental Consequences	This chapter presents an overview of the existing environment in the EA's study areas. It describes the potential effects of the alternative on each of the environmental resources identified in the FAA Order 5050.4B.
Chapter 4: Agency and Public Involvement	This chapter describes the coordination process to applicable agencies and the public's opportunity to comment on the EA.
Chapter 5: List of Preparers	This chapter lists the staff at the Authority and consulting associates who researched, wrote, reviewed, and documented the EA.

[1] "Page" means 500 words and does not include explanatory maps, diagrams, graphs, tables, and other means of graphically displaying quantitative or geospatial information.

Chapter	Description
Chapter 6: References	This chapter identifies the reference materials used to prepare the EA.
Appendices	The appendices present relevant material, exhibits, and technical reports developed as part of preparing the EA.

Source: RS&H, 2022

1.2 AIRPORT OVERVIEW

The Airport opened as a commercial airport to replace the smaller Imeson Airport in 1968. The Airport is part of the Jacksonville Aviation Authority (JAA), which operates three other public-use airports in the Jacksonville area (Jacksonville Aviation Authority, 2015).

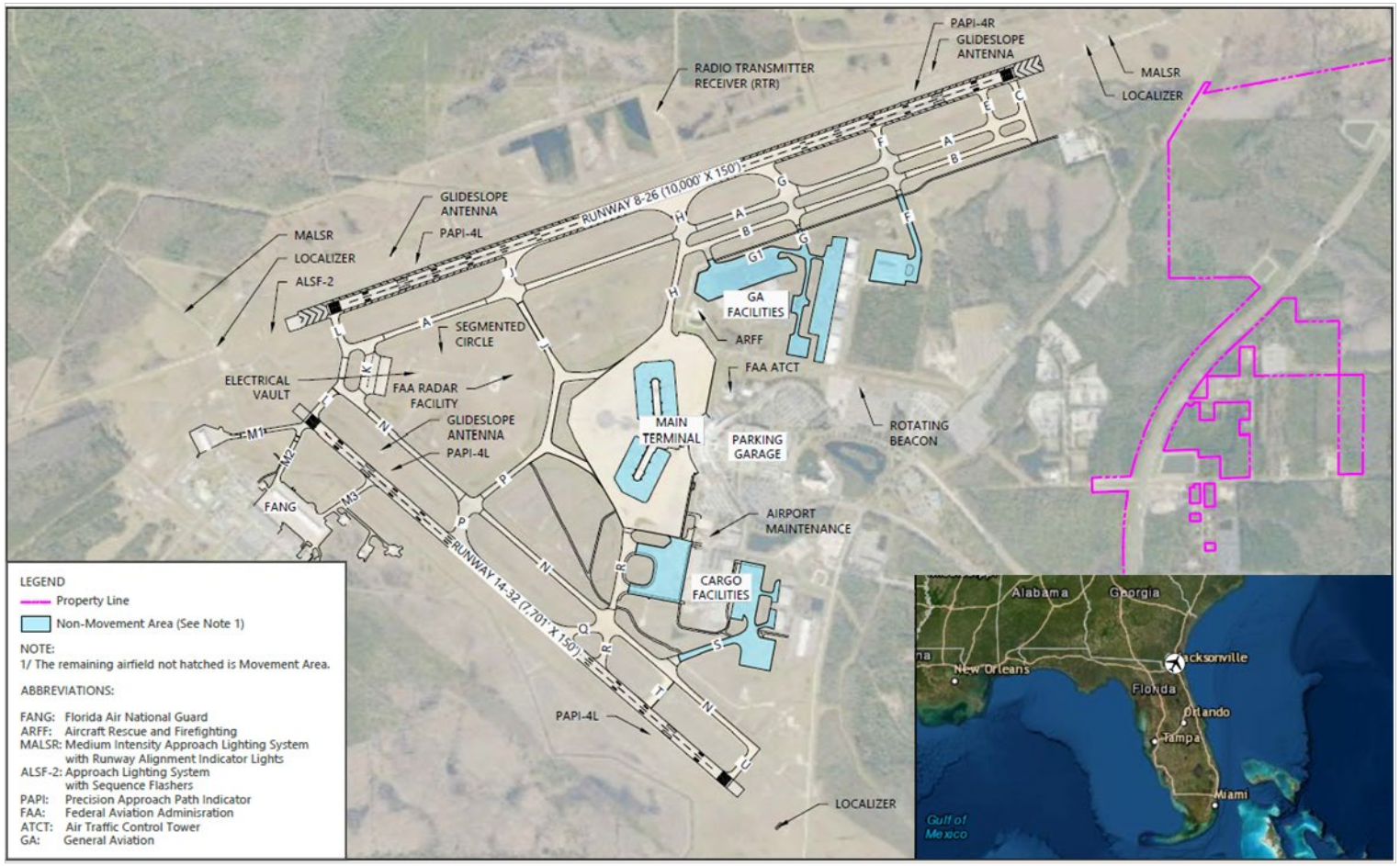
JAX is located in Duval County, about 12 miles north of downtown Jacksonville. The Airport has two runways, with the longest runway, Runway 8/26, measuring 10,000 feet (see ***Figure 1-1***). JAX supports the general aviation community with two fixed-based operators (FBO), the operation of several cargo operators and freight forwarders. JAX also supports the Florida Air National Guard (FANG) 125th Fighter Wing (JAA, 2020). The JAX Airport Layout Plan (ALP) is shown in ***Figure 1-2***.

The Airport has two existing concourses (Concourse A and Concourse C). Each concourse has 10 aircraft gates, each with a passenger boarding bridge. Concourses A and C also have holdrooms, restrooms, and retail/food and beverage concessions for passengers. Concourse A is nearly 600 linear feet from the terminal courtyard and approximately 111,000 square feet in total area. "A" gates primarily serve Delta Airlines, JetBlue Airways, and United Airlines. Level 2 of Concourse A (i.e., passenger circulation and holdroom space) is approximately 55,700 square feet in area. Concourse C is also nearly 600 feet from the terminal courtyard and approximately 112,000 square feet in total area. "C" gates primarily serve Southwest Airlines and American Airlines. Level 2 of Concourse C is approximately 56,200 square feet in area. Frontier Airlines, Allegiant Air, Air Canada, and Spirit Airlines use common use gates[2] on Concourses A and C (Ricondo & Associates, 2020).

The Airport is a vital component of the region's economy and boasts an exceptional geographic location in northeast Florida that offers easy access to major highways (e.g., Interstate 10 and Interstate 95). The Airport helps move the state and local economy by creating jobs, supporting business growth, and connecting global markets. The Airport's economic impact supports approximately 26,400 jobs, which provide $994 million in personal income, and its total economic output is approximately $3.19 billion (FDOT, 2019).

[2] Common Use Gates - assigned to airlines as-needed by JAA.

FIGURE 1-1: JACKSONVILLE INTERNATIONAL AIRPORT



Source: Ricondo & Associates, 2020. ESRI, 2022.

RS&H

Figure is not to scale and is for graphic purposes only.

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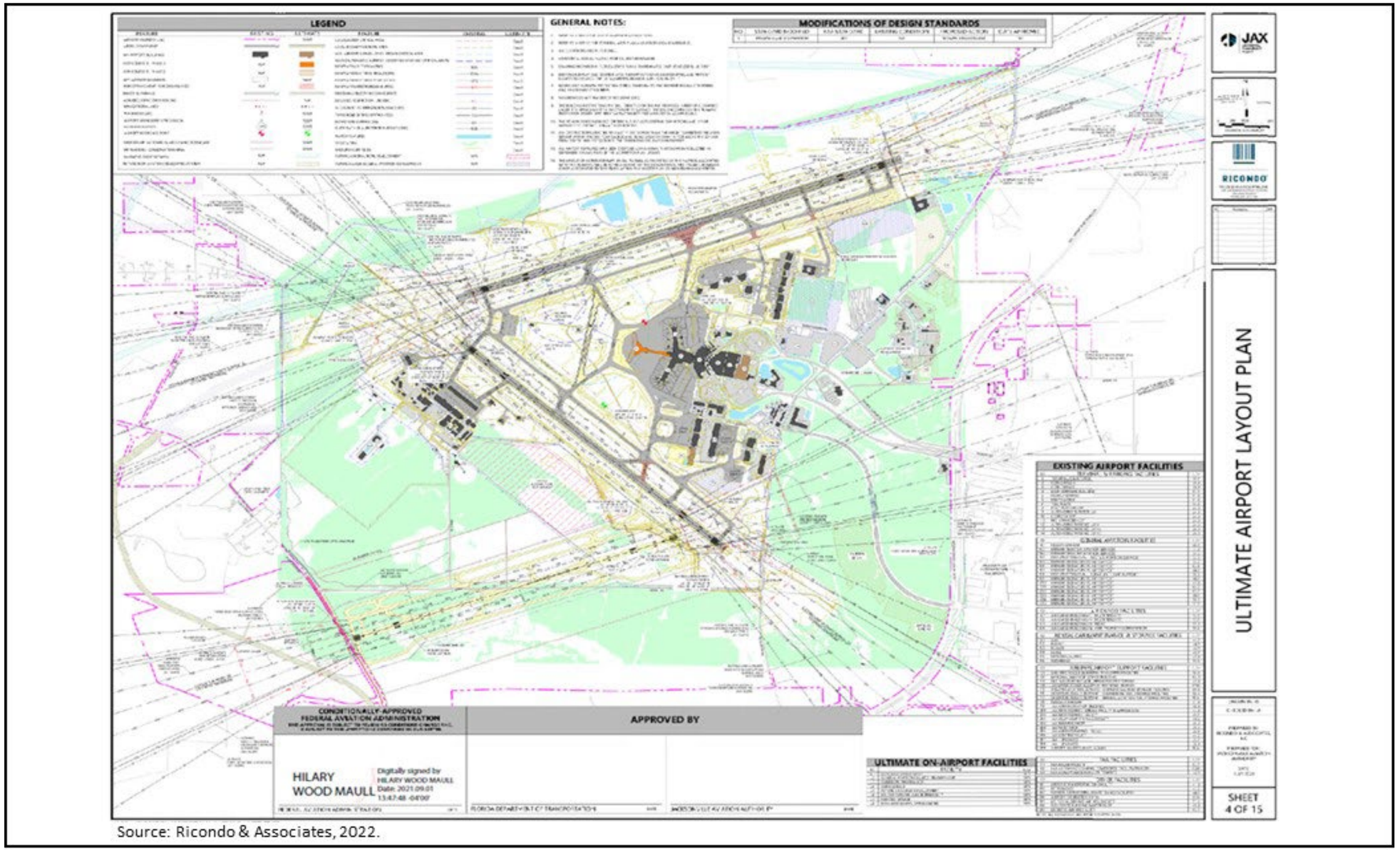
FIGURE 1-2: JACKSONVILLE INTERNATIONAL AIRPORT LAYOUT PLAN



Source: Ricondo & Associates, 2022.

RS&H

Figure is not to scale and is for graphic purposes only.

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The operation of the Airport is important to the economy, providing continued economic benefits to Duval County, the northeast Florida region, and the State (FDOT, 2019).

Aircraft operations at the Airport include commercial, corporate/business, general aviation, charter, recreational, and military flights. ***Table 1-2*** shows the FAA's Terminal Area Forecast (TAF) summarizing the Airport's historical and forecast itinerant, local, and total operations from 2019 to 2033.

TABLE 1-2: AIRPORT OPERATIONS - FAA TERMINAL AREA FORECAST

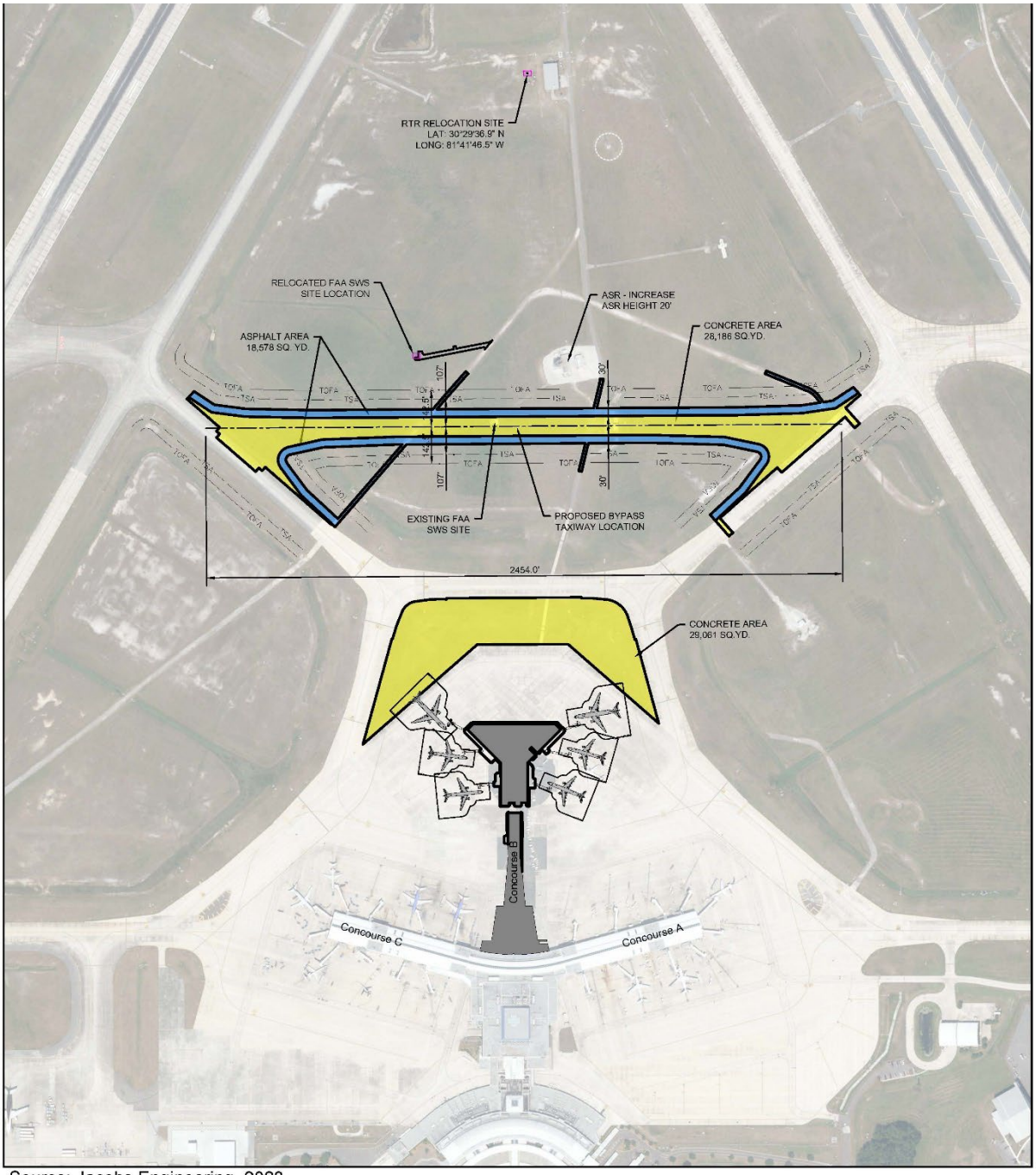
Year	Itinerant Operations	Local Operations	Total Operations	Based Aircraft
2019	103,243	6,021	109,264	61
2020	72,805	5,723	78,528	56
2021	75,288	5,884	81,172	58
2022	94,443	5,008	99,451	59
2023	86,365	5,321	91,686	59
2024	93,655	5,559	99,214	59
2025	101,274	5,828	107,102	59
2026	103,239	5,838	109,077	59
2027	105,107	5,848	110,955	59
2028	107,014	5,858	112,872	59
2029	108,997	5,869	114,846	60
2030	110,936	5,880	116,816	60
2031	112,952	5,891	118,843	60
2032	114,996	5,902	120,898	60
2033	117,032	5,913	122,945	60

Source: (FAA, 2023)

1.3 PROPOSED PROJECT

The Proposed Project includes improvements at the Airport (see ***Figure 1-3***) to accommodate demand at the Airport. The Proposed Project is the construction and operation of replacement Concourse B and the associated ramp area, as well as the relocation of Taxiway V, raising the existing Airport Surveillance Radar (ASR), relocating the existing Remote Transmitter Receiver (RTR) and Surface Weather Station (SWS) systems, and demolishing an unused on-Airport building.

FIGURE 1-3: PROPOSED PROJECT



Source: Jacobs Engineering, 2023

The proposed Concourse B would increase the number of concourses at the JAX Terminal to three (3), like the original terminal layout. Concourse B would consist of up to three levels with approximately 190,000 total square feet and include the development of new holdrooms, six new aircraft gates, concessions, restrooms, and a connecting corridor with moving sidewalks.

- The operations (or ground) level would support the Airport and airline operations and contain the building's mechanical and electrical rooms (approximately 52,000 square feet).
- The concourse (or second) level would be largely passenger circulation and holdroom space (approximately 119,000 square feet). The concourse level would also include concession space. The east end, or Hub area, would connect to existing concourses A and C directly across from the existing TSA passenger security screening checkpoint (SSCP). The new concession areas would tie into the existing concession areas and become one large retail space visible to all passengers as they emerge from the SSCP. Services such as mother's nursing rooms, men's and women's restrooms, and a pet relief area would also be on the concourse level.
- The mezzanine (or third) level would be located at the hub and would be approximately 19,000 square feet, which can be subdivided as needed for club areas and/or a potential restaurant.

To accommodate the construction of Concourse B, the air carrier apron would be expanded by 29,061 square yards west up to existing Taxiway V. Taxiway V would then be relocated approximately 600 feet west of the current location to improve aircraft maneuverability and eliminate the line-of-sight obstruction for air traffic control personnel that results from the construction of Concourse B. In addition, the Proposed Project would include an approximate 5,200-gallon above-ground diesel storage tank for Concourse B backup generators.

The Proposed Project would require modifying the existing ASR-9/Mode S, SWS, and RTR systems to maintain existing communications equipment. Through the Obstruction Evaluation/Airport Airspace Analysis, the FAA identified potential conflicts with the ASR and aircraft taxiing on the proposed taxiway as well as aircraft parked on the apron of the proposed Concourse B. The FAA ATCT personnel also identified existing RTR issues with the current terminal layout. An FAA RTR study was initiated to study further impacts of the proposed Concourse B. The FAA's two studies evaluated the performance of these communications equipment for the Proposed Project and recommendations for continued FAA communication services to the Air Traffic Control System. The studies included an alternatives analysis for these communication services (see ***Appendix D***). The ASR-9/Mode S study recommended that the existing tower be raised 20 feet at its current location and orientation (FAAa, 2023). The SWS system would be relocated from its current location to the west and adjacent to the relocated Taxiway V. The RTR study recommended relocating the existing RTR to an area close to the existing windsock (FAAb, 2023). The RTR site would be on approximately one acre of land, with

one 32-foot consolidated platform (or three 32-foot towers) and a 12-foot x 36-foot precast shelter. The relocated RTR would provide a clear line of sight to both ends of the runways, hold short points/areas, and provide easy access for local maintenance technicians. Additionally, lowering the RTR antenna heights to 32 feet from the current 45 feet would increase the ground coverage and improve the overall communication coverage for Air Traffic.

A replacement Concourse B would also improve aircraft operations on the ground. The original Concourse B gated aircraft around all sides of the concourse, creating dependent push-back and taxi-in operations within the western gates of Concourses A and C. The length of the replacement Concourse B connector would be extended, compared to the original Concourse B, to facilitate independent push-back and taxi-in operations, as well as gate aircraft further west to avoid conflict with the geometric changes to the new Concourses A and C. Extending the connector requires pavement to be extended from the existing ramp up to Taxiway V to accommodate aircraft parking on the westernmost end of the concourse and movement around a replacement Concourse B without transitioning multiple times between movement and non-movement areas. As a result of constructing Taxiway V, new SJRWMD permitted stormwater management swales would be constructed in the airfield to convey, store, and treat runoff.

1.4 PURPOSE AND NEED

According to FAA Order 1050.1F, Section 6-2.1(c), the purpose and need briefly describe the underlying purpose and need for the federal action and provides the foundation for identifying reasonable alternatives to a Proposed Project. The purpose and need identifies the problem facing the airport sponsor (i.e., the "need" for the project) and describes what would be achieved by the Proposed Project (i.e., the "purpose" of the project).

The Purpose and Need provides the foundation for identifying intended results or benefits for future conditions. In addition, it defines the range of reasonable alternatives to a proposed action. The FAA federal action is the unconditional approval of the Airport Layout Plan (ALP) for those parts of the ALP which are defined in this EA (e.g., Concourse B, apron, Taxiway V, relocation of navaids, etc.). Pursuant to 49 U.S.C. § 47107(a)(16), the FAA Administrator (under authority delegated from the Secretary of Transportation) must approve any revisions or modifications to an ALP before a revision or modification takes effect.

The following sections describe the project's background, purpose, and need in accordance with FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions,* and FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*.

1.4.1 Need

Airport projects that accommodate passenger traffic should be undertaken to the maximum possible extent to increase safety and efficiency and avoid passenger delays. Such projects are typically conducted to answer different needs. The terminal at JAX originally had three (3) concourses (A, B, and C) with associated aircraft parking positions. The layout of the terminal

has evolved to adapt to demand, usage, and maintenance/modernization needs. Ultimately, the original Concourse B was demolished as part of that adaptation.

In a continuation of that adaptation process, the JAA currently needs additional gates for the following reasons:

- Meet gate and holdroom requirements based on forecasted passenger demands.
- Complete the terminal modernization program and restore the original number of three concourses by replacing the old Concourse B, demolished in 2009.
- Maintain an adequate number of gates and aircraft positions to, at a minimum, restore capacity to pre-Concourse B demolition and meet future demand.
- Maintain the appropriate Level of Service (LOS) and safe handling of passengers under all circumstances.

1.4.1.1 Airport Master Plan

The FAA approved a forecast of aviation activity in 2019 as part of the latest 2020 JAX Airport Master Plan (2020 AMP). Aviation activity can be affected by external factors unknown at the time of the forecast analysis. The COVID-19 pandemic (2020-2021) significantly affected civil aviation operations across the World, including at JAX. As shown in ***Figure 1-4***, the industry is recovering, and aviation activity is forecast to be at a pre-pandemic level and continue growing. Also shown in ***Figure 1-5***, the 2019 forecast remains valid for the upcoming years.

The validity of the 2019 forecast is also justified by the following reasons:

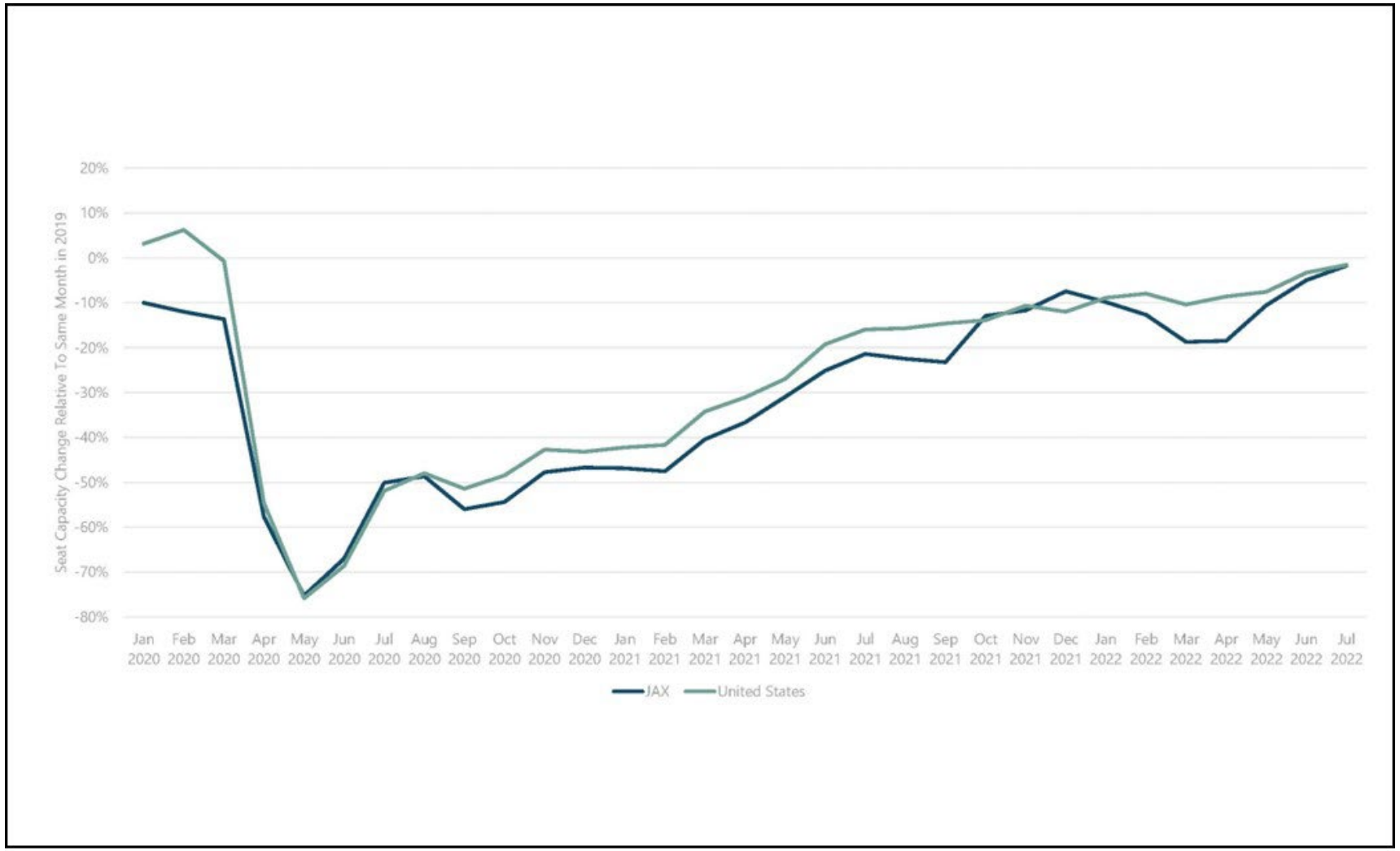
- In 2022, JAA verified the forecast recovery of aviation activity at the Airport. The results of this analysis are conclusive and match the pre-pandemic 2019 forecast within the next five years.

The FAA TAF published in March 2022 predicts slightly greater growth at the Airport than the 2019 forecast.

In the 2020 AMP, design day flight schedules (DDFS) were developed from the annual forecast of aviation activity for 2019 and each Planning Activity Level (PAL).[3] The DDFS represents passenger airline activity that is forecast during the peak period for an average day. The 2020 AMP concludes that the peak hour of passenger airline operations is between 11:00 -11:59 am, with a total of 16 passenger airline arrivals and 11 passenger airline departures for a total of 27 movements either going to or coming from the passenger terminal during this time. This increases to 29 in PAL 1 (2025) and 31 in PAL 3 (2035).

[3] Passenger Activity Levels (PAL) are selected activity levels that may trigger the need for additional facilities or improvements. PAL 1 is assumed to be reached by the end of 2025, PAL 2 by the end of 2030, and PAL 3 by the end of 2035 (JAA, 2020).

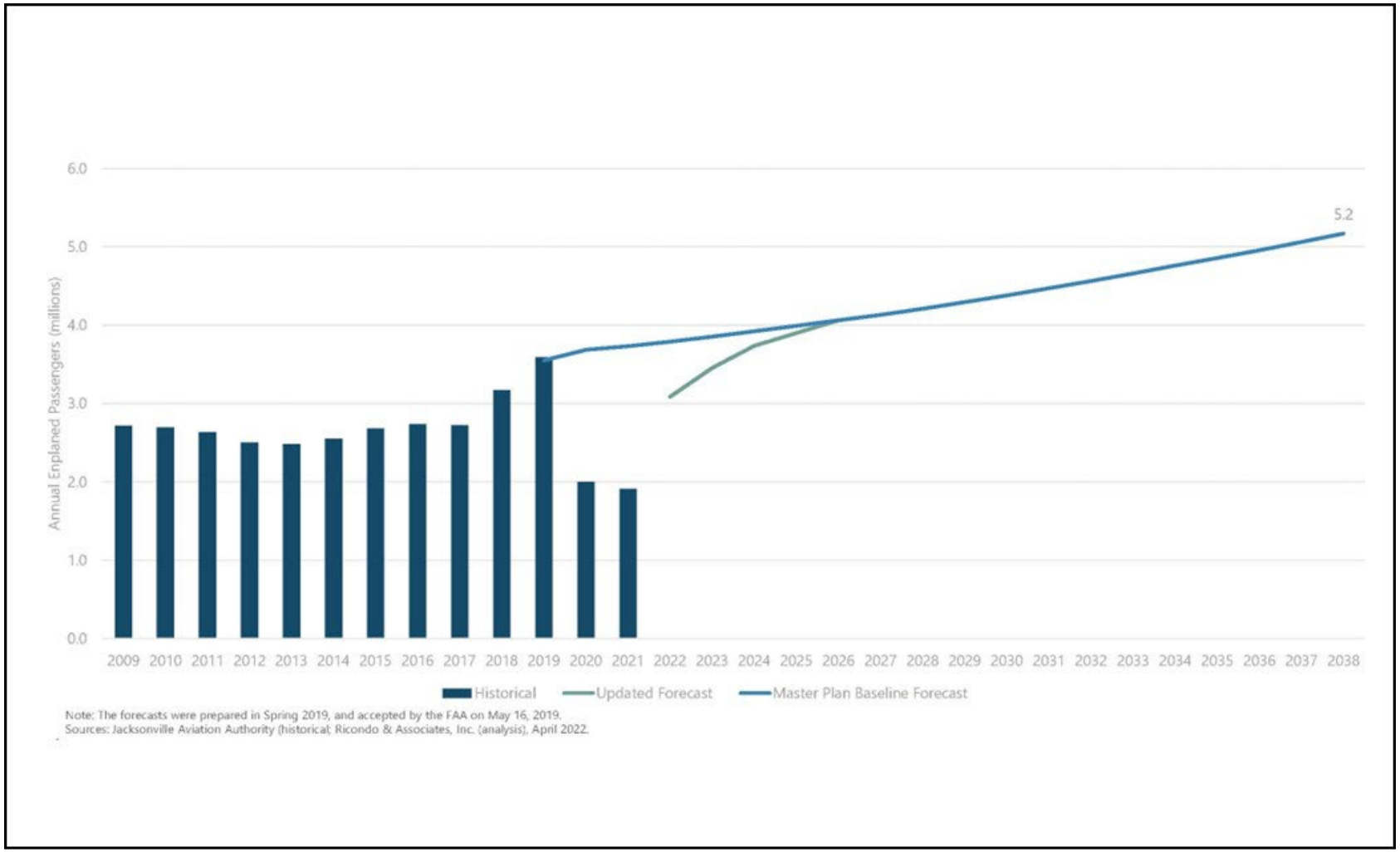
FIGURE 1-4: ACTIVITY RECOVERY AT JAX



RS&H

Source: Ricondo & Associates, 2022.

FIGURE 1-5: PASSENGER FORECAST COMPARISON



RS&H

Source: Ricondo & Associates, 2022.

The 2020 AMP concludes that the existing terminal holdroom space and gates were at capacity in 2019. The results from the analysis in the 2020 AMP triggered requirements in terms of holdroom space and the number of gates at the Airport, requiring Concourse B to be replaced at the terminal (see 2020 AMP for additional details).

1.4.1.2 Terminal Deficiencies

Currently, the Airport has deficiencies in the number of concourses and gates and concerns about planning for future levels of service and passenger safety.

Concourses - The original Airport terminal was constructed in 1968. It was programmed for modernization in 1998 due to age, a layout that no longer effectively served the fleet mix and an increasing financial burden for facility maintenance. The terminal modernization program at the Airport was initially staged in four phases to avoid excessive operational impacts:

- Phase 1, completed in March 2003, provided approximately 95,000 square feet of additional space and included an expansion of the baggage claim/makeup processing space and additional ticketing and rental car counter space.
- Phase 2, completed in late 2004, added 46,500 square feet and included an expansion of the main courtyard to accommodate a new centralized security screening checkpoint and provided more concession space.
- Phase 3, completed in 2008, replaced Concourses A and C.

Phase 4 commenced in 2009 with the demolition of Concourse B, but the subsequent construction of a replacement concourse has not yet occurred.

Phase 4 was interrupted, which created a delay between the demolition of the old Concourse B and its replacement. Initially, Concourse B was set to be replaced immediately following demolition. But the aviation industry experienced a downturn in response to the economic recession in 2008-2009, which created the delay from 2010 to 2019.

In 2019, the JAA revived the replacement Concourse B because of the Airport's 16% increase in passengers in 2018. In 2020, plans to construct and operate a replacement Concourse B were again delayed due to the COVID-19 pandemic and a sharp decline in operations and passengers. A decrease in COVID-19 pandemic cases, recovery of air traffic, and economic trends showing growing stability in the aviation industry initiated the JAA to once again proceed with the concourse replacement.

Gates - In 2005, before the demolition of the old Concourse B, JAX had a total of 29 gates across the three concourses, as follows:

- 7 gates at Concourse A
- 12 gates at the old Concourse B (mix of contact gates and hardstands)
- 10 gates at Concourse C

Since then, Concourse B was demolished, and Concourse A added 3 more gates for a total of 10, bringing the total number of gates available today at JAX to 20.

In the 2020 AMP, a gating analysis was completed for each PAL using a detailed overview of airline operations and the 2019 approved forecast. The Airport operates a mixture of common-use gates (i.e., assigned to airlines as-needed by JAA) and preferential-use gates (i.e., leased by airlines). The gating analysis assumed that a minimum of one-hour ground time would be required between the departure of one flight and the arrival of another on a single gate when the carriers of successive flights are not the same. For operations occurring by a single air carrier, it was assumed that 30 minutes would be required between flights. The conclusion of the gating analysis in the 2020 AMP describes the Airport's immediate need for an additional three (3) gates (contact and spare gates), with a total of four (4) gates needed by PAL 1 (or 2025) and six (6) gates by PAL 3 (2035). Since the completion of the 2020 AMP, the 2022 FAA Terminal Area Forecast (TAF) now projects more total passengers than the 2018 aviation forecast. Enplaned passengers are expected to exceed 2019 volumes by 2024, resulting in the need for six (6) total gates significantly before PAL 3.

Spare Gates[4] – Multiple factors can affect the previous analysis, and it is good practice to construct spare gates for the reasons explained below:

- According to *ACRP Report 163, Guidebook for Preparing and Using Airport Design Day Schedules*, spare gates are intended to provide additional gate capacity in case flight schedules are disrupted, and off-schedule flights result in a higher demand for gates than anticipated under the original schedule.
- Airfield and terminal improvement projects can affect airport operations significantly and require the closure of existing gates throughout construction. Spare gates help the Airport maintain safe and efficient operations during Airport maintenance/development projects around the terminal and construction of the replacement concourse itself.
- The fleet mix used by airlines can change regularly, requiring the Airport to adapt and adjust the gate layout. In addition, limited apron space can lead to a smaller clearance between aircraft and an increased safety risk. Spare gates provide an airport with more space and flexibility to safely shift aircraft positions around the facility for new aircraft types.
- The air transportation industry relies on the ability to arrive and depart an airport facility without unnecessary service interruptions. Ground delays could lead to significant adverse operational and economic consequences and environmental impact if aircraft remain on the ramp with an engine running while waiting for a gate.
- Florida, including Duval County, is subject to unpredictable severe weather events (e.g.,

[4] As described in the 2020 AMP, spare gates are necessary to prepare for irregular operations due to maintenance or weather, causing an aircraft to remain on a scheduled gate longer than anticipated.

significant thunderstorms/rainfalls) that can affect air traffic and require aircraft to remain grounded at gates longer than scheduled. To avoid additional ground delay, gates need to be available during such events. In addition, other southeast U.S. airports have the potential to be closed for the weather as well, requiring aircraft to be diverted to JAX.

Passenger Service and Safety **-** Level of Service (LOS) is the quality or conditions passengers experience at a facility. JAA uses it as a measurement for meeting passenger demand. Passenger LOS can refer to a range of established values combining qualitative and quantitative criteria relative to comfort and convenience. It is expressed as the current comfort level and a desirable threshold of the air traveler's experience.

At JAX, the historical performance of the Airport to passenger processing efficiency and convenience is considered the benchmark for LOS standards. This benchmark includes the sole use of contact gates (no non-contact gates/hardstands) and convenient and accessible amenities.

Contact gates are of critical concern at JAX due to the extreme summer meteorological conditions when daytime temperatures frequently exceed 95 degrees. In addition, the ability to shelter JAX passengers from monsoon-like seasonal storms (e.g., heavy rain and lightning) is also a primary consideration. Historical weather data from the National Oceanic and Atmospheric Administration (NOAA) shows that Duval County has thousands of lightning strikes and severe storms yearly. Cloud-to-ground lightning flashes recorded from 1988 to 2017 show that the County had 522,000 total flashes, with storm activity significantly increased in May through September, with 1 pm-7 pm local time as the peak time range for storms and lightning, when passenger activity is at its highest.

Additional contact gates, as opposed to the addition of hardstand positions around the existing concourses, are needed to provide safety and maintain its current level of comfort to passengers.

1.4.2 Purpose

The JAA is proposing improvements at the Airport that are intended to maintain its current level of service and proactively prevent near-future congestion.

The additional concourse was a part of the original modernization program and then re-emphasized in the previous AMP. Due to various reasons described previously that were out of JAA's control, the project was put on hold. The 2020 AMP highlighted the need to replace the concourse and triggered the current project. Additional gates would ensure that JAX can meet latent demand and maintain its current LOS. Additional gates are needed to provide additional holdroom space for contact gates to load and unload passengers, maintain the Airport's current LOS, and continue safe passenger operations.

1.4.2.1 Construction and Operation of New Additional Gates

The 2020 AMP documented the need for additional gates to accommodate the projected growth in passenger enplanements. An increase of six (6) gates (4 additional and 2 spares) would leave the Airport with a three-gate deficit when compared to its original terminal (see ***Table 1-2***).

The JAA has determined that implementing the construction and operation of additional gates would meet increased forecast passenger demand, maintain the Airport's current level of service, accommodate additional aircraft, and continue to provide safe and efficient aircraft movement at the Airport.

TABLE 1-3: AIRPORT GATE HISTORY

Number of Gates	Concourse A	Concourse B	Concourse C	Airport Total	Comparison to the Original Terminal
Original Terminal (2005)	7	12[1]	10	29	-
Existing Terminal (2022)	10	0	10	20	(9.00)
With Replacement Concourse B (2026)	10	6	10	26	(3.00)

Notes: [1] - Contact / Hardstand Gates

Source: RS&H, 2023.

JAX facilities are consistent with the LOS standards referenced in the International Air Transportation Association (IATA) *Airport Development Reference Manual* and the FAA AC 150/5360-13A, *Airport Terminal Planning.* New contact gates at JAX would provide airline passengers and tenant airlines with a LOS consistent with that historically provided at the Airport. In addition, it would ensure sheltering of passengers during severe weather conditions and limit passenger circulation on the apron for safer operations with contact gates.[5]

Construction and Operation of Spare Gates - Spare gates are needed at JAX due to the number of flights proposed for each gate per day, especially on the preferential-use gates.[6] Preferential-use gates (i.e., leased by a single carrier with first right-of-refusal) only have 30 minutes between flights and average seven to nine turns (i.e., deplaning and boarding of an aircraft) per day, which can quickly compound delay during irregular operations and peak periods. Therefore, the 2020 AMP gating analysis recommended four (4) new gates and two (2) spare gates (6 total gates) for the safe, efficient, and best passenger experience.

[5] JAA determined that common departure lounge/holdroom concept and use of remote gate/aircraft hardstand operations do not provide an acceptable LOS

[6] JAA determined the 2020 AMP gating analysis should plan for an operational spare gate on each concourse.

1.5 FEDERAL ACTION

The following are the federal actions for the Proposed Project.

- Unconditional approval of the Airport Layout Plan (ALP) to depict the proposed improvements pursuant to 49 USC § 40103(b) and 47107(a)(16).
- Determinations under 49 USC 47106 and 47107 relating to the eligibility of the Proposed Project for federal funding under the Airport Improvement Program (AIP) and/or determinations under 49 USC 40117, as implemented by 14 CFR 158.25, to impose and use passenger facility charges (PFCs) collected at the airport to assist with construction of potentially eligible development items shown on the ALP including the proposed construction of Concourse B and associated actions.

2

ALTERNATIVES

FAA Order 1050.1F, Paragraph 6-2.1.d describes the requirements of an alternatives analysis within an FAA EA. EAs discuss the alternatives the approving official will consider. There is no requirement for a specific number of alternatives, and an EA may limit the range of alternatives to the Proposed Project and no action. For alternatives considered but eliminated from further study, the EA should briefly explain why these were eliminated.

As stated in Federal Aviation Administration (FAA) Order 5050.4B, paragraph 706 (d)(7), an alternative can be eliminated from further consideration when the alternative has been judged "not reasonable." Whether a proposed alternative is reasonable depends, in large part, upon the extent to which it meets the purpose and need for the Proposed Action (FAA Order 1050.1F, paragraph 7-1.1[e]). In addition, 40 C.F.R. 1502.14(c)[2020] requires the evaluation of the No Action alternative regardless of whether it meets the stated purpose and need or is reasonable to implement.

This chapter evaluates the Proposed Project (i.e., the proposed replacement Concourse B) and alternatives. CEQ regulations (Title 40 Code of Federal Regulations [C.F.R.] Section 1502.14) regarding implementation of the NEPA require that federal agencies rigorously explore and objectively evaluate all reasonable alternatives and, for alternatives eliminated from detailed study, briefly discuss the reasons for elimination.

2.1 OVERVIEW OF THE ALTERNATIVES SCREENING PROCESS

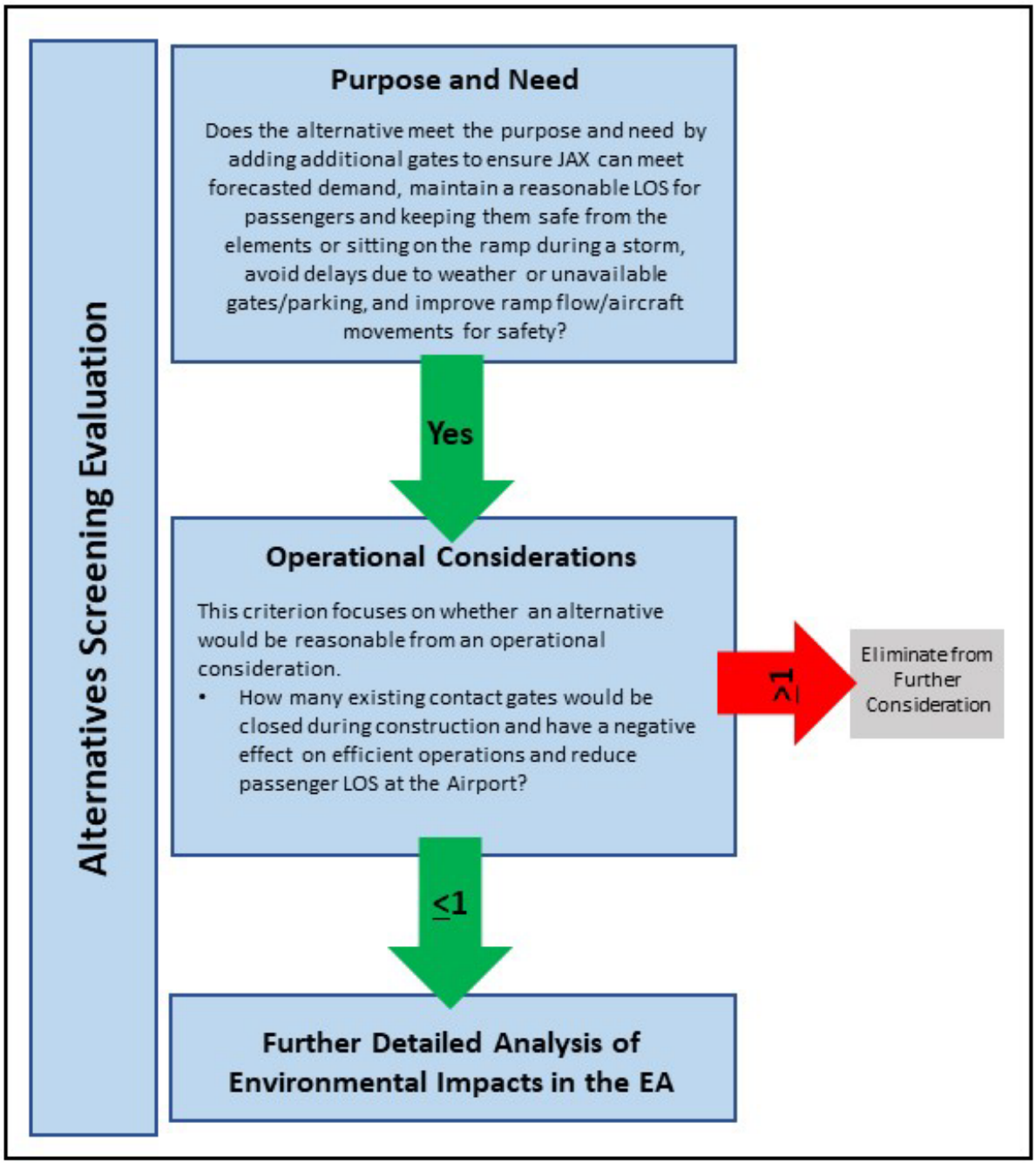
The alternatives evaluation involves a two-step screening process. The first step addresses whether the alternative meets the purpose and need for the project as described in Chapter 1, Purpose and Need. The second step is to determine if the alternative would be reasonable, including constructability and operational considerations.

Alternatives that did not meet the evaluation criteria established were eliminated from further consideration and were not subject to a detailed analysis of environmental impacts in this EA.

2.1.1 SCREENING CRITERIA FOR ALTERNATIVES

This section introduces and describes the evaluation process for the No Action Alternative, Proposed Project, and alternatives (see ***Figure 2-1***). The purpose is to evaluate the reasonableness of the implementation of each alternative. Each criterion is used to evaluate each alternative independently on its own merits. The criteria include evaluation of the ability of the alternative to achieve the Purpose and Need and maintain the functionality of the overall operations of the Airport. If an alternative cannot fulfill the criteria described below, it is not carried forward for further environmental analysis.

FIGURE 2-1: ALTERNATIVES EVALUATION PROCESS



Source: RS&H, 2022

2.1.1.1 Purpose and Need

This criterion evaluates the alternative's ability to achieve the Purpose and Need by ensuring JAX can meet forecasted demand, maintain its current LOS for passengers, and keep them safe from the elements or sitting on the ramp during a storm. The alternative must also help JAA users avoid delays due to weather or unavailable gates/parking and improve ramp flow/aircraft movements for safety.

2.1.1.2 Operational Considerations

This criterion focused on whether an alternative would be reasonable from an operational consideration. This criterion considers whether an alternative would impact overall operations at the Airport. Of primary concern would be each alternative's number of existing gates that would be closed during construction, as this would contribute most to continued inefficient operations at the Airport.

The Airport must keep all existing gates open and operational to meet the existing demand. A temporary shutdown of existing Airport gates to construct additional gates would substantially affect air carrier operations and passenger LOS during construction. Construction that would close existing gates would require shutting down portions of a concourse for long periods (multiple years). This would have a negative effect on efficient operations and reduce passenger LOS at the Airport. If an alternative requires closing (temporarily or permanently) at least one (1) existing gate for the construction of new gates, there would be a substantial impact on efficient operations at JAX.

2.2 ALTERNATIVES CONSIDERED AND EVALUATED

Alternatives were prepared to identify options to meet increased passenger demand, maintain the Airport's current level of service, accommodate additional aircraft, including at least one (1) spare gate, and continue to provide a safe and efficient movement of aircraft at the Airport. The Proposed Project is the identified JAA preferred alternative to achieve the Purpose and Need. Other development alternatives to the Proposed Project were also prepared to determine if other reasonable options to the Proposed Project exist. Alternatives 1 and 2 were originally proposed and evaluated in the 2010 AMP and are described as reasonable alternatives in this EA.

In addition, NEPA requires agencies to consider a "no action" alternative in NEPA analyses and to compare the effects of no development with the effects of the development alternative(s). The No Action Alternative serves as a baseline to assess the effects of the Proposed Project.

The following describes and evaluates the No Action, Proposed Project, and other alternatives.

2.2.1 No Action Alternative

Under the No Action Alternative, the project (i.e., replacement Concourse B) would not be constructed. This alternative would not involve airside or landside improvements beyond those

already programmed or that the Airport will undertake for safety, security, or maintenance reasons. The No Action Alternative would not satisfy the project's purpose and need.

The EA retains the No Action Alternative for environmental baseline comparative purposes, to fulfill CEQ regulations (40 CFR Part 1502) implementing NEPA, and to comply with FAA Order 1050.1F, E*nvironmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*. Therefore, the No Action Alternative is retained as the base against which the project's effects can be assessed.

2.2.2 Proposed Project

As described in ***Chapter 1***, the Proposed Project includes improvements at the Airport (see ***Figure 1-3***) to accommodate demand at the Airport. The Proposed Project is the construction and operation of replacement Concourse B and connected actions.

The Proposed Project would achieve the Purpose and Need by ensuring JAX can meet forecasted demand, maintain its current LOS for passengers, and keep them safe from the elements or sitting on the ramp during a storm. The Proposed Project also helps JAA users avoid delays due to weather or unavailable gates/parking and improves ramp flow/aircraft movements for safety.

The Proposed Project would also improve aircraft operations on the ground. The original Concourse B gated aircraft around all sides of the concourse, creating dependent push-back and taxi-in operations within the western gates of Concourses A and C. The length of the replacement Concourse B connector would be extended, compared to the original Concourse B, to facilitate independent push-back and taxi-in operations, as well as gate aircraft further west to avoid conflict with the geometric changes to the new Concourses A and C. Extending the connector requires pavement to be extended from the existing ramp up to Taxiway V to accommodate aircraft parking on the westernmost end of the concourse and movement around a replacement Concourse B without transitioning multiple times between movement and non-movement areas.

The Proposed Project would meet the EA Purpose and Need by including six new gates (including 2 spare gates), keeping all existing gates open and operational during construction, accommodating air carrier airfield movements, and maintaining existing communication and surveillance systems. Therefore, the Proposed Project is carried forward for further environmental analysis.

2.2.3 Alternative 1 – Expand Concourse C

For Alternative 1, Concourse C would be expanded further south to include six new gates (including 2 spare gates) for 26 gates (see ***Figure 2-2***). This alternative would require the closure of four existing aircraft gates (C7, C8, C9, and C10) during construction, substantially reducing the Airport's existing gate capacity. This alternative would also require the existing apron to be increased to provide dual taxilanes around the end of extended Concourse C. Alternative 1 would not affect the Airport's existing ATCT communications systems (i.e., ASR-9/Mode S, SWS, or RTR systems) and, therefore, they would remain in their current positions.

Alternative 1 would substantially affect air carrier operations and passenger LOS during construction. Four existing gates would close during construction, and portions of the concourse could be shut down for long periods. Overall, this can have a negative effect on the passenger's perception of the Airport and the overall level of service being provided.

Losing four existing gates during construction would negatively impact Airport operations and passenger LOS. Without these gates, the Airport could have disrupted schedules and constrained operations during Airport maintenance/development projects around the terminal. In addition, flexibility to safely shift aircraft positions as needed around the facility for new aircraft types would not be achievable. The Airport is subject to unpredictable severe weather events (e.g., significant thunderstorms/rainfalls) that can affect air traffic and require aircraft to remain grounded at gates longer than scheduled. A temporary reduction in overall contact gates during construction under Alternative 1 could result in additional ground delays.

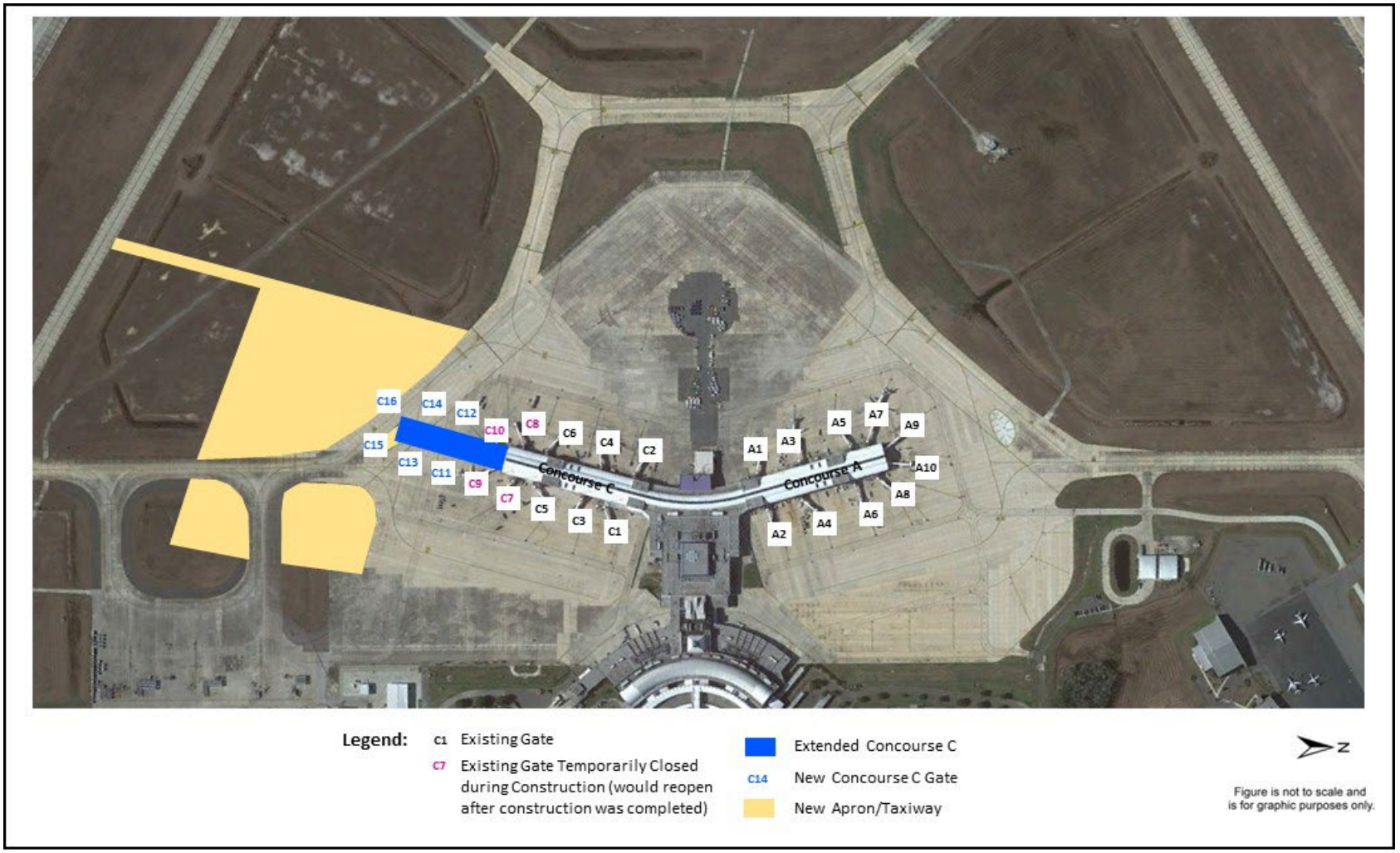
Alternative 1 would provide new aircraft gates but would reduce the overall functionality of the Airport. Alternative 1 would not allow the Airport to continue to operate safely and efficiently. As a result, Alternative 1 was rejected from further environmental consideration.

2.2.4 Alternative 2 – Expand Concourse A

For Alternative 2, Concourse A would be expanded further north to include six new gates (including 2 spare gates) for 26 gates (see ***Figure 2-3***). This alternative would require the closure of four aircraft gates (A7, A8, A9, and A10) during construction, reducing the Airport's existing gate capacity. This alternative would also require the existing apron areas to be increased to provide dual taxilanes around the end of extended Concourse A. Alternative 2 would not affect the Airport's existing ATCT communications systems (i.e., ASR-9/Mode S, SWS, or RTR systems) and, therefore, they would remain in their existing locations.

Alternative 2 would substantially affect air carrier operations or passenger LOS during construction. Construction would close four gates and could require shutting down portions of the concourse for long periods. Overall, this can have a negative effect on the passenger's perception of the Airport and the overall level of service being provided.

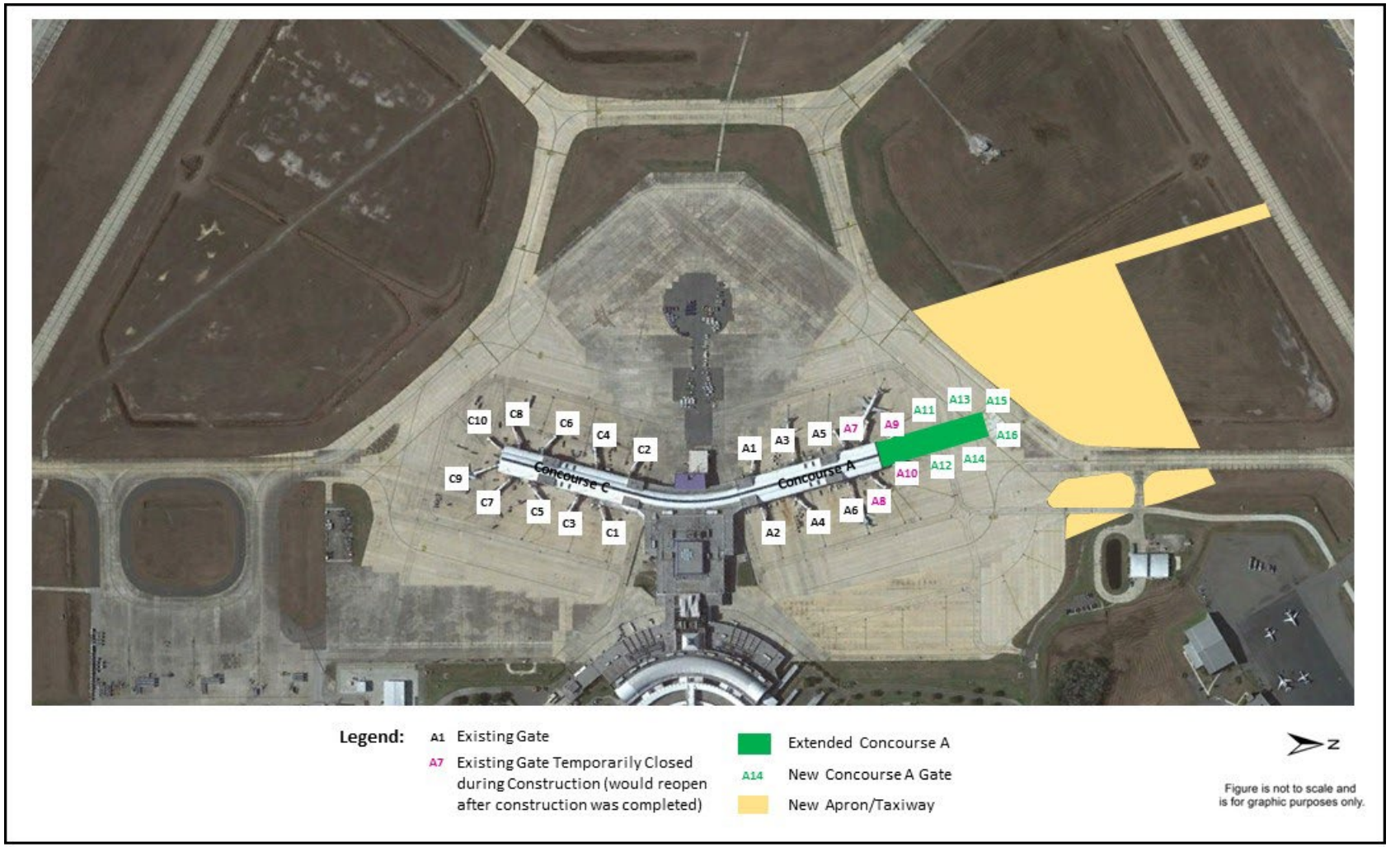
FIGURE 2-2: ALTERNATIVE 1



RS&H

Source: Google Earth, 2022; RS&H, Inc. 2022

FIGURE 2-3: ALTERNATIVE 2



RS&H

Source: Google Earth, 2022; RS&H, Inc. 2022

With the loss of four existing gates during construction, the Airport would have a reduction in functionality with the overall operations of the Airport and a decreased passenger level of service. Without these gates, the Airport could have disrupted schedules and constrained efficient operations during Airport maintenance/development projects around the terminal.

Without the four existing gates, during the construction of this alternative, flexibility to safely shift aircraft positions as needed around the existing facility would be eliminated because of the aircraft characteristics and the existing remaining contact gates (i.e., aircraft at existing Gates A7-A10 would be temporarily relocated to other existing gates; however, those existing gates may not be able to board/deplane passengers). In addition, the Airport is subject to unpredictable severe weather events that can affect air traffic and require aircraft to remain grounded at gates longer than scheduled. A temporary reduction in overall contact gates during construction under Alternative 2 could result in additional ground delays.

Alternative 2 would provide new aircraft gates but would reduce the overall functionality of the Airport. Alternative 2 would not allow the Airport to continue to operate safely and efficiently. As a result, Alternative 2 was rejected from further environmental consideration.

2.3 ALTERNATIVES RETAINED FOR DETAILED ANALYSIS

Table 2-1 summarizes the alternatives evaluation results.

The No Action Alternative would not satisfy the Purpose and Need and does not satisfy the evaluation criterion. However, the EA retains the No Action Alternative for environmental baseline comparative purposes, to fulfill CEQ regulations (40 CFR Part 1502.14(c))[2020], and to comply with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.

Based on the evaluation of reasonable alternatives to achieve the project's purpose and the evaluation comparison of alternatives, the Proposed Project is the JAA's preferred alternative. It is retained for further environmental analysis (see ***Chapter 3*** for further details).

TABLE 2-1: ALTERNATIVES EVALUATION

Evaluation Criteria	No Action Alternative	Proposed Project	Alternative 1	Alternative 2
Purpose and Need				
Does the alternative meet forecasted demand and address terminal deficiencies in providing adequate hold rooms and gates to address concerns about the level of service and safety for passengers?	No	Yes	Yes	Yes
Operational Considerations				
The number of contact gates that would be temporarily shut down due to the construction of new gates resulting in inefficient Airport operations?	-	0	4	4
Retained for Further Analysis?	**Yes[1]**	**Yes**	No	No

Notes: [1] – No Action Alternative for environmental baseline comparative purposes, to fulfill CEQ regulations (40 CFR Part 1502) implementing NEPA, and to comply with FAA Order 1050.1F and FAA Order 5050.4B.

Source: RS&H, 2022.

3

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

As per the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Implementing Regulations 40 CFR Parts 1500 – 1508, dated 2020, FAA Orders *1050.1F Environmental Impacts: Policies and Procedures,* and *5050.4B National Environmental Policy Act Implementing Instructions for Airport Actions*, this chapter describes the existing environmental condition (i.e., Affected Environment) as well as environmental resources that the Proposed Project may affect (i.e., Environmental Consequences).

Study areas were established for this Environmental Assessment (EA) to identify the environmental characteristics that may be directly or indirectly affected by the construction and operation of the Proposed Project.

To evaluate potential impacts, the analyses in this chapter overlay the components of the Proposed Project and No Action Alternative onto the conditions within the approximate 81-acre Direct Study Area (see ***Figure 3-1***) for each environmental impact category presented. The Direct Study Area is where ground-disturbing activities could occur. In addition, an Indirect Study Area is also established to assess the potential aviation noise impacts of the Proposed Project compared to the No Action Alternative (see ***Figure 3-2***). The Indirect Study Area is the 2031 Proposed Project DNL 65 dBA noise contour (see ***Section 3.2.11*** for further information).

The environmental analyses in this chapter are consistent with FAA Orders *1050.1F* and *5050.4B* and discloses the potential impacts for the projected future conditions in 2026. The EA uses 2026 as a basis for analysis because 2026 is the projected opening year for the Proposed Project. The EA also includes a +5-year project study year (2031).

3.1 NO ACTION ALTERNATIVE

Under the No Action Alternative, the construction and operation of the proposed replacement Concourse B would not occur. Future development at the Airport would be subject to review under NEPA and is not assumed under the No Action Alternative. The affected environment of the study areas under the No Action Alternative would not differ from existing conditions.

Because there would be no anticipated construction or change in Airport facilities under the No Action Alternative, no impacts would be expected to occur related to Air Quality; Biological Resources; Climate; Coastal Resources; DOT Section 4(f) Resources; Hazardous Materials, Solid Waste, and Pollution Prevention; Historical, Architectural, Archaeological, and Cultural Resources; Land Use; Natural Resources and Energy Supply; Noise and Noise-Compatible Land Use; Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks; Visual Effects; or Water Resources in the study areas or vicinity of the Airport.

FIGURE 3-1: DIRECT STUDY AREA

Sources:ESRI, 2022; RS&H, 2022.

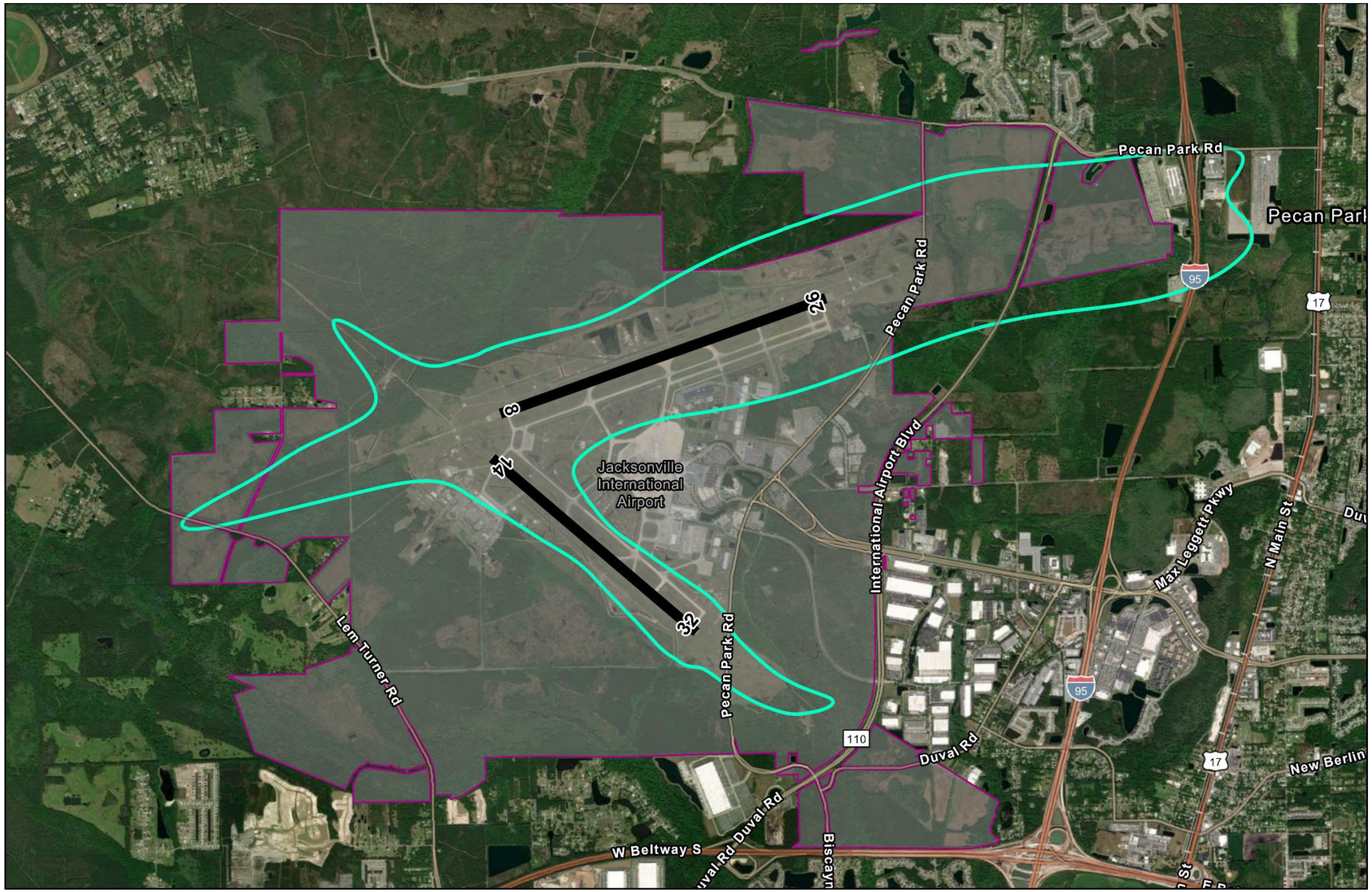
Legend

Direct Study Area
Raised ASR
Relocated RTR
Existing RTR
Relocated SWS

N

RS&H

FIGURE 3-2: INDIRECT STUDY AREA



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3.2 ENVIRONMENTAL ANALYSIS

This section describes the significance threshold, general characteristics of the environment within the study areas, and the Proposed Project's potential environmental effects compared to the No Action Alternative.

3.2.1 Air Quality

This section describes the existing condition, the FAA's significance threshold(s), the potential air quality effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.1.1 Affected Environment

The Clean Air Act (CAA) is the primary statute related to air quality. The CAA regulates air pollutant emissions from stationary and mobile sources and authorizes the U.S. Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The CAA also gives the USEPA authority to regulate Hazardous Air Pollutants.

The United States Environmental Protection Agency (USEPA) sets National Ambient Air Quality Standards (NAAQS) to protect public health and environmental welfare. The USEPA has identified the following six criteria air pollutants for which NAAQS are applicable: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM10 and PM2.5), and sulfur dioxide (SO2). USEPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels (USEPA, 2022).

The USEPA has three classifications for areas regarding their ability or inability to meet the NAAQS. "Nonattainment" areas are geographic areas that violate one or more NAAQS. "Attainment" areas are geographic areas where concentrations of the criteria pollutants are below (i.e., within) the NAAQS. Lastly, "maintenance" areas are geographic areas with prior nonattainment status that have since transitioned to attainment.

The study areas are located entirely within Duval County. The USEPA classifies all of Duval County as an "attainment" area for all National Ambient Air Quality Standards (NAAQS) (EPA Greenbook, 2022).[7] See ***Table 3-1*** for the existing aircraft air pollutant emissions for each NAAQS category.

TABLE 3-1: EXISTING AIRCRAFT OPERATIONAL EMISSIONS

Year	CO	VOC	NOx	SOx	PM2.5	PM10
2022	323.59	44.09	172.74	19.94	2.19	2.19

Source: FAA ATADS, 2023. AEDT, 2024. RS&H, 2024.

[7] NAAQS are six criteria pollutants: carbon monoxide, lead, ozone, sulfur dioxide, nitrogen dioxide, and ozone.

3.2.1.2 Environmental Consequences

Significance Threshold **-** FAA Order 1050.1F, Exhibit 4-1, provides the FAA's significance threshold for air quality, which states, "The action would cause pollutant concentrations to exceed one or more of the NAAQS, as established by the USEPA under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations."

Potential Impacts

Construction - Construction of the Proposed Project would cause a minor increase in surface vehicles using area roadways to access the construction site. However, this would be temporary, lasting the duration of construction. A Construction Emissions Inventory (CEI) of the Proposed Project was conducted through EPA's MOtor Vehicle Emissions Simulator 3 (MOVES3.1) program. MOVES3.1 uses EPA-approved emission factors for non-road construction equipment and on-road vehicles. Exhaust and fugitive emission factors were developed for non-road construction equipment and on-road vehicles. ***Table 3-2*** shows an increase in temporary construction air pollutant emissions for each NAAQS category and CO2. See ***Appendix B*** for CEI data and calculations.

TABLE 3-2: TEMPORARY CONSTRUCTION EMISSIONS

2024-2026	CO	VOC	NOx	SOx	PM10	PM2.5	CO2
Nonroad[1]	0.62	0.14	2.39	0.13	0.13	0.01	4,861.73
On road[2]	71.97	0.62	2.40	0.07	0.06	0.04	5,939.19
Fugitive[3]	0.40	6.21	0.03	1.07	N/A	0.00	N/A
Total[4]	**73.00**	**6.97**	**4.81**	**1.27**	**0.19**	**0.06**	**10,800.92**

Notes: 1 – Nonroad: Emissions from construction equipment (e.g., bulldozer); 2 – Onroad: Emissions from cars, trucks, and buses; 3 – Fugitive: Emissions of particulate matter from vehicles driving over paved roads. 4- Totals may not sum due to rounding. N/A – not applicable. Source: RS&H, 2024.

Operational - Compared to the No Action Alternative, the Proposed Project would increase aircraft operations (7,737 operations in 2026 and 23,971 operations in 2031) and air emissions in 2026 and 2031. As previously described, Duval County is in "attainment" for all NAAQS. Therefore, air quality *de minimis* thresholds do not apply. However, for informational purposes, ***Table 3-3*** shows the increased aircraft operational emissions compared to the No Action Alternative for each study year. The Proposed Project would not significantly affect air quality or violate local, state, tribal, or federal air quality standards under the Clean Air Act Amendments of 1990.

TABLE 3-3: FUTURE AIRCRAFT OPERATIONAL EMISSIONS

Year	CO	VOC	NOx	SOx	PM2.5	PM10
2026						
No Action Alternative	350.51	60.62	183.95	21.58	2.31	2.31
Proposed Project	373.75	63.77	196.89	23.21	2.43	2.43
Difference	**23.25**	**3.14**	**12.95**	**1.62**	**0.12**	**0.12**
2031						
No Action Alternative	380.45	64.86	200.77	23.64	2.46	2.46
Proposed Project	452.47	74.60	240.85	28.67	2.83	2.83
Difference	**72.02**	**9.74**	**40.08**	**5.03**	**0.37**	**0.37**

Source: FAA TAF; Virtower™, 2023. AEDT, 2023. RS&H, 2024.

Mitigation, Avoidance, and Minimization Measures – Because the Proposed Project would not cause significant direct or indirect effects to air quality, the JAA does not propose mitigation measures.

3.2.2 Biological Resources

This section describes the existing condition, the FAA's significance threshold(s), the potential biological resource effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.2.1 Affected Environment

Biological resources are valued for their intrinsic, aesthetic, economic, and recreational qualities and include fish, wildlife, plants, and their respective habitats. Typical categories of biological resources include terrestrial and aquatic plant and animal species, game and non-game species, special status species (state or federally listed threatened or endangered species, marine mammals, or species of concern, such as species proposed for listing or migratory birds), and environmentally sensitive or critical habitats.

Section 7(a)(2) of the Endangered Species Act (ESA) requires that each federal agency, in consultation with the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS), ensures that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. The FAA is required to consult the USFWS or NMFS if an action may affect a federally listed species or critical habitat.

The Migratory Bird Treaty Act (MBTA) prohibits taking any migratory birds, their parts, nests, or eggs, except as permitted by regulations. It does not require intent to be proven. The Bald and Golden Eagle Protection Act (BGEPA) provides additional protection for bald and golden eagles. It prohibits taking bald or golden eagles, including their parts, nests, or eggs.

According to the U.S. Fish & Wildlife Service (USFWS) Information for Planning and Conservation (IPaC), there are federally listed species with the potential to occur within the study areas (U.S. Fish & Wildlife Service Information for Planning and Consultation, 2023). ***Table 3-4*** identifies threatened and/or endangered species and their federal/state designation for Duval County. According to the USFWS, neither study area has a critical habitat.

TABLE 3-4: THREATENED OR ENDANGERED SPECIES WITHIN THE STUDY AREAS

Common Name	Scientific Name	Federal Listing[1]	State Listing[1]
Eastern Black Rail	*Leterallus jamaicensis ssp. Jamaicensis*	FT	ST
Red-Cockaded Woodpecker	*Picoides borealis*	FE	ST
Wood Stork	*Mycteria americana*	FT	SE
Eastern Indigo Snake	*Drymarchon corais couperi*	FT	ST
Gopher Tortoise	*Gopherus polyphenus*	C	ST
Green Sea Turtle	*Chelonia mydas*	FT	ST
Hawksbill Sea Turtle	*Eretmochelys imbricata*	FE	SE
Leatherback Sea Turtle	*Dermochelys coriacea*	FE	SE
Loggerhead Sea Turtle	*Caretta caretta*	FT	ST
Frosted Flatwoods Salamander	*Ambystoma cingulatum*	FT	ST
Monarch Butterfly	*Danaus plexippus*	C	C

Note: [1] – FE-Federally Endangered, FT-Federally Threatened, SE- State Endangered, ST- State Threatened, C-Candidate.
Source: (U.S. Fish & Wildlife Service Information for Planning and Consultation, 2023).

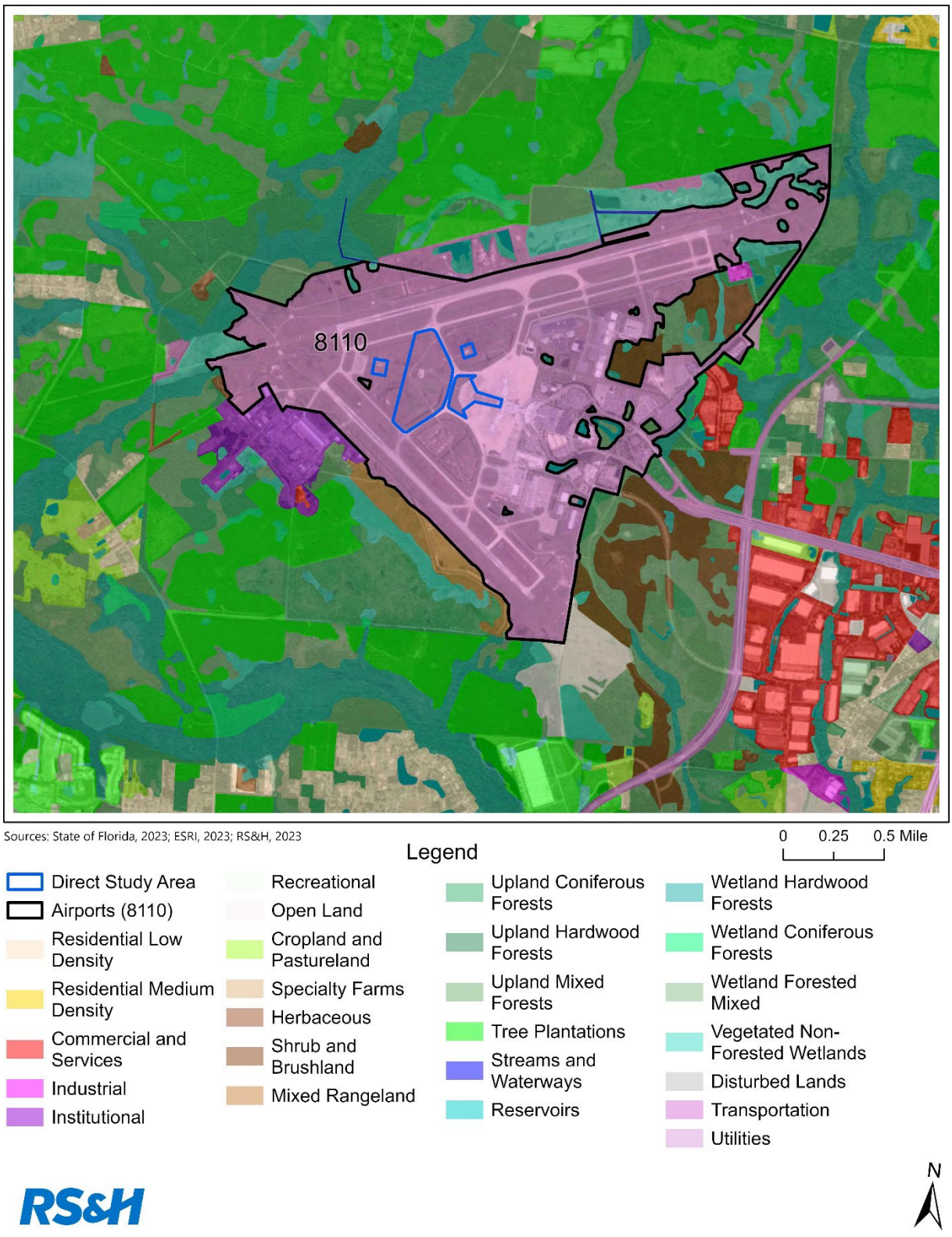
Habitat within the Direct Study Area was inspected and classified using the Florida Department of Transportation (FDOT) Florida Land Use, Cover and Forms Classification System (FLUCFCS, 1999). As shown in ***Figure 3-3***, the FLUCCS shows the Direct Study Area as Airport (i.e., runways, intervening land, terminals, service buildings, navigational aids, fuel storage, parking lots, and a limited buffer zone).

3.2.2.1 Environmental Consequences

Significance Threshold – FAA Order 1050.1F, Exhibit 4-1, provides the factors that should be considered in evaluating the context and intensity of potential environmental impacts on biological resources, which include:

- "A long-term or permanent loss of unlisted plant or wildlife species, i.e., extirpation of the species from a large project area (e.g., a new commercial service airport); or
- Adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats; or

FIGURE 3-3: FLUCCS OF THE DIRECT STUDY AREA



- Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations; or
- Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), or ability to sustain the minimum population levels required for population maintenance."

Potential Impacts – Although there is the potential for federal/state threatened and endangered species within the study areas, the Proposed Project would take place on previously disturbed land that includes existing airfield pavements and mowed and maintained airfield turf. These characteristics of the Direct Study Area do not provide habitat for any federal/state-protected species.

The Proposed Project does not require removing trees or altering environmental characteristics outside the Direct Study Area; therefore, the Proposed Project would not affect birds protected by the Migratory Bird Treaty Act.

According to the Florida Fish and Wildlife Conservation Commission (FWC), there are no land mammal, reptile, or invertebrate habitat areas within the Direct Study Area (Florida Fish and Wildlife Conservation Commission, 2022). Therefore, neither natural habitat nor designated critical habitat are within the Direct Study Area.

The existing characteristics of the study areas do not provide suitable habitats for protected species. Additionally, there is no designated critical habitat within the study areas. Therefore, the Proposed Project would not affect biological resources.

The closest bald eagle (*Haliaeetus leucocephalus*) nests are approximately 3 miles southeast of the Direct Study Area.

Mitigation, Avoidance, and Minimization Measures – The JAA does not propose mitigation measures because the Proposed Project would not cause significant direct or indirect effects to biological resources.

3.2.3 Climate

This section describes the existing condition, the FAA's significance threshold(s), the potential climate effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

Research has shown that increased atmospheric greenhouse gas (GHG) emissions affect the Earth's climate. These conclusions are based upon a scientific record that includes substantial contributions from the U.S. Global Change Research Program (USGCRP), a program mandated by Congress in the Global Change Research Act to "assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global

change."[8] In 2009, based primarily on the scientific assessments of the USGCRP, as well as the National Research Council (NRC) and the Intergovernmental Panel on Climate Change (IPCC), the USEPA issued a finding that it was reasonable to assume that changes in our climate caused by elevated concentrations of GHG in the atmosphere endanger the public health and public welfare of current and future generations.[9] In 2015, the USEPA acknowledged more recent scientific assessments that "highlight the urgency of addressing the rising concentration of carbon dioxide (CO2) in the atmosphere."[10]

3.2.3.1 Affected Environment

Greenhouse gases (GHG) trap heat in the earth's atmosphere. Naturally occurring and man-made GHGs include water vapor, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Activities that require fuel or power are the primary stationary sources of GHGs at airports. Aircraft and ground access vehicles, which are not under the control of an airport, typically generate more GHG emissions than airport-controlled sources.

Research has shown a direct correlation between fuel combustion and greenhouse gas emissions. In terms of U.S. contributions, the U.S. Government Accountability Office (GAO) reports that "domestic aviation contributes about three percent of total carbon dioxide (CO_2) emissions, according to USEPA data," compared with other industrial sources, including the remainder of the transportation sector (20 percent) and power generation (41 percent) (GAO, 2009). The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly three percent of all anthropogenic GHG emissions globally (Melrose, 2010). Climate change due to GHG emissions is a global phenomenon, so the affected environment is the global climate (USEPA, 2009).

The scientific community is continuing efforts to understand the impact of aviation emissions on the global atmosphere. The FAA is leading and participating in several intended to clarify commercial aviation's role in GHG emissions and climate. The FAA, with support from the U.S. Global Change Research Program and its participating federal agencies (e.g., National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, USEPA, and U.S. Department of Energy), has developed the Aviation Climate Change Research Initiative to advance scientific understanding of regional and global climate impacts from aircraft emissions. The FAA also funds the Partnership for Air Transportation Noise & Emissions Reduction Center of Excellence research initiative to quantify the effects of aircraft exhaust and

[8] The National Academies of Sciences, Engineering, and Medicine. (2017). *Accomplishments of the U.S. Global Change Program*.
[9] USEPA. (2009, December 15). *Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act*, 74 Federal Register 66496.
[10] USEPA. (2015, October 23). *Final Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources Electric Utility Generating Units*, 80 Federal Register 64661, 64677.

contrails on global and U.S. climate and atmospheric composition. ICAO is examining similar research topics at the international level (Maurice & Lee, 2007).

As described previously, the study areas are located entirely within Duval County. The USEPA classifies Duval County as an "attainment" area for all NAAQS criteria pollutants (EPA Greenbook, 2022). In 2020, the GHG emissions for the U.S. were 5,981 million metric tons of Carbon Dioxide equivalent (MMT CO_{2e}), and the State of Florida was 262 MMT CO_{2e} (EPA, 2022).

3.2.3.2 Environmental Consequences

Significance Threshold **-** While FAA 1050.1F does not provide a significance threshold for aviation-related GHG emissions, the projected increase in GHG emissions from the Proposed Project is discussed in the context of national and global GHG emissions from all sources.

Although there are no federal standards for aviation-related GHG emissions, it is well established that GHG emissions can affect climate. The Council on Environmental Quality (CEQ) has indicated that climate should be considered in NEPA analyses (FAA, 2012). As noted by CEQ, "it is not useful, for NEPA purposes, to link GHG emissions from a proposal to specific climatological changes to a particular site. When considering the GHG emissions, agencies do not need to calculate a proposal's GHG emissions as a percentage of nationwide or worldwide GHG emissions unless the agency determines that such information would be helpful to decision makers and the public to distinguish among alternatives and mitigations, or that the emissions and sequestration associated with a Proposed Project may rise to a significant level (CEQ, 2014)."

Potential Impacts

Construction GHG Emissions – GHG emissions would occur during the construction of the Proposed Project (approximately 73.27 MT from 2024-2026) (see ***Appendix B*** for additional information). Using fossil fuel-powered machinery during the construction of the Proposed Project would emit GHGs such as CO_2. Increasing the number of construction-related personal vehicles traveling to and from the Airport would increase vehicle-related GHG emissions. For this EA, it is assumed that most construction-related workers already live and work in the region; therefore, the region's vehicle-related GHG emissions would not significantly change. Therefore, the construction of the Proposed Project would not have a significant effect on GHG emissions for the State of Florida, the U.S., or the global climate.

Operational GHG Emissions - The Proposed Project would increase the number of aircraft operating at the Airport. Following the Federal protocol to provide a single metric that embodies all GHGs, emissions are reported in metric tons of CO2 equivalent (CO_{2e}). The CO_{2e} is estimated by taking the mass equivalent of each pollutant and multiplying it by the global warming potential (GWP) equivalent of each pollutant and adding them together. For example,

the IPCC Fifth Assessment Report shows the GWP of CO_2 is 1 and NO_2 is 265 GWP.[11] The additional aircraft emissions from the Proposed Project were converted to CO2e using this methodology (see ***Appendix B***). The Proposed Project's aircraft operations emissions would increase by 445 MT (0.00045 MMT) CO_{2e} in 2026 and 1,400 MT (0.00140 MMT) CO_{2e} in 2031. Therefore, the operation of the Proposed Project would not have a significant effect on GHG emissions for the State of Florida, the U.S., or the global climate.

Social Costs of Greenhouse Gases (SC-GHGs) - In January 2023, the Council on Environmental Quality (CEQ) issued interim guidance, *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*, to assist agencies in analyzing GHG emissions (and climate change effects of a proposed project under NEPA. The CEQ identified Social Cost-Greenhouse Gases (SC-GHG) as the metric for assessing potential climate impacts and represents the monetary estimate of the effect associated with each additional metric ton of carbon dioxide released into the air (Interagency Working Group, 2021).

To calculate SC-GHG, the carbon dioxide equivalent CO_2e[12] must be calculated first. The project's total construction CO_2e would be approximately 0.0002 MMT (i.e., 200 MT).

The Interagency Working Group (IWG) developed average discount rates to assess possible climate impacts over time. The higher the discount rate, the lower the social climate cost (SCC) for future generations. Three integrated assessment models (IAMs) were used to develop discount rates that were based on the results from the three IAMs used by the IWG: William Nordhaus' DICE model (Yale University), Richard Tol's FUND model (Sussex University), and Chris Hope's PAGE model (Cambridge University) (Interagency Working Group, 2021). The IWG average discount rates are 5 percent, 3 percent, and 2.5 percent, and the 95th percentile estimate at the 3 percent discount rate represents the potential for low-probability catastrophic climate impacts. The IWG average discount rates represent a range of possible climate impacts to future generations. For example, the 5 percent average rate represents a situation where future generations are best suited to handle potential climate impacts from the Proposed Project, leading to a minimal social cost impact. The IWG determined the social cost of CO_2 (SC-CO_2) through 2050 and assigned a monetary value[13] for each additional metric ton of CO_2 produced. SC-CO_2 is equivalent to SC-GHGs and represents the social costs of the total greenhouse gases converted to the CO_2e equivalent. The SC-CO_2 helps weigh the benefits of climate mitigation against its costs.

[11] https://www.ipcc.ch/assessment-report/ar5/

[12] CO_2e: Number of metric tons of CO2 emissions with the same global warming potential as one metric ton of another greenhouse gas.

[13] These monetary values are based on the results from three economic models used by the IWG: William Nordhaus' DICE model (Yale University), Richard Tol's FUND model (Sussex University), and Chris Hope's PAGE model (Cambridge University).

The calculated social costs are estimates only and subject to change depending on various factors (i.e., flooding, energy supply).[14] ***Table 3-5*** calculations are for information purposes only and represent the potential social costs from construction emissions in years 2024 -2026 (30 months) and operational emissions in years 2026 and 2031. The social cost calculations represent a range of possibilities and are not guaranteed to occur. Advances in technology and operational practices could lead to lower social impacts than disclosed. This range represents the potential social costs of adding GHGs to the global atmosphere in a given year (Interagency Working Group, 2021). The range of potential social costs for 2024 from construction emissions is approximately $2,200 – $23,000; for 2025, the potential social cost is approximately $600 – $5,800. The potential social cost for 2026 construction emissions is approximately $600 - $5,900. For operational emissions in 2026, the potential social cost ranges from approximately $59,000 to $600,000; for 2031, the potential social cost ranges from approximately $214,000 to just over $2,000,000 (see ***Appendix B*** for further information). It is important to note that this climate analysis does not include positive impacts from the Proposed Project (e.g., economic development, meeting forecast passenger demand, maintaining the Airport's current level of service, and continuing to provide safe and efficient aircraft movement at the Airport).

Mitigation, Avoidance, and Minimization Measures – The JAA does not propose mitigation measures because the Proposed Project would not cause significant direct or indirect effects to climate.

TABLE 3-5: SOCIAL COST – CARBON DIOXIDE FOR THE PROPOSED PROJECT

Year	Proposed Project CO_2e	Average Estimate at 5% Discount Rate	Average Estimate at 3% Discount Rate	Average Estimate at 2.5% Discount Rate	95th Percentile Estimate at 3.0% Discount Rate
Construction Emissions					
2024	138.42	$2,214	$7,613	$11,350	$22,977
2025	34.19	$581	$1,914	$2,838	$5,778
2026	33.84	$575	$1,928	$2,842	$5,854
Operational Emissions					
2026	3,455.0	$58,735	$196,935	$290,220	$597,715
2031	10,693.22	$213,864	$673,672	$973,083	$2,042,405

Note: Per the 2023 IPCC Sixth Assessment Report, CO_2e equivalent for SC-GHG were calculated using the Interagency Working Group[15] average discount rates: 5 percent, 3 percent, 2.5 percent, and the 95th percentile estimate applying the 3 percent discount rate. CO_2e Values are multiplied by the discount rate to calculate SC-CO_2.

[14] https://costofcarbon.org/files/Omitted_Damages_Whats_Missing_From_the_Social_Cost_of_Carbon.pdf; Accessed November 2023

[15] Technical Support Document: Social Cost of Carbon, Methane, (whitehouse.gov); Accessed November 2023

Per the 2023 IPCC[16] Sixth Assessment Report, the CO_2 equivalent for N_2O is calculated by multiplying the N_2O emissions by the GWP of 265. The CO_2 equivalent for CH_4 is calculated by multiplying the CH_4 emissions by the GWP of 28. For example, the 2024 Average Estimate at 5% Discount Rate was calculated using the 2024 CO_2e value of 43.51 multiplied by 2024's $16 determined value for the 5% Discount Rate. Sources: Interagency Working Group, 2021, IPCC Sixth Assessment 2023, RS&H, 2024.

3.2.4 Coastal Resources

This section describes the existing condition, the FAA's significance threshold(s), the potential coastal resources effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.4.1 Affected Environment

FAA Order 1050.1F, Desk Reference states, "Coastal resources include all natural resources occurring within coastal waters and their adjacent shorelands. Coastal resources include islands, transitional and intertidal areas, salt marshes, wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as fish and wildlife and their respective habitats within these areas. Coastal resources include the coastlines of the Atlantic and Pacific oceans, the Great Lakes, and the Gulf of Mexico."

According to the Florida Department of Environmental Protection (FDEP) Coastal Office, the entire state of Florida is located within a coastal zone, including the study areas. The Florida Department of Environmental Protection (FDEP), Office of Intergovernmental Programs, Florida State Clearinghouse (FSC) coordinates the review of Federal actions in the State of Florida for consistency with the Florida Coastal Management Program (FCMP).

The Direct Study Area is located entirely on Airport property and not in a Coastal Barrier Resource System (CBRS). The closest CBRS unit, Talbot Islands (P02), is 15 miles east of the Direct Study Area (USFWS, 2022).

3.2.4.2 Environmental Consequences

Significance Threshold - FAA Order 1050.1F does not define a significance threshold for coastal resources; however, it does provide factors to consider in evaluating the context and intensity of potential environmental impacts to coastal resources. These include when the action would have the potential to:

- Be inconsistent with the relevant state coastal zone management plan(s);
- Impact a coastal barrier resource system unit (and the degree to which the resource would be impacted);
- Pose an impact to coral reef ecosystems (and the degree to which the ecosystem would be affected);

[16] https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf; Accessed November 2023

- Cause an unacceptable risk to human safety or property; or
- Cause adverse impacts to the coastal environmental that cannot be satisfactorily mitigated.

Potential Impacts - The Proposed Project would be consistent to the maximum extent practicable with the enforceable policies of the Florida Coastal Management Program. The Proposed Project would not affect coastal resources, create plans to direct future agency actions, propose rulemaking that alters uses of a coastal zone that are inconsistent with the Program, or involve Outer Continental Shelf (OCS) leases (FDEP, 2022). Therefore, the Proposed Project would not affect coastal resources.

Mitigation, Avoidance, and Minimization Measures – The JAA does not propose mitigation measures because the Proposed Project would not cause significant direct or indirect effects to coastal resources.

3.2.5 Department of Transportation Act, Section 4(f) and 6(f)

This section describes the existing condition, the FAA's significance threshold(s), the potential Section 4(f) and Section 6(f) effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.5.1 Affected Environment

According to FAA Order 5050.4B Desk Reference, "Section 4(f) of the U.S. DOT Act of 1966 (now codified at 49 U.S.C. § 303) protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites." Section 4(f) provides that the Secretary of Transportation may approve a transportation program or project requiring the use of a Section 4(f) resource only if there is no feasible and prudent alternative to the using that land and the program or project includes all possible planning to minimize harm resulting from the use. USDOT Section 4(f) properties are publicly-owned lands, including public parks, recreation areas, wildlife and waterfowl refuges, or publicly- or privately-owned historical sites of National, State, and/or local importance. Historical sites include prehistoric and historic districts, sites, buildings, structures, or objects listed in, or eligible for listing in, the National Register of Historic Places (NRHP).

There are no Section 4(f) resources within the Direct Study Area. The closest Section 4(f) resource is Oceanway Park, about 4 miles southeast of the Direct Study Area and 2 miles southeast of the Indirect Study Area (City of Jacksonville, 2022).

Section 6(f) of the Land and Water Conservation Fund Act of 1965 (LWCFA) provides funds for buying or developing public-use recreational lands through grants to local and state governments. Section 6(f) prevents the conversion of lands purchased or developed with LWCFA funds to non-recreation uses, like airport projects, unless the Secretary of the

Department of Interior (DOI), through the National Park Service (NPS), approves the conversion of the land use.

The closest Section 6(f) resource is the Timucuan Ecological and Historic Preserve, about 5 miles northeast of the Direct Study Area and approximately 1.5 miles north of the Indirect Study Area (Land and Water Conservation Fund, 2022).

3.2.5.2 Environmental Consequences

Significance Threshold – FAA Order 1050.1F, Exhibit 4-1, provides the FAA's significance threshold for Section 4(f), which states, "The action involves more than a minimal physical use of a Section 4(f) resource or constitutes a 'constructive use' based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource." For Section 4(f) purposes, a project would "use" a resource in one of two ways (see ***Table 3-6***).

Potential Impacts - The Proposed Project would not require the direct (physical) use or indirect use (i.e., constructive use) of Section 4(f) resources. The Proposed Project would not require using any recreational or park land purchased with Section 6(f) Land and Water Conservation Funds. In addition, the Proposed Project would not affect environmental resources (e.g., air quality, noise, etc.) in a manner that would indirectly affect (constructively use) Section 4(f) and 6(f) resources. Therefore, the Proposed Project would have no effect on Section 4(f) or 6(f) resources.

TABLE 3-6: DOT SECTION 4(F) RESOURCE "USES"

Use	Description
Physical	The action physically occupies and directly uses the DOT Section 4(f) resource. An action's occupancy or direct control (via purchase) causes a change in the use of the DOT Section 4(f) resource. For example, building a runway safety area across a fairway of a publicly owned golf course is a physical taking because the transportation facility physically used the course by eliminating the fairway.
Constructive	The action indirectly uses a DOT Section 4(f) resource by substantially impairing the resource's intended use, features, or attributes. For example, a constructive use of an overnight camping area would occur when project-related aircraft noise eliminates the camping area's solitude. Although not physically occupying the area, the project indirectly uses the area by substantially impairing the features and attributes (i.e., solitude) that are necessary for the area to be used as an overnight camping area.

Source: (FAA, 2020).

Mitigation, Avoidance, and Minimization Measures – Because the Proposed Project would not cause significant direct or indirect effects to Section 4(f) or Section 6(f) resources, the JAA does not propose mitigation measures.

3.2.6 Farmlands

This section describes the existing condition, the FAA's significance threshold(s), the potential farmland effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.6.1 Affected Environment

According to FAA Order 1050.1F, Desk Reference, "Farmlands are defined as those agricultural areas considered important and protected by federal, state, and local regulations. Important farmlands include all pasturelands, croplands, and forests (even if zoned for development) considered to be prime, unique, or of statewide or local importance. Farmland does not include land already in or committed to urban development or water storage."

The Natural Resource Conservation Service (NRCS) Web Soil Survey does not classify any soil types in and near the Direct Study Area as prime, unique, state, or locally important farmlands. Additionally, the Direct Study Area has been previously disturbed and is primarily a paved area with mowed and maintained airfield turf.

3.2.6.2 Environmental Consequences

Significance Threshold – A significant impact would occur if the conversion impact rating score on the NRCS Form AD-1006 is between 200 and 260 points. According to FAA Order 1050.1F, "if the total score on Form AD-1006, 'Farmland Conservation Impact Rating,' is below 160, no further analysis is necessary." When Form AD-1006 indicates a score that exceeds 160, then two alternative sites should be considered with the NRCS. If the conversion impact rating score is over 220 points, then three alternative sites should be considered.

Potential Impacts - The Proposed Project would not require the acquisition or conversion of farmland. Also, the Airport is located within the U.S. Census Bureau Designated Urban Area (Jacksonville). It, therefore, is exempt from the Farmland Policy Protection Act (FPPA) (US Census Bureau Urban Area Reference Map, 2022). Thus, the Proposed Project would have no effect on farmland.

Mitigation, Avoidance, and Minimization Measures – The JAA does not propose mitigation measures because the Proposed Project would not cause direct or indirect effects to Farmlands.

3.2.7 Hazardous Materials, Solid Waste, and Pollution Prevention

This section describes the existing condition, the FAA's significance threshold(s), the potential hazardous materials, solid waste, and pollution prevention effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.7.1 Affected Environment

According to FAA 1050.1F Desk Reference, "hazardous material is any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce" and includes hazardous wastes and hazardous substances. According to the Resource Conservation and Recovery Act (RCRA), solid waste includes construction and demolition debris, food waste from concession activities in the terminal, and paper/cardboard. Pollution prevention includes methods to avoid, prevent, or reduce pollutant discharges or emissions as a result of a project.

Hazardous Materials - Fixed Based Operators, Signature Flight Support and Sheltair Aviation Services provide fuel for all airport commercial and general aviation aircraft. Sheltair Aviation Services serves UPS, Allegiant Air, and Spirit Airlines. Signature Flight Support provides fuel to all other airlines. The main fuel farm is located southeast of the passenger terminal building, adjacent to and west of the JAA maintenance facilities. Sheltair Aviation Services operates two 50,000-gallon Jet A fuel tanks and one 10,000-gallon AVGAS tank. The second Airport fuel farm is in the general aviation area between Yonge Drive and Signature Flight Support Hangar. The aboveground tanks in this area provide a total capacity of 90,000 gallons for the storage of Jet-A fuel and 20,000 gallons for the storage of Avgas (Ricondo & Associates, 2020). There are no superfund sites within the Direct Study Area or the Airport (JAA, 2020). The JAA implements a Spill Prevention, Control, and Countermeasures (SPCC) Plan and Storm Water Pollution Prevention Plan (SWPPP) for the entire Airport. According to the JAA General Rules and Regulations, a best management practice (BMP) for managing and cleaning minor hazardous material spills includes the use of appropriate absorbent material(s) and containment measures capable of damming/diking a fuel spill.

Solid Waste and Pollution Prevention – Municipal solid waste (MSW) includes everyday items like plastic and cardboard. MSW is sorted between trash and recycling at the time of disposal at the trash receptacles located throughout the Airport. MSW is collected by Waste Management and is transported to a Trail Ridge Landfill. Trail Ridge Landfill has an estimated remaining capacity through December 2076 (Waste Management, 2022).

Waste Management Old Kings Road Landfill is the closest landfill, located approximately five miles southwest of the Airport (Waste Management, 2022). The Old Kings Road Landfill is a construction and demolition debris landfill that accepts 850 tons per day. At the current tonnage, the landfill has capacity until 2041 (Waste Management, 2022).

The JAA has established multiple sustainability initiatives to reduce the environmental footprint at the Airport. The initiatives cover the Airport's energy, water, waste management, and design. For energy use, the Airport has implemented energy-efficient lighting, installed electric vehicle charging stations, and installed solar arrays on the top of the terminal and the top level of the parking garage (JAA, 2020). For water use, the Airport has implemented low-flow fixtures and reclaimed water for irrigation to reduce potable water usage and adherence to the City of Jacksonville landscaping regulations to minimize irrigation water use (JAA, 2020). Waste Management at the Airport is handled sustainably, and recycle bins are located throughout the Airport. Waste generated elsewhere at the Airport is handled by the tenants or airlines (JAA, 2020). The JAA has initiatives to minimize non-municipal solid waste (MSW) by the following:

- Storing used tires, oils, and lubricants generated within maintenance areas.
- Disposing of fluorescent lamps, electronic waste, and toner cartridges in compliance with applicable environmental laws and regulations.
- Providing space to collect scrap metal generated by JAA and tenants.
- Prioritizing the reuse of wood and composite pallets.
- Replanting landscaping waste in a designated area for future reuse.
- Requiring that independent contractors manage waste generated during construction and demolition activities on a project-by-project basis.

3.2.7.2 Environmental Consequences

Significance Threshold - FAA Order 1050.1F does not define a significance threshold for hazardous materials, solid waste, and pollution prevention; however, it does provide several factors to consider in evaluating the context and intensity of potential environmental impacts. FAA Order 1050.1F, Exhibit 4-1 states that these include when the action would have the potential to:

- Violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials and/or solid waste management;
- Involve a contaminated site, including but not limited to a site listed on the National Priorities List. Contaminated sites may encompass relatively large areas. However, not all of the grounds within the boundaries of a contaminated site are contaminated, which leaves space for siting a facility on non-contaminated land within the boundaries of a contaminated site. An EIS is not necessarily required. Paragraph 6-2.3.a of [FAA Order 1050.1F] allows for mitigating impacts below significant levels (e.g., modifying an action to site it on non-contaminated grounds within a contaminated site). Therefore, if appropriately mitigated, actions within the boundaries of a contaminated site would not have significant impacts;
- Produce an appreciably different quantity or type of hazardous waste;

- Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity; or
- Adversely affect human health and the environment.

Potential Impacts

Hazardous Materials - Construction of the Proposed Project would involve using hazardous materials (i.e., fuels), subject to Best Management Practices (BMPs). The hazardous materials would be stored and used at the construction site. The materials would be stored in compliance with federal, state, and local regulatory requirements and compliance with the Airport's storm water pollution prevention plan and the contractor's NPDES permit conditions requiring pollution prevention measures. Additionally, all construction debris and waste would be disposed of at the appropriate authorized disposal facility.

The Proposed Project would include an approximate 5,200-gallon aboveground diesel storage tank for Concourse B backup generators. The tank would comply with Chapter 62-762 F.A.C., as applicable, including requirements for aboveground storage tank systems having individual storage tank capacities greater than 550 gallons. Operation of the Proposed Project would not change the Airport's existing hazardous materials storage and handling procedures (e.g., oils, solvents, etc.). It would not involve any properties on the National Priorities List. The SWPPP and SPCC would be updated based on the Proposed Project. Therefore, the Proposed Project would not have a significant effect on the use of hazardous materials at the Airport.

Solid Waste and Pollution Prevention - Construction of the Proposed Project would cause a short-term, temporary increase in the quantity of solid waste generated at the Airport; however, the amount of solid waste anticipated would not adversely affect the capacity of landfills in the area. The selected construction contractor would be responsible for disposing waste per all federal, state, and local rules and regulations. The Proposed Project's solid waste would be managed by the applicable state solid waste regulations of Ch 62-701, F.A.C. The oil used to lubricate construction equipment could be recycled per federal, state, and local laws. Operation of the Proposed Project would increase the amount of solid waste produced at the Airport. Solid waste would continue to be handled, recycled, as applicable, and/or disposed of per federal, state, and local rules and regulations. A current JAA initiative to minimize non-MSW includes requiring independent contractors manage waste generated during construction and demolition activities on a project-by-project basis. Therefore, the Proposed Project would not have an effect on solid waste and pollution prevention.

Mitigation, Avoidance, and Minimization Measures – The JAA does not propose mitigation measures because the Proposed Project would not cause direct or indirect effects to hazardous materials, solid waste, and pollution prevention.

3.2.8 Historical, Architectural, Archeological, and Cultural Resources

This section describes the existing condition, the FAA's significance threshold(s), the potential historical, architectural, archeological, and cultural resource effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.8.1 Affected Environment

The National Historic Preservation Act (NHPA)[17] establishes the Advisory Council on Historic Preservation (ACHP). The ACHP oversees federal agency compliance with the NHPA. The NHPA also established the National Register of Historic Places (NRHP), which the National Park Service (NPS) oversees. Section 106 of the NHPA requires federal agencies to account for the effects of their undertaking[18] and consult with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officers (THPO), and other parties to develop and evaluate alternatives or modifications to the undertaking where necessary to avoid, minimize, or mitigate adverse effects on historic properties. In consultation with the SHPO/THPO, the FAA evaluates a property's eligibility for inclusion in the NRHP.

The Area of Potential Effects (APE) for this EA is shown in ***Figure 3-4***. According to the Florida Master Site File (FMSF) records, one archaeological resource exists in the APE. The Florida SHPO determined that the Jax Raceways Site (site ID 17810) was not eligible for listing on the NRHP (SHPO, 2024). The FMSF identified seven standing structures within the APE at the Florida Air National Guard (FANG) 125th Fighter Wing (FW).

All FANG 125th FW buildings and structures were surveyed and evaluated as described in the United States Air Force F-35A Operational Beddown – Air National Guard Final Environmental Impact Statement (USAF, 2021). The National Guard Bureau determined that the FANG 125th FW's structures were not eligible for listing on the NRHP. The Florida SHPO concurred with the determination of eligibility (USAF, 2021).

3.2.8.2 Environmental Consequences

Significance Threshold - FAA Order 1050.1F does not provide a significance threshold for historical, architectural, archeological, and cultural resources; however, it does provide a factor to consider in evaluating the context and intensity of potential environmental impacts. This would occur when the action results in a finding of adverse effect through the Section 106 process.

[17] 54 U.S.C. §§ 300101 et seq.
[18] Under Section 106, an undertaking is the proposed action, or project.

FIGURE 3-4: AREA OF POTENTIAL EFFECTS

Potential Impacts - The Proposed Project would not require the direct use of historic resources. In addition, the Proposed Project would be consistent with the Airport setting. It would not cause significant indirect effect (e.g., air quality or noise) or alter the surrounding environment in a way that would affect historic resources.

The Proposed Project would not affect tribal land or land of interest to tribes. The Proposed Project would occur entirely on Airport property and on land that has been previously disturbed and constructed, along with a small area of mowed and maintained grass. For those reasons, the Proposed Project would not affect tribal land or land of interest to tribes.

Therefore, the Proposed Project would not directly or indirectly affect historical, architectural, archeological, or cultural resources.

The Federal Aviation Administration (FAA) submitted a letter to the Florida State Historic Preservation Office (FL SHPO) on March 27, 2024 describing the Proposed Project, the APEs, a summary of historic and archaeological resources within the APEs, and the FAA's determination of effects (see ***Appendix A***). The FAA's Determination of Effects described:

> *Based on a review of the proposed project and information available, the FAA has determined the undertaking would not affect historic properties. Based on the noise analysis conducted as part of the Environmental Assessment, noise generated by the Proposed Project would have a minimal effect on aircraft noise generated at the airport. The change in noise associated with the Proposed Project would be negligible and would not be noticeable. Because the Proposed Project includes ground disturbance activities, the FAA will require the Authority to implement special conditions regarding unexpected discoveries during construction.*

The FL SHPO replied to the FAA on April 26, 2024, stating, in part:

> *"Based on the information provided, our office concurs with FAA's determination that the proposed activities will have no adverse effect on historic properties. However, the permit, if issued, should include the following special condition regarding unexpected discoveries:*
>
> *If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at (850)- 245-6333. Project activities shall not resume without verbal and/or written authorization.*

In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes."

Therefore, the Proposed Project would have ***no adverse effect*** on historic properties (see ***Appendix A*** for further details).

Mitigation, Avoidance, or Minimization Measures - The JAA does not propose mitigation measures because the Proposed Project would not cause direct or indirect effects to historical, architectural, archeological, or cultural resources. However, if archeological, paleontological, or cultural resources or human remains are encountered during subsurface construction, all ground-disturbing activities within 25 feet of the discovered resources would stop immediately. The contractor would immediately contact the JAA, the SHPO, the FAA, and proper authorities (if necessary). The JAA's construction contractor would ensure a qualified paleontologist or proper authority is called as soon as possible to assess the situation. Consultation would be conducted to seek recommendations for the treatment of the discovery. Project activities would not resume without the SHPO's verbal and/or written authorization.

3.2.9 Land Use

This section describes the existing condition, the FAA's significance threshold(s), the potential land use effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.9.1 Affected Environment

Compatible land use around an airport increases safety and minimizes the effects of airport operations. Airport projects receiving federal funding may not be approved unless the Airport Sponsor provides written assurance that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or near the airport to activities and purposes compatible with normal airport operations, including the landing and takeoff of aircraft.

An inventory of existing land use configurations and characteristics is necessary to assess compatibility issues. The Airport's land use is classified as public buildings and facilities and is surrounded by several different land uses. North of the Airport are agriculture and light industrial land uses. West of the Airport is classified as "multi-use" land use. Low-density residential and rural residential are south and southwest of the Airport. East of the Airport are light industrial, business park, and community/general commercial land uses (Duval County, 2022).

As listed in ***Table 3-7***, multiple types of land uses surround the Airport. See ***Figure 3-5*** for the existing land use map of the Indirect Study Area and its surrounding environment.

TABLE 3-7: LAND USES BEYOND AIRPORT RUNWAY ENDS

Runway 8 Approach End	Runway 26 Approach End	Runway 32 Approach End	Runway 14 Approach End
Multi-Use (MU)	Community / General Commercial (CGC)	Community / General Commercial (CGC)	Multi-Use (MU)
Low-Density Residential (LDR)	Multi-Use (MU)	Heavy Industrial (HI)	Agriculture II (AGR-II)
Conservation (CSV)	Low-Density Residential (LDR)	Low-Density Residential (LDR)	Agriculture III (AGR-III)
Conservation (CSV)	Rural Residential (RR)	Light Industrial (LI)	Rural Residential (RR)
Conservation (CSV)	Light Industrial (LI)	Light Industrial (LI)	Rural Residential (RR)

Source: (City of Jacksonville, 2023)

3.2.9.2 Environmental Consequences

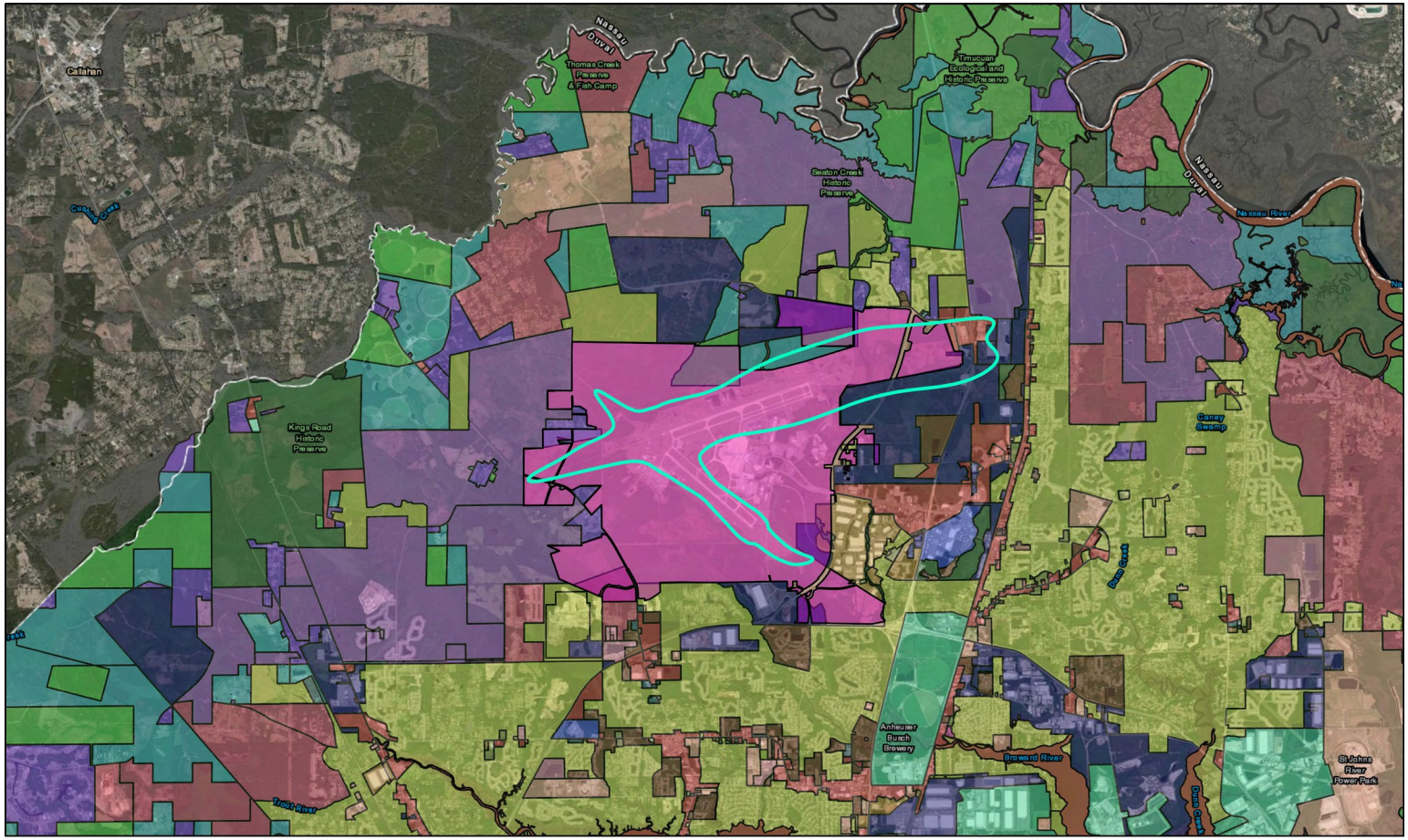
Significance Threshold – FAA Order 1050.1F does not define a significance threshold for land use nor provides factors to consider in evaluating the context and intensity of potential environmental impacts. Determining significant impacts regarding land use impacts depends on the significance of other impact categories.

According to 1050.1F Section (9)(3)(1), "If the proposal would result in other impacts that have land use ramifications, for example, disruption of communities, relocation, and induced socioeconomic impacts, the impacts on land use should be analyzed in these contexts and described accordingly under the appropriate impact category with any necessary cross-references to the Land Use section to avoid duplication."

Potential Impacts - The Proposed Project would occur entirely on-Airport property. It would not require the acquisition or use of surrounding off-Airport land. The Proposed Project would be consistent with the JAA and local governments' plans, goals, zoning, policies, and local controls. Therefore, the Proposed Project would not affect land use compared to the No Action Alternative.

Mitigation, Avoidance, and Minimization Measures – The JAA does not propose mitigation measures because the Proposed Project would not cause direct or indirect effects to land use.

FIGURE 3-5: LAND USE AROUND THE AIRPORT



Sources: ESRI 2022; City of Jacksonville 2022; RS&H 2022.

0 1 2 Miles

Legend

- Airport Property Boundary
- Indirect Study Area
- Agriculture (AGR-I)
- Agriculture (AGR-II)
- Agriculture (AGR-III)
- Agriculture (AGR-IV)
- Business Park (BP)
- Central Business District (CBD)
- Community / General Commerical (CGC)
- Conservation (CSV)
- High Density Residential (HDR)
- Heavy Industrial (HI)
- Low Density Residential (LDR)
- Light Industrial (LI)
- Medium Density Residential (MDR)
- Multi-Use (MU)
- Neighborhood Commercial (NC)
- Public Buildings and Facilities (PBF)
- Regional Commercial (RC)
- Recreation and Open Space (ROS)
- Residential-Professional-Institutional (RPI)
- Rural Residential (RR)
- Water
- Water Dependent-Water Related (WD/WR)
- Other

N

RS&H

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3.2.10 Natural Resources and Energy Supply

This section describes the existing condition, the FAA's significance threshold(s), the potential natural resources and energy supply effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.10.1 Affected Environment

Sections 1502.16(e) and (f) of the CEQ Regulations require federal agencies to consider the use of consumable natural resources and demands on energy supplies from projects, as well as the conservation potential of alternatives and mitigation measures. FAA policy also encourages developing facilities to use the highest design standards and to incorporate sustainable measures into designs.

Airport personnel and tenants regularly use consumable materials to maintain various airside and landside facilities and services. Those materials may include asphalt, concrete, aggregate for sub-base materials, various metals associated with such maintenance, and fuels associated with the operation of aircraft and vehicles.

Jacksonville Electric Authority (JEA) supplies water and electric utilities to the Airport. The Airport currently uses energy-efficient lighting to reduce energy demands. Additionally, the Airport has installed electric vehicle charging stations and solar arrays on the terminal and parking garage (JAA, 2020) to reduce energy needs further.

JEA is meeting all current utility demands at the Airport. The Airport's electrical distribution consists of up to three 1,200A (amp) feeds at 4.167 kilovolts (kV) (i.e., identified as M-1, M-2, and M-3). A series of switches can isolate onto one feed or split between two feeds. The Airport's normal operating condition is to use two feeds (M-1 and M-2). During the existing peak load (e.g., summer), the M-1 feed used 233A (of 1,200A capacity), the M-2 feed used 459A of the total 1,200A capacity, and the M-3 feed was not used. If, in an emergency, the Airport loses two of the three feeds, the total load on the third feed would be 692A (of 1,200A capacity).

3.2.10.2 Environmental Consequences

Significance Threshold – FAA Order 1050.1F does not define a significance threshold for natural resources and energy supply; however, it does provide a factor to consider in evaluating the context and intensity of potential environmental impacts. Potentially significant effects could occur if the action has the potential to cause demand to exceed available or future supplies of these resources, which include aviation and surface vehicle fuel, construction material, and electrical power.

Potential Impacts

Construction - Construction of the Proposed Project would temporarily increase the use of natural resources at the Airport. These natural resources could include prefabricated building components, aggregate, sub-base materials, and oils associated with the Proposed Project's construction. These resources are not rare or in short supply, and the quantity required for the development of this size would not place an undue strain on supplies. Construction would also increase the energy demand at the Airport; however, this increase would be temporary, minor, and within the supply capabilities of the JEA.

Construction of the Proposed Project would result in a temporary increase in fuel usage from construction-related vehicles accessing the Airport but would not result in a change in vehicle traffic patterns. During the construction of Concourse B, ground support equipment would need to travel around the site to traverse from Concourse A to Concourse C; however, this would only last for the duration of construction. Additionally, construction would not result in a change in aircraft traffic patterns.

Operational Impacts - The Proposed Project's operation would increase the use of electricity, fuel, and water. The Proposed Project's increase in aircraft operations would increase the use of aviation fuel at the Airport; however, additional fuel storage tanks are not needed to accommodate the increase in fuel demand. The Proposed Project would include an energy-efficient design using building automation, controlled daylight harvesting with LEDs, and intelligent sensing tinted glazing throughout the facility to minimize heat gain and mechanical equipment loads. The Proposed Project would also incorporate a condensate recovery system to reuse the air conditioning system's drained water. Airport custodial and maintenance employees would use electric vehicles to travel around the concourse/terminal areas. Police officers also would use electric "scooters" to patrol the Airport.

The existing airport Building Automation System (BAS) would be expanded to include Concourse B. The BAS would have a web-based front end for time-of-day scheduling, energy management, and sub-metering. The data collected within the BAS can be trended and used to continuously improve the building's energy performance. The BAS controls the following systems:

- During favorable weather conditions, the BAS would engage the chilled water plant operation to allow the building heat to be rejected directly to the outdoors instead of energizing the chiller motors and chilled water pumps.
- All lighting within Concourse B would be designed for integration into the BAS. This would allow building operators to use the BAS programming to assign time-of-day scheduling to control when lighting zones are de-energized and dimming features to provide proper illumination in a space without excessive energy use.

- To accurately track all utility data, tenant spaces within the Proposed Project would have sub-meters installed and integrated into the BAS. Tenant utility data is used for billing and identifying inefficient users.
- Light Emitting Diodes (LED) would be used to illuminate the interior and exterior sections of Concourse B. LEDs use a fraction of the energy and minimize heat output compared to other filament luminaires while producing equally effective illumination. Coupled with room occupancy light sensors, electrical savings would be maximized.
- Concourse B would feature all touch-free automatic shutoff valves in restrooms to prevent accidental water waste. Infrared sensor technology provides the code required flow of water for hand washing and automatically shuts off flow when not actively engaged.
- Domestic hot water systems serving restrooms would be provided with recirculating pumps. This design uses low-energy pumps to keep hot water moving through all major branches of a piping system to eliminate “dead end” branches that stagnate and cool off. This feature reduces the amount of water drained while waiting for hot water at the fixture. Digital mixing valve assemblies ensure that the hot water delivered is within a tolerable range for users.
- Variable Speed Drives (VSD) would be designed for all pump and fan motors in Concourse B. VSDs control the amount of electrical power supplied to the motors on heating, ventilation, and air conditioning (HVAC) and other mechanical equipment, ensuring the systems operate to the condition needed for service instead of constantly operating at a full load. This reduces electrical power consumption by the equipment and provides a means of rebalancing systems as demands change in the building.
- To increase indoor air quality, Concourse B HVAC units serving passenger areas would be equipped with electronic air cleaners. This Bipolar Ionization technology creates ions within the airstream, which bond to pollutants. The charged pollutants are ionically attracted to each other and agglomerate to a size where they can be captured in the air handling unit filters, leaving cleaner air to pass through and be supplied to the space. Additionally, all elevator units would incorporate cab air purifiers. These purifiers use bipolar ionization to kill harmful, disease-inducing microbes as well.
- A new central chilled water plant serving Concourse B would serve as a backup capacity to the existing Airport chiller plant. The new plant would feature magnetic bearing chillers, which reduce friction within the rotating components by magnetically suspending the rotor shafts and are the most energy-efficient machines available in the required capacities.
- The new chilled water plant would have waterside economizers or “free-cooling” heat exchangers. This feature uses plate and frame heat exchangers to cool the building's HVAC water loop directly from the outdoor cooling towers. HVAC air handler units

would be designed to recapture already cooled condensation. This would save water and reduce the required energy necessary to lower makeup water's temperature.

- Passenger Loading Bridges would use both Pre-Conditioned Air Units (PCA) and 400 HZ power units for aircraft to use instead of the aircraft's Auxiliary Power Units (APU). The electrically powered bridge units reduce APU noise, aircraft operating costs, fuel usage, and pollution levels on the ramp. Additionally, noise reduction improves ramp and employee safety. PCA units would also be able to provide cooling into the terminal areas if required during emergencies.

The Proposed Project would increase the electrical usage at the Airport. As previously described, the Airport's electrical distribution consists of up to three 1,200A feeds (M-1, M-2, and M-3). With the Proposed Project, the M-1 feed would increase to a total load of approximately 593A, and the M-2 feed would increase to a total load of approximately 657A. The total amps for each feed are less than the 1,200A total capacity of each feed. Therefore, the Proposed Project would not place an undue burden on JEA's electrical capacity.

Operation of the Proposed Project would change aircraft ground movements and require additional ground support equipment but would not significantly affect fuel usage. Coordination would occur with JEA to upsize the capacity of the lift station, which serves the area to manage additional wastewater.

Therefore, the Proposed Project would not significantly impact natural resources or energy supply compared to the No Action Alternative.

Mitigation, Avoidance, and Minimization Measures – The JAA does not propose mitigation measures because the Proposed Project would not cause significant direct or indirect effects to natural resources and energy supply.

3.2.11 Noise and Noise-Compatible Land Use

This section describes the existing condition, the FAA's significance threshold(s), the potential noise and noise-compatible land use effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.11.1 Affected Environment

The noise analysis was developed using the FAA's Aviation Environmental Design Tool (AEDT). The AEDT is the required FAA tool to evaluate potential noise impacts from actions subject to NEPA. The AEDT produces aircraft noise contours that delineate areas of equal day-night average sound level (DNL).

DNL is based on sound levels measured in relative intensity of sound decibels (dB) on the A-weighted scale (dBA) over a time-weighted average normalized to 24 hours. A penalty of 10 dB to sound levels between 10 p.m. and 7 a.m. local time is added to aircraft operations occurring during those hours to account for greater sensitivity to noise during the nighttime hours and

reduced ambient noise. DNL has been widely accepted as the best method to describe aircraft noise exposure. The USEPA identifies DNL as the principal metric for airport noise analysis. The FAA requires DNL as the noise descriptor in aircraft noise exposure analysis and noise compatibility planning. DNL levels are commonly shown as lines of equal noise exposure, similar to terrain contour maps, referred to as noise contours.

The noise environment is commonly depicted in lines of equal noise levels or noise contours. These noise contours are supplemented with noise data for selected points such as noise-sensitive receptors. The noise analysis takes the following operational characteristics into account:

- number of aircraft operations;
- aircraft fleet mix;
- aircraft noise and performance characteristics;
- flight tracks; and
- runway use.

Noise modeling requires the use of specific noise data and performance data for each aircraft type operating at the Airport. Noise data includes particular aircraft with engines at a range of thrust levels at a range of distances (from 200 feet to 25,000 feet). Performance data include thrust, speed, and altitude profiles for takeoff and landing operations. AEDT has standard aircraft flight profiles for takeoffs, landings, and flight patterns or touch-and-go operations, which were used for all civilian and military aircraft types. The AEDT database contains standard noise and performance data for over 300 fixed-wing aircraft types, most of which are civilian aircraft. Within the AEDT database, it is standard for aircraft takeoff or departure profiles to be defined by a range of trip distances identified as "stage lengths." Higher stage lengths (longer trip distances) are associated with heavier aircraft due to the flight's increased fuel requirements.

The 2022 65, 70, and 75 day-night average sound level (DNL)[19] contours are provided in ***Figure 3-6***. ***Table 3-8*** identifies the areas within the DNL contour ranges. As shown in the table, the total area within the 65 DNL and greater contour is 4.49 square miles and is primarily located within the limits of the Airport property boundary. The 65 DNL encompasses 0.7 square mile of the off-Airport property, primarily commercial and industrial compatible land uses. One residence, located near Interstate 95 and Pecan Park Road intersection, is within the contour and is exposed to the 65 DNL. See ***Appendix C*** for further information.

[19] The DNL is a 24-hour time-weighted sound level that is expressed in A-weighted decibels. The FAA and other federal agencies use DNL as the primary measure of noise impact because it: correlates well with the results of attitudinal surveys regarding noise; increases with the duration of noise events; and accounts for an increased sensitivity to noise at night by increasing each noise event that occurs during nighttime hours (i.e., 10:00 pm to 6:59 am) by 10 decibels (dB).

FIGURE 3-6: EXISTING NOISE CONTOURS

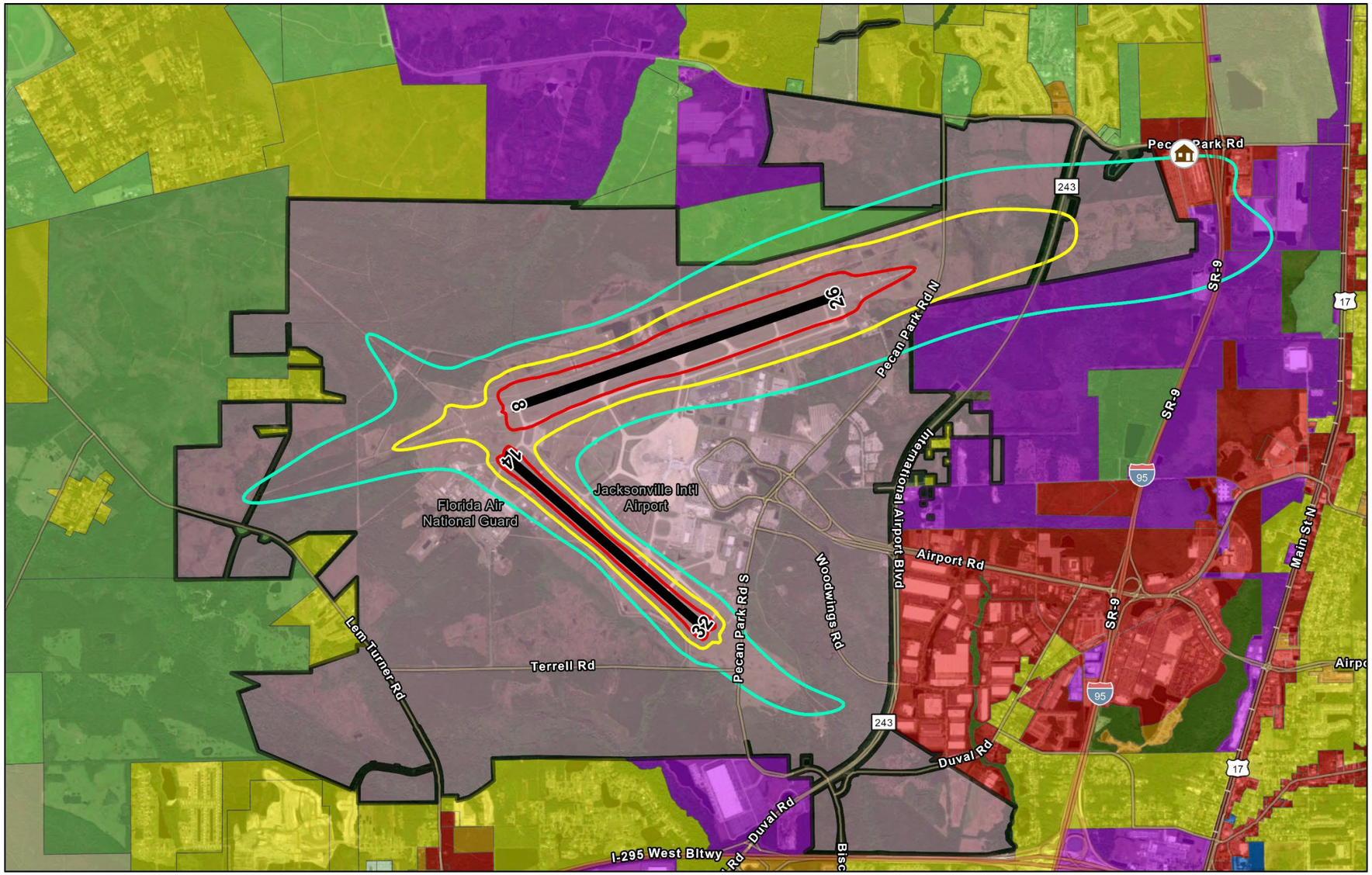

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TABLE 3-8: AREA WITHIN THE 2022 EXISTING CONDITION DNL CONTOURS

DNL Contour Range	Area (sq. miles)
65-70	2.75
70-75	1.09
>75	0.65
Total	**4.49**

Source: AEDT, 2023. RS&H, 2023.

3.2.11.1 Environmental Consequences

Significance Threshold – Per FAA Order 1050.1F, "a significant noise impact would occur if the action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is [already] exposed to noise at or above the DNL 65 dB noise exposure level, or that will 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 for the same timeframe." Noise-sensitive areas generally include residential neighborhoods; educational, health, and religious facilities; and cultural and historic sites.

For example, an increase from DNL 65.5 dB to 67 dB is considered a significant impact, as is an increase from DNL 63.5 dB to 65 dB. The determination of significance must be obtained using noise contours and/or grid point analysis along with local land use information and general guidance contained in Appendix A of 14 CFR Part 150. In addition to defining significant impacts, FAA Order 1050.1F includes additional reporting requirements, including:

- The location and number of noise-sensitive uses at or above DNL 65 dB;
- The disclosure of potentially newly non-compatible land use, regardless of whether there is a significant noise impact; and
- Maps reporting the number of residences or people residing at or above DNL 65 dB for at least the 65-, 70-, and 75-dB exposure levels.

Potential Impacts

Construction-related Noise - The Proposed Project's construction involves the temporary use of heavy machinery, equipment, and construction activities that generate noise. The intensity and duration of construction noise can vary depending on the specific construction techniques and equipment used. Construction noise can occur during various times of the day, including daytime, evenings, and potentially even overnight shifts, depending on the construction schedule and local regulations.

The impact of construction noise can be influenced by the local environment and the sensitivity of nearby communities. Noise-sensitive areas, such as residential neighborhoods, hospitals, or schools, may be more affected by construction noise. Vegetation and man-made structures can reduce noise exposure. The nearest noise sensitive residential area is located 1.7 miles west of the Direct Study Area and is buffered by approximately 1,900 feet of existing dense vegetation.

The standard noise drop-off rate is 6 dB per doubling of distance. Normal background sound levels in residential/suburban areas range from 45-55 dB. Noise levels calculated at the closest residential area range from 30 dB to 44 dB and are at or below typical background levels.

2026 DNL Contours - Annual aircraft operations for the 2026 No Action Alternative total 109,077, or an average of 299 operations per day (see ***Appendix C***). The 2026 No Action Alternative aircraft fleet mix was determined by multiplying the percentages by aircraft type that occurred in 2022 by the FAA TAF operations forecast to occur in 2026. As shown in ***Table 3-9***, the 2026 Proposed Project annual operations total 116,814, or an average of 320 operations per day. The 2026 Proposed Project aircraft fleet mix was determined by multiplying the percentages by aircraft type that occurred in 2022 by the FAA TAF operations forecast to occur in 2026. The 2026 Proposed Project includes an additional 7,737 passenger aircraft operations, which were distributed proportionally among the passenger aircraft fleet mix that occurred in 2022.

The operations and fleet mix modeled for the 2026 No Action Alternative and Proposed Project are shown in ***Table 3-10***. The runway use, flight tracks, and time of day modeled for the 2026 condition were the same as the 2022 condition.

TABLE 3-9: ANNUAL AIRCRAFT OPERATIONS FOR AIRCRAFT NOISE MODELING

	No Action					Proposed Project	
Year	Passenger Aircraft Operations	Cargo Operations	General Aviation Operations	Military Operations	Total Operations	Additional Passenger Operations	Total Aircraft Operations
2026	79,903	4,340	16,234	8,600	**109,077**	7,737	**116,814**
2031	89,194	4,607	16,442	8,600	**118,843**	23,971	**142,814**

Source: FAA TAF, 2023; Virtower™, 2022; RS&H, 2023.

TABLE 3-10: 2026 AIRCRAFT OPERATIONS AND FLEET MIX

Aircraft Type (s)	AEDT Aircraft	No Action Alternative Operations	Proposed Project Operations	Difference
Embraer 175	EMB175	17,860	19,555	1,694
Boeing 737-800/900	737800	10,524	11,523	998
Boeing 757-200	757PW	10,050	11,004	954
Airbus A320-200	A320-211	8,397	9,194	797
Boeing 737-700	737700	8,389	9,185	796
Canadair CRJ 700/900	CRJ9-ER	6,746	7,386	640
Airbus A319-100	A319-131	6,158	6,742	584
Embraer 190	EMB190	3,102	3,396	294
Embraer 170	EMB170	2,855	3,126	271

Aircraft Type (s)	AEDT Aircraft	No Action Alternative Operations	Proposed Project Operations	Difference
Boeing 767-300	767300	1,666	1,666	0
Airbus A321-200	A321-232	2,165	2,370	205
Airbus A300	A300B4-203	990	990	0
Embraer 135/145	EMB145	997	1,091	95
Airbus A320neo	A320-271N	841	921	80
Boeing 737 MAX8	7378MAX	825	903	78
Beechcraft 1900	1900D	691	756	66
Boeing 717-200	717200	654	716	62
ATR-42	DHC8	431	472	41
Dash 8-300	DHC830	429	470	41
Boeing 757-300	757300	181	198	17
Boeing 737-400	737400	116	127	11
Boeing 737-300	737300	110	120	10
Boeing 747-400	747400	36	36	0
Challenger 300/600	CL600	21	23	2
King Air/Super King Air	DHC6	9	10	1
Learjet 35/40/45/55/60/75	LEAR35	1,837	1,837	0
Cessna 560 Citation XLS	CNA560XL	1,346	1,346	0
Citation II/Bravo,Premier,Phenom 300	CNA55B	1,018	1,018	0
Cessna Citation CJ1/CJ3/CJ4	CNA525C	1,003	1,003	0
Beechcraft Beechjet	MU3001	992	992	0
Cessna Citation Sovereign/Latitude	CNA680	867	867	0
Gulfstream G280	CL601	780	780	0
Challenger 300/600	CL600	729	729	0
Cessna Citation Ultra/Encore	CNA560E	573	573	0
Gulfstream GV/G500/G550	GV	537	537	0
Cessna Citation X, Falcon 2000	CNA750	475	475	0
Dassault Falcon 50/900	FAL900EX	340	340	0
Gulfstream GIV/G400	GIV	329	329	0
Cirrus Vision, Citation Mustang	CNA510	240	240	0
IAI Astra/Galaxy	IA1125	152	152	0
Cessna Citation CJ1/CJ2/CJ3	CNA500	79	79	0
Cessna Citation III	CIT3	72	72	0
Bombardier Global 7500	BD-700-1A10	63	63	0
Gulfstream G650	G650ER	60	60	0
Eclipse 500	ECLIPSE500	49	49	0

Aircraft Type (s)	AEDT Aircraft	No Action Alternative Operations	Proposed Project Operations	Difference
Bombardier Global 5000	BD-700-1A11	29	29	0
King Air/Super King Air	DHC6	769	769	0
Pilatus PC-12, Cessna 208, Socata TBM9	CNA208	200	200	0
Cessna 172/177	CNA172	2,333	2,333	0
Cessna 152	GASEPF	568	568	0
Piper 46 Malibu, Lancair 4, Bonanza 36	GASEPV	266	266	0
Piper Seminole, Diamond 42/62	PA30	212	212	0
Baron 58, Cessna 310/414	BEC58P	163	163	0
Cirrus SR20/22	COMSEP	151	151	0
Boeing P-8	737800	5,232	5,232	0
F-15	F15E20	3,368	3,368	0
Total		**109,077**	**116,814**	**7,737**

Source: FAA TAF; Virtower™; RS&H, 2023.

The 2026 No Action Alternative and Proposed Project 65, 70, and 75 DNL contours are provided in ***Figure 3-7*** and ***Figure 3-8, respectively.*** ***Table 3-11***, which identifies the areas within the DNL contour ranges, shows that the total area within the 65 DNL contour is 4.57 square miles for the No Action Alternative and 4.66 square miles for the Proposed Project. The No Action Alternative 65 DNL contour encompasses 0.70 square mile of off-Airport property, and the Proposed Project encompasses 0.73 square mile of off-Airport property. One residence near the Interstate 95 and Pecan Park Road intersection is within the 65 DNL for both conditions. The residence is exposed to 65.25 DNL for the No Action Alternative and 65.39 DNL for the Proposed Project. Therefore, the residence would experience an increase of 0.14 DNL as a result of the Proposed Project. The 0.14 DNL increase is below the FAA significance threshold of DNL 1.5 dB.

TABLE 3-11: AREA WITHIN THE 2026 DNL CONTOURS

DNL Contour Range	No Action Alternative (sq. mile)	Proposed Project (sq. mile)	Difference (sq. mile)
65-70	2.80	2.86	+0.06
70-75	1.11	1.13	+0.02
>75	0.66	0.67	+0.01
Total	**4.57**	**4.66**	**+0.09**

Source: AEDT, 2023. RS&H, 2023

FIGURE 3-7: 2026 NO ACTION ALTERNATIVE NOISE CONTOURS

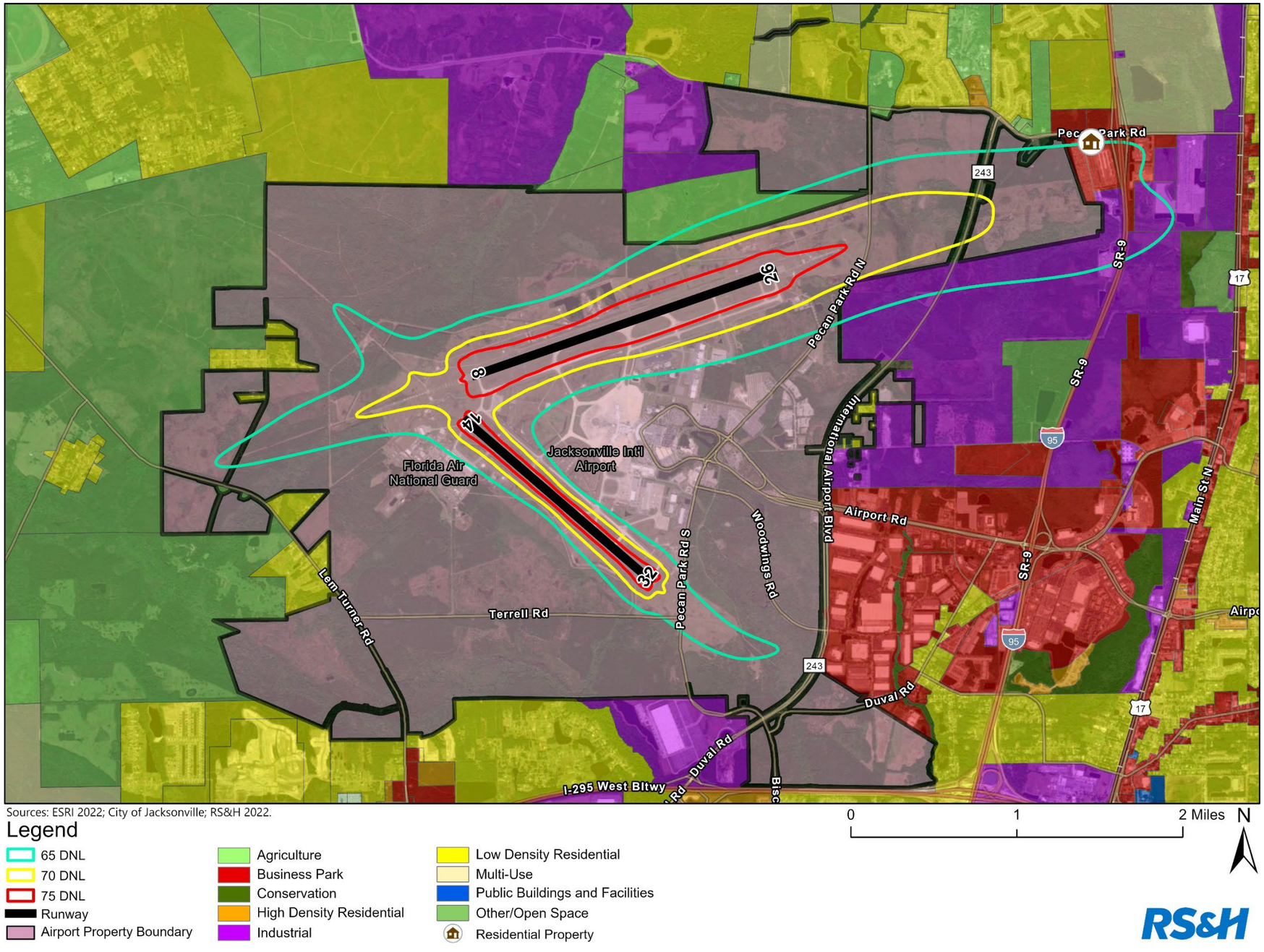

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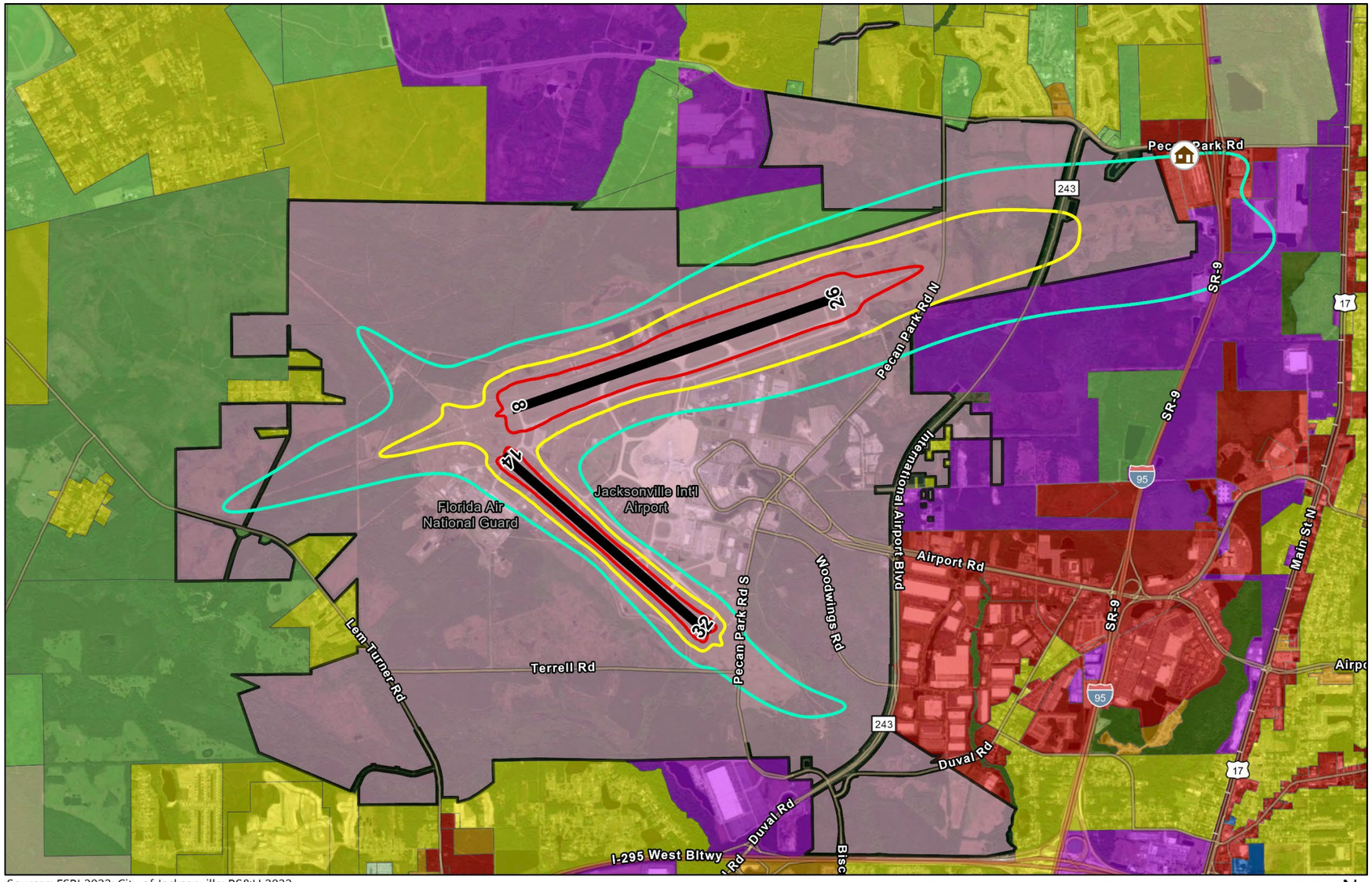
FIGURE 3-8: 2026 PROPOSED PROJECT NOISE CONTOURS



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2031 DNL Contours - Annual aircraft operations for the 2031 No Action Alternative total 118,843, or an average of 326 operations per day. The 2031 No Action Alternative aircraft fleet mix was determined by multiplying the percentages by aircraft type that occurred in 2022 by the FAA TAF operations forecast to occur in 2031. As shown in ***Table 3-9***, the 2031 Proposed Project annual operations total 142,814, or an average of 391 operations per day. The 2031 Proposed Project aircraft fleet mix was determined by multiplying the percentages by aircraft type that occurred in 2022 by the FAA TAF operations forecast to occur in 2031. The 2031 Proposed Project includes an additional 23,971 passenger aircraft operations, which were distributed proportionally among the passenger aircraft fleet mix that occurred in 2022.

The operations and fleet mix modeled for the 2031 No Action and Proposed Project are shown in ***Table 3-12***. The runway use, flight tracks, and time of day modeled for the 2031 condition were the same as the 2022 condition.

The 2031 No Action Alternative and Proposed Project 65, 70, and 75 DNL contours are provided in ***Figure 3-9*** and ***Figure 3-10***, respectively. ***Table 3-13***, which identifies the areas within the DNL contour ranges, shows that the total area within the 65 DNL contour is 4.70 square miles for the No Action Alternative and 5.02 square miles for the Proposed Project. The No Action Alternative 65 DNL contour encompasses 0.74 square mile of off-Airport property, and the Proposed Project encompasses 0.82 square mile. One residence near Interstate 95 and Pecan Park Road intersection is within the 65 DNL for both conditions. The residence is exposed to 65.62 DNL for the 2031 No Action Alternative and 66.01 DNL for the Proposed Project, an increase of 0.39 DNL as a result of the Proposed Project. The 0.39 DNL increase is below the FAA significance threshold of DNL 1.5 dB. Therefore, compared to the No Action Alternative, the Proposed Project would not have a significant effect on noise. See ***Appendix C*** for further information.

Mitigation, Avoidance, and Minimization Measures – The JAA does not propose mitigation measures because the Proposed Project would not cause significant direct or indirect effects to noise and noise-compatible land use.

TABLE 3-12: 2031 AIRCRAFT OPERATIONS AND FLEET MIX

Aircraft Type (s)	AEDT Aircraft	No Action Operations	Proposed Project Operations	Difference
Embraer 175	EMB175	19,917	25,167	5,250
Boeing 737-800/900	737800	11,736	14,830	3,093
Boeing 757-200	757PW	11,208	14,162	2,954
Airbus A320-200	A320-211	9,364	11,832	2,468
Boeing 737-700	737700	9,356	11,822	2,466
Canadair CRJ 700/900	CRJ9-ER	7,523	9,506	1,983

Aircraft Type (s)	AEDT Aircraft	No Action Operations	Proposed Project Operations	Difference
Airbus A319-100	A319-131	6,867	8,677	1,810
Embraer 190	EMB190	3,459	4,371	912
Embraer 170	EMB170	3,184	4,024	839
Boeing 767-300	767300	1,768	1,768	0
Airbus A321-200	A321-232	2,414	3,050	636
Airbus A300	A300B4-203	1,051	1,051	0
Embraer 135/145	EMB145	1,112	1,405	293
Airbus A320neo	A320-271N	938	1,185	247
Boeing 737 MAX8	7378MAX	919	1,162	242
Beechcraft 1900	1900D	770	973	203
Boeing 717-200	717200	729	921	192
ATR-42	DHC8	480	607	127
Dash 8-300	DHC830	479	605	126
Boeing 757-300	757300	202	255	53
Boeing 737-400	737400	129	163	34
Boeing 737-300	737300	123	155	32
Boeing 747-400	747400	38	38	0
Challenger 300/600	CL600	23	29	6
King Air/Super King Air	DHC6	10	13	3
Learjet 35/40/45/55/60/75	LEAR35	1,856	1,856	0
Cessna 560 Citation XLS	CNA560XL	1,360	1,360	0
Citation II/Bravo, Premier, Phenom 300	CNA55B	1,029	1,029	0
Cessna Citation CJ1/CJ3/CJ4	CNA525C	1,014	1,014	0
Beechcraft Beechjet	MU3001	1,003	1,003	0
Cessna Citation Sovereign/Latitude	CNA680	876	876	0
Gulfstream G280	CL601	788	788	0
Challenger 300/600	CL600	737	737	0
Cessna Citation Ultra/Encore	CNA560E	579	579	0
Gulfstream GV/G500/G550	GV	543	543	0
Cessna Citation X, Falcon 2000	CNA750	480	480	0
Dassault Falcon 50/900	FAL900EX	344	344	0
Gulfstream GIV/G400	GIV	332	332	0
Cirrus Vision, Citation Mustang	CNA510	243	243	0
IAI Astra/Galaxy	IA1125	153	153	0
Cessna Citation CJ1/CJ2/CJ3	CNA500	80	80	0
Cessna Citation III	CIT3	73	73	0

Aircraft Type (s)	AEDT Aircraft	No Action Operations	Proposed Project Operations	Difference
Bombardier Global 7500	BD-700-1A10	64	64	0
Gulfstream G650	G650ER	61	61	0
Eclipse 500	ECLIPSE500	49	49	0
Bombardier Global 5000	BD-700-1A11	30	30	0
King Air/Super King Air	DHC6	777	777	0
Pilatus PC-12, Cessna 208, Socata TBM9	CNA208	202	202	0
Cessna 172/177	CNA172	2,397	2,397	0
Cessna 152	GASEPF	574	574	0
Piper 46 Malibu, Lancair 4, Bonanza 36	GASEPV	269	269	0
Piper Seminole, Diamond 42/62	PA30	215	215	0
Baron 58, Cessna 310/414	BEC58P	165	165	0
Cirrus SR20/22	COMSEP	152	152	0
Boeing P-8	737800	5,232	5,232	0
F-15	F15E20	3,368	3,368	0
Total		**118,843**	**142,814**	**23,971**

Source: FAA TAF; Virtower™; RS&H, 2023

TABLE 3-13: AREA WITHIN THE 2031 DNL CONTOURS

DNL Contour Range	No Action Alternative (sq. mile)	Proposed Project (sq. mile)	Difference (sq. mile)
65-70	2.88	3.08	+0.20
70-75	1.14	1.21	+0.07
>75	0.68	0.73	+0.05
Total	**4.70**	**5.02**	**+0.32**

Source: AEDT, 2023. RS&H, 2023

FIGURE 3-9: 2031 NO ACTION ALTERNATIVE NOISE CONTOURS

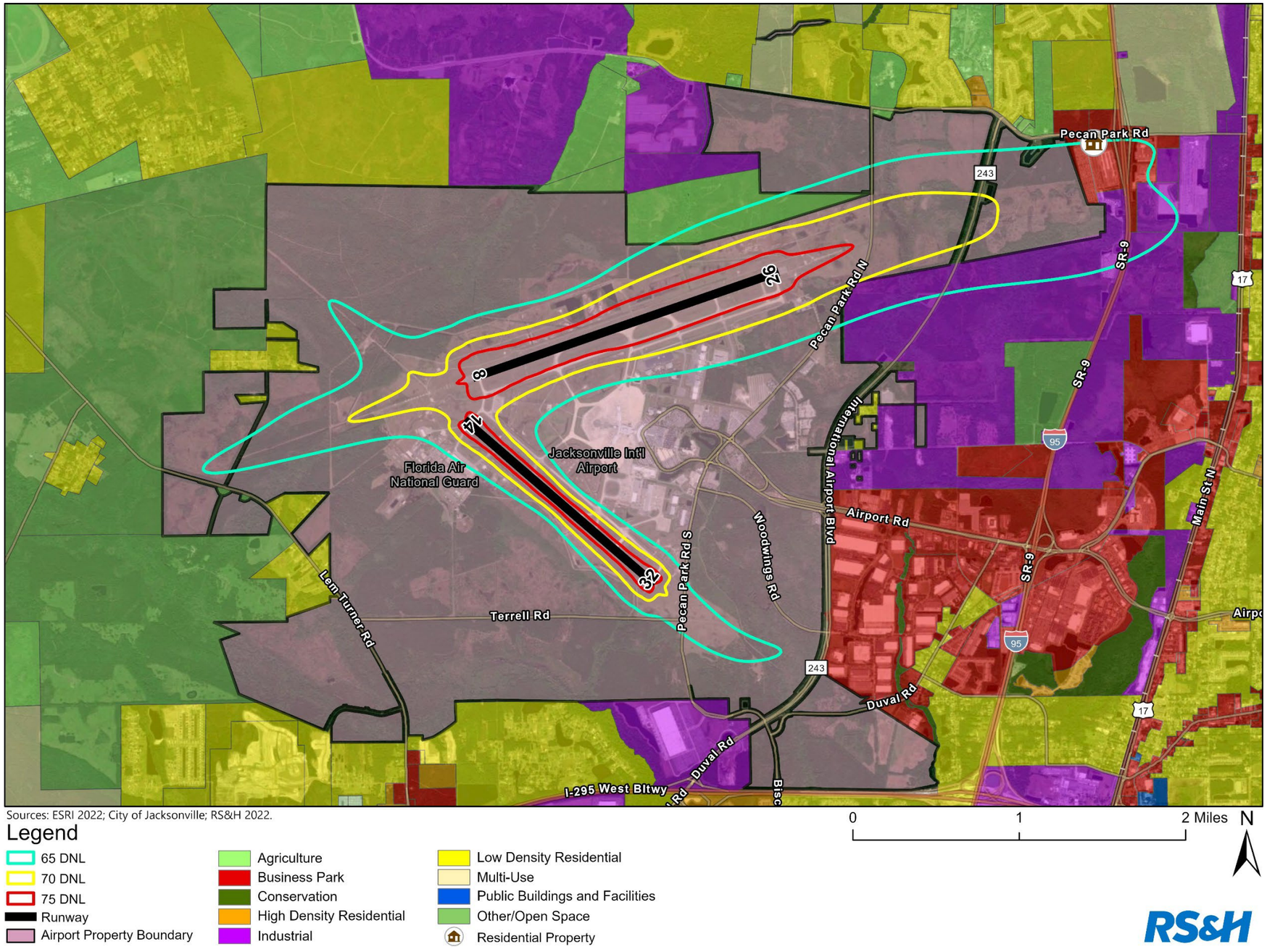

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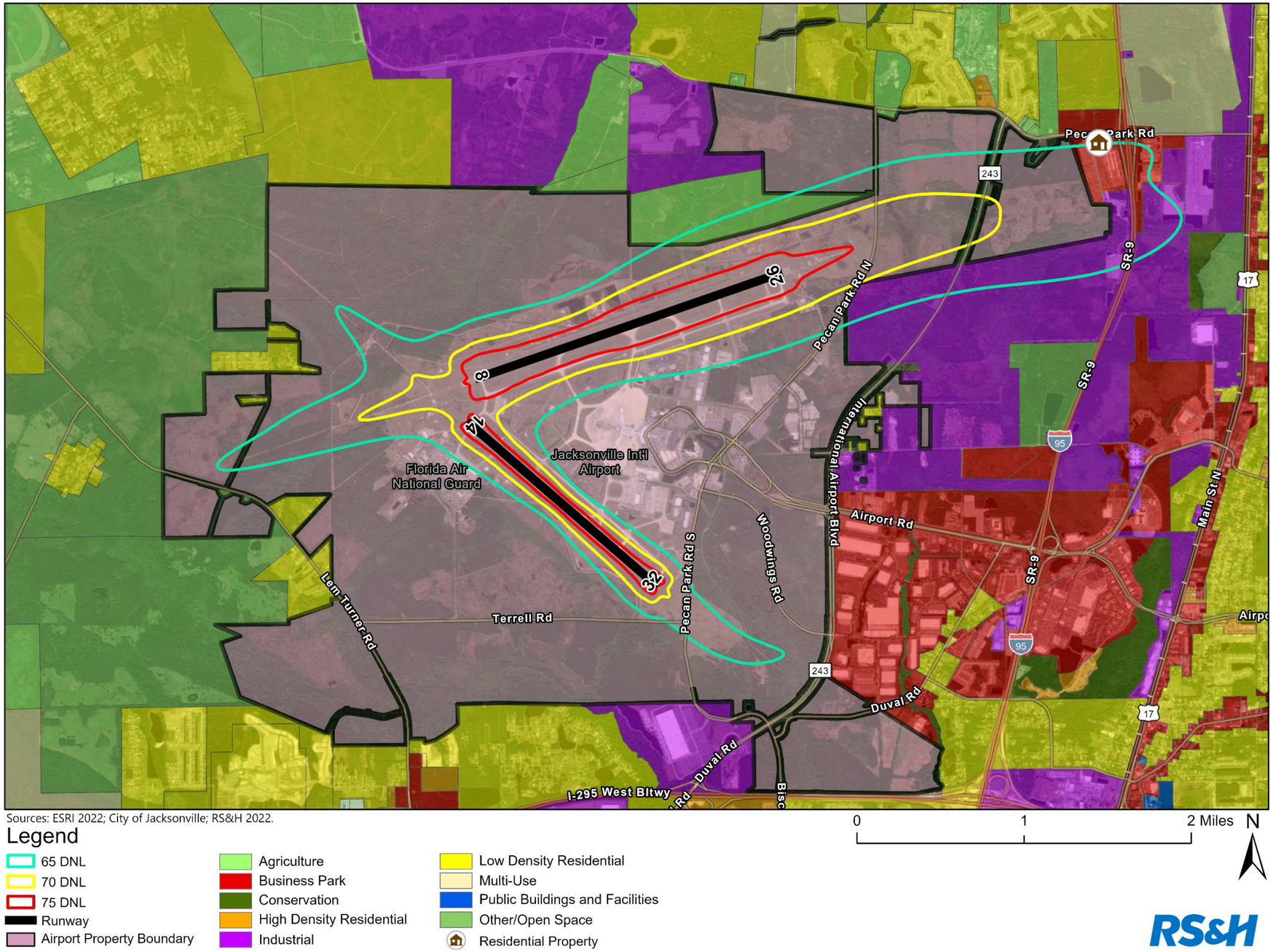
FIGURE 3-10: 2031 PROPOSED PROJECT NOISE CONTOURS



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3.2.12 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

This section describes the existing condition, the FAA's significance threshold(s), the potential socioeconomics, environmental justice, and children's environmental health and safety risks effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.12.1 Affected Environment

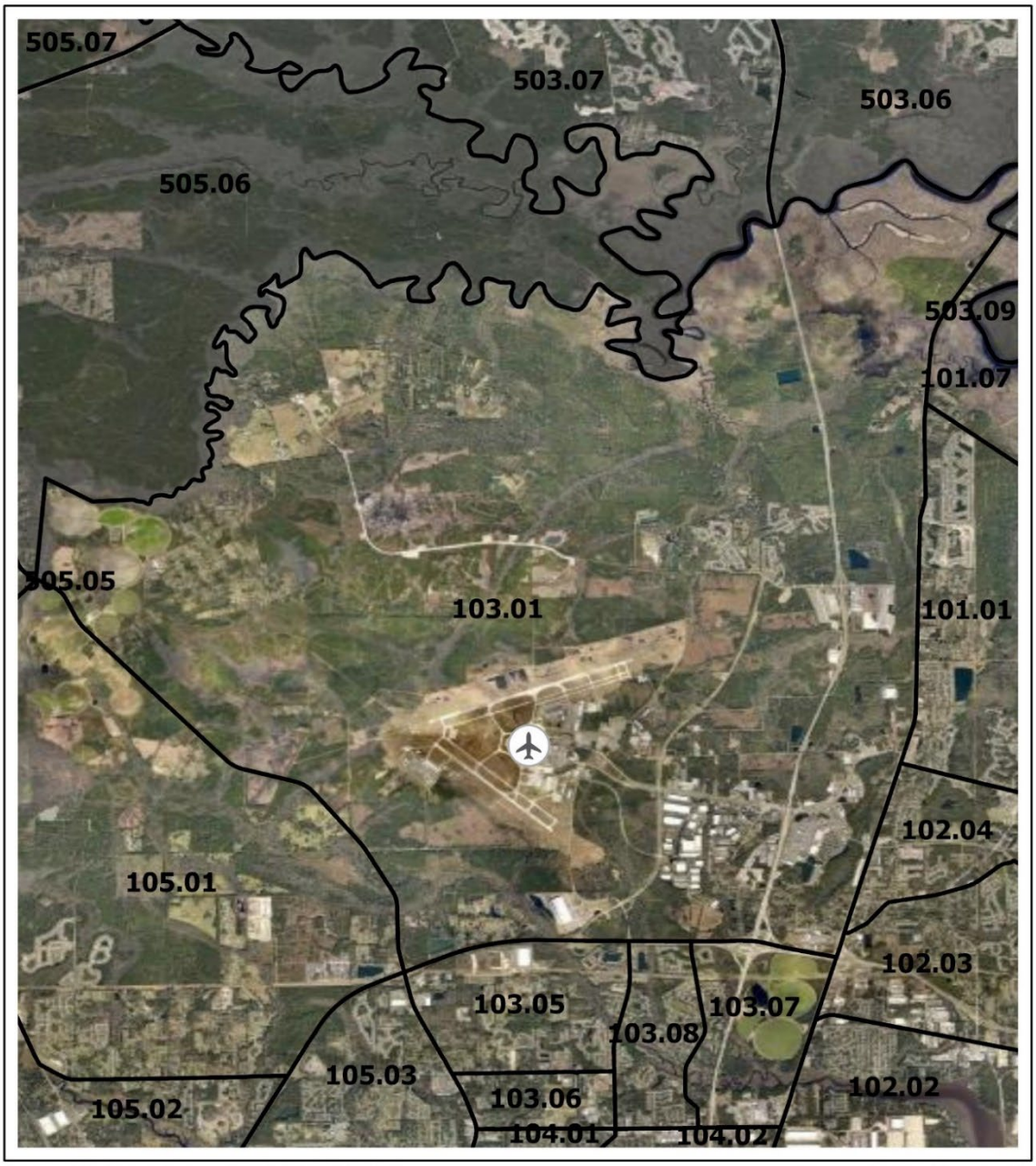
Socioeconomics is an umbrella term to describe a project's social or economic aspects or a combination of the two. A socioeconomic analysis evaluates how elements of the human environment, such as population, employment, housing, and public services, might be affected by a Proposed Project and alternative(s). The Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970 is the main regulation governing socioeconomics. It includes provisions that must be followed if property acquisition or displacement of people would occur due to implementing the Proposed Project. More information on socioeconomics, environmental justice, and children's environmental health and safety risk and regulations can be found in the FAA Order 1050.1F Desk Reference (FAA, 2020).

The existing demographics of the area in and around the study areas as they relate to socioeconomics, environmental justice, and children's environmental health and safety risks are described. U.S. Census Bureau information for the city and county is the basis of the socioeconomic and environmental justice analyses. Census tracts are the smallest units that provide information on poverty, which is needed to determine the effects on low-income populations. For consistency, this EA uses information from the U.S. Census Bureau for Census Tract 103.01 (see ***Figure 3-11***).

Socioeconomics - Population, housing, and labor force data for the City of Jacksonville and Duval County is included as the basis for evaluating potential socioeconomic impacts.

Population **-** ***Table 3-14*** lists the population growth from 2010 to 2020 in the census tract that the Indirect Study Area intersects, as well as the City, County, State, and U.S. for comparison purposes. Between 2010 and 2020, the population in and around the Indirect Study Area increased by an average of 54.3%. Comparatively, the population in the City, Duval County, the State of Florida, and the U.S. increased slower.

FIGURE 3-11: U.S. CENSUS BUREAU TRACTS



Sources: U.S. Census Bureau; ESRI 2022; RS&H 2022.

Not to scale. Graphics use only.

Legend

Airport Location

Census Tract

N

RS&H

U.S. Census Bureau Census Tracts

TABLE 3-14: POPULATION CHANGE BETWEEN 2010 AND 2020

Area	2010	2020	Percent Change
Census Tract 103.01	4,120	6,359	54.3%
City of Jacksonville	821,784	902,488	9.8%
Duval County	864,263	995,567	15.2%
State of Florida	18,801,310	21,538,187	14.6%
United States	308,745,538	331,449,281	7.4%

Source: (United States Census Bureau, 2020)

Transportation – The primary access roads to/from the Airport are located along Yankee Clipper Drive, Dixie Clipper Road, and Pecan Park Road. Passengers, tenants, and employees use these roads to access the Airport facilities (passenger terminal, hourly and daily parking garages, daily surface lots, rental car return facility, and JAA offices). According to the FDOT, the Average Annual Daily Traffic (AADT) volume along Yankee Clipper Drive and Dixie Clipper Road is between 13,500 and 14,000 trips. These roads have a 2020 Level of Service (LOS) C and A, respectively (FDOTa, 2022).

Other roadway access to/from the Airport includes Pecan Park Road. Pecan Park Road stretches from the I-95–Pecan Park Road North interchange, about 2.6 miles north of the Airport Road exit, to International Airport Boulevard, just north of I-295. North of Airport Road, Pecan Park Road provides access to the general aviation area, the FAA ATCT, the ARFF station, the Commercial Parking Lot via Barnstormer Road, the economy parking lots, the U.S. Postal Service, and Rental Car Road. South of Airport Road, Pecan Park Road provides access to the Flex-Office/Warehouse Building, JAA office maintenance facilities, Air Cargo Building #4, Cole Flyer Road, and Woodwings Road (Ricondo & Associates, 2020).

Housing - ***Table 3-15*** lists the total and vacant housing units in the referenced Census Tract and surrounding geographies. An average of 14.3% of housing units are vacant in the referenced Census Tract. About ten percent of the housing units in the City and County, respectively, are vacant.

TABLE 3-4: HOUSING UNITS

Area	Total Units	Vacant Units (percentage)
Census Tract 103.01	2,566	14.3%
City of Jacksonville	389,130	10.4%
Duval County	413,084	10.5%
State of Florida	9,562,324	17.1%
United States	138,432,751	11.6%

Note: The U.S. Census Bureau considers vacant housing units for rent; rented but not occupied; for sale; sold but not occupied; for seasonal, recreational, or occasional use; for migrant workers; and other vacant units. Source: (United States Census Bureau, 2020).

Labor Force - The U.S. Census Bureau lists 2,011 employed civilians in the Census Tract that intersects the Indirect Study Area. The unemployment rate averages about five percent in the tract. Comparatively, the unemployment rate in the City and County is about three percent.

Economic Impact – The Airport is vital to the region's economy. As described previously, the Airport helps the state and local economy by creating jobs, supporting business growth, and connecting Jacksonville to global markets. The Airport's economic impact supports approximately 26,400 jobs, which provide $994 million in personal income, and its total economic output is approximately $3.19 billion (FDOT, 2019).

Environmental Justice - ***Table 3-16*** describes the share of the population in poverty within the referenced Census Tract compared to the City and County. About 18% of the population in the referenced Census Tract is below the poverty level. ***Table 3-17*** shows the total minority presence in the referenced Census Tract compared to the City and County. According to the U.S. Census Bureau, about 48% of the population in the referenced Census Tract are minorities.

TABLE 3-5: POPULATION BELOW THE POVERTY LEVEL

Area	Population for Whom Poverty Status is Determined	Percent of the Population Living Below the Poverty Level
Census Tract 103.01	1,145	18.0%
City of Jacksonville	135,373	15.0%
Duval County	137,554	14.5%

Source: (United States Census Bureau, 2020).

TABLE 3-6: MINORITY POPULATION

Area	Total Population	Percent Minority
Census Tract 103.01	6,359	48.0%
City of Jacksonville	902,488	50.0%
Duval County	995,567	48.0%

Source: (United States Census Bureau, 2020).

Children's Environmental Health and Safety Risks - Areas of particular concern for children's environmental health and safety risks include schools, daycare facilities, children's health clinics, and recreational facilities. The closest school is Biscayne Elementary School, about three miles southeast of the Direct Study Area. ***Figure 3-12*** shows the location of Biscayne Elementary School in relation to the Proposed Project. ***Table 3-18*** shows the percentage of children under 18 years in the referenced Census Tract compared to the City and County.

FIGURE 3-12: CLOSEST SCHOOL TO THE STUDY AREAS

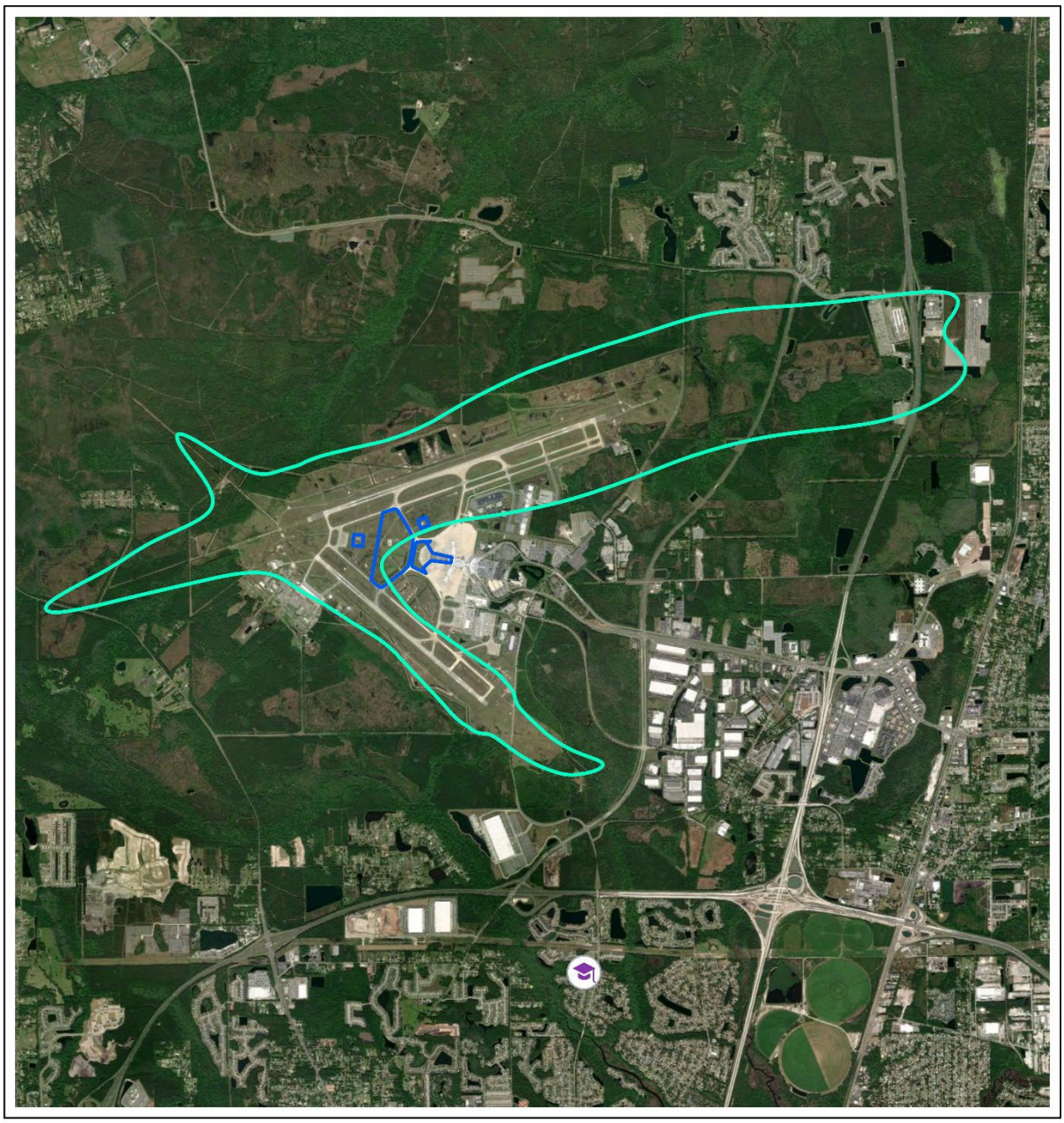


TABLE 3-7: PERCENTAGE OF CHILDREN (UNDER 18)

Area	Total Population	Percentage Under 18 Years of Age
Census Tract 103.10	1,548	24.3%
City of Jacksonville	206,050	22.8%
Duval County	214,225	22.6%

Source: (United States Census Bureau, 2020).

3.2.12.2 Environmental Consequences

The following sections describe the Proposed Project's potential effect on socioeconomics, environmental justice, and children's environmental health and safety compared to the No Action Alternative.

Significance Threshold

Socioeconomics - FAA Order 1050.1F does not provide a significance threshold for socioeconomics. It does provide several factors to consider in evaluating the context and intensity of potential environmental effects. Those factors to consider include the potential of the action to:

- Induce substantial economic growth in an area, either directly or indirectly (e.g., through establishing projects in an undeveloped area)
- Disrupt or divide the physical arrangement of an established community
- Cause extensive relocation when sufficient replacement housing is unavailable
- Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities
- Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities
- Produce a substantial change in the community tax base

Environmental Justice - FAA Order 1050.1F does not provide a significance threshold for environmental justice. It does provide several factors to consider, including the potential of the action to have a disproportionately high and adverse impact on low-income or minority populations due to the following:

- Significant impacts in other environmental impact categories
- Impacts on the physical or natural environment that affect an environmental justice population in a way that the FAA determines are unique to the environmental justice population and significant to that population.

Children's Environmental Health and Safety - FAA Order 1050.1F does not provide a significance threshold for children's environmental health and safety risks. It does provide a factor to consider in evaluating the context and intensity of potential environmental impacts. This is when the action would have the potential to lead to a disproportionate health or safety risk to children.

Potential Impacts

Socioeconomics - The Proposed Project would increase the economic activity in the community compared to the No Action Alternative through the development and operation of the Concourse. The Proposed Project would result in the short-term construction-related employment of local contractors, which could be considered a positive effect. Construction-related impacts would be temporary and are not expected to cause a significant secondary (induced) impact on the surrounding area.

The Proposed Project's employment opportunities could also be considered a positive, long-term secondary impact. Compared to the No Action Alternative, the Proposed Project would increase the number of airline employees, airport employees, including baggage handlers, janitors, and airport tenant concessionaire employees at JAX. Construction of the Proposed Project would have the potential to employ hundreds of construction workers. Operation of the Proposed Project would hire approximately 16 maintenance and police union employees, approximately 48 concession, and 15-30 airline-related employees. Most employees for the Proposed Project would be from the local area or northeast Florida region. Therefore, the Proposed Project would not cause extensive relocations or substantially change the community tax base.

The Proposed Project is not anticipated to increase the demand for local law enforcement and fire and life safety services. For these reasons, the Proposed Project would not affect public service. The Proposed Project would not cause shifts in the projected population growth, relocate community businesses, or cause changes to population movement. Compared to the No Action Alternative, the Proposed Project would not disrupt any nearby communities of any planned development, and it would be consistent with the plans or goals of the community.

The JAA's 2022 Landside Planning Study analyzed future roadway operating conditions by calculating the volume of roadway links compared to the capacity of the roadway system at that location. Roadways accessing the Airport that were analyzed included Yankee Clipper Drive, Pecan Park Road, and Dixie Clipper Drive. The Landside Planning Study included the same forecast of enplaned passengers used for the Proposed Project studied in this EA.

Total inbound and outbound traffic volumes for the Yankee Clipper Drive and Dixie Clipper Drive corridors were calculated using the Airport traffic demand model. The traffic volumes were calculated for the arrivals and departures peak hour, which is anticipated to generate the peak hour demand for traffic. The posted speed limit on Yankee Clipper Drive is 45 miles per

hour (mph) entering the Airport and is reduced to 35 mph approaching Pecan Park Road. The posted speed limit approaching the terminal curbside roadway and ramps is 20 mph. The field observations indicate that curbside free-flow speeds are generally within this range. To analyze the future operating conditions along the Airport roadway system, the calculated volume for each roadway link was compared to the roadway's capacity at that location. LOS E is the trigger for roadway improvements. According to the 2022 Landside Planning Study, the LOS of these roadways servicing the Airport would remain A, B, or C through 2032 (a year beyond this EA's study years) (Ricondo, 2022).[20] Therefore, compared to the No Action Alternative, the Proposed Project would not disrupt local traffic patterns and substantially reduce the LOS of roads serving the Airport and its surrounding communities.

Environmental Justice - Compared to the No Action Alternative, the Proposed Project would not directly or indirectly affect low-income or minority populations. The Direct Study Area is located entirely on Airport property and does not include any residences. All direct impacts would be limited to this area. The Proposed Project would not cause significant, short-term, or long-term environmental effects disproportionately affecting minority and/or low-income populations. The closest minority and/or low-income area is about three miles southwest of the Direct Study Area (EPA, 2022). According to the USEPA, a minority and/or low-income area is located within the Indirect Study Area (EPA, 2022). However, the affected area is wooded, does not contain any residences, and is owned by the JAA.

As shown in ***Section 3.2.11.2***, one residence is located within the 65 DNL contour in 2026 and 2031. The increase in noise exposure at the residence in both conditions when comparing the No Action Alternative and Proposed Project is less than the significance threshold for noise. Therefore, there are no significant noise impacts, and there would be no disproportionately affected minority and/or low-income populations.

Children's Environmental Health and Safety - Construction and operation of the Proposed Project would not significantly affect surrounding communities. The construction and operation of the Proposed Project would occur in a secure and controlled environment and would not affect the closest school, Biscayne Elementary School, which is located about three miles southeast of the Direct Study Area. The Proposed Project would not have a substantial effect on products or substances that a child would likely touch, digest, or be exposed to. Therefore, the Proposed Project would not affect children's environmental health and safety risks.

[20] According to the Transportation Research Board, National Research Council, Highway Capacity Manual, LOS A (Excellent) refers to traffic that is free flowing, with volumes and high speeds; LOS B (Very Good) refers to drivers having reasonable freedom to select their speed and lane of operation; LOS C (Good) refers to drivers become restricted in their ability to select their speed or to change lanes; LOS D (Fair) occurs when drivers have little freedom to maneuver and driving comfort is low; LOS E (Poor) occurs when the roadway is operating at or near capacity; and LOS F (Failure) is forced-flow operations where excessive roadway queuing develops.

Mitigation, Avoidance, and Minimization Measures – The JAA does not propose mitigation measures because the Proposed Project would not cause significant direct or indirect effects to socioeconomic, environmental justice, or children's environmental health and safety.

3.2.13 Visual Effects

This section describes the existing condition, the FAA's significance threshold(s), the potential visual effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.13.1 Affected Environment

According to FAA 1050.1F Desk Reference, "visual effects deal broadly with the extent to which the Proposed Project or alternative(s) would either: 1) produce light emissions that create an annoyance or interfere with activities; or 2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment."

The Direct Study Area is within the central portion of the Airport. The viewshed of the Direct Study Area includes the Airport facilities such as the terminal, concourses, and ATCT. Thick vegetation surrounds the airfield, and no residents have a line of sight to the Direct Study Area. Existing permanent outside lighting for the safe movement of vehicles (e.g., aircraft and personnel vehicles) and people illuminates the Airport facilities.

3.2.13.2 Environmental Consequences

Significance Threshold – FAA Order 1050.1F does not define a significance threshold for visual effects; however, Exhibit 4-1 of the Order provides several factors to consider in evaluating the context and intensity of potential environmental impacts.

For light emissions, these factors include the degree to which the action would have the potential to:

- "Create annoyance or interfere with normal activities from light emissions; and
- Affect the visual character of the area due to the light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources."

For visual resources/visual character, these include the extent the action would have the potential to:

- "Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;
- Contrast with the visual resources and/or visual character in the study area; and
- Block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations."

Potential Impacts - Potential aesthetic effects of an action are generally assessed by comparing the visual characteristics of the proposed development to existing development in the areas and to the environmental setting and by determining if a jurisdictional agency considers this contrast objectionable. The visual effects resulting from constructing and operating the Proposed Project would result from physical changes to the visual character of the Direct Study Area, including existing development, landforms, vegetation, and water surfaces.

Construction of the Proposed Project would occur mainly during the day. Some minor nighttime work would require additional lighting; however, this lighting would be directional and last only for nighttime construction work. The temporary use of directional lighting for construction purposes would not result in light emission impacts on the surrounding area.

A conceptual illustration of the Proposed Project is shown in ***Figure 3-13***. Operation of the Proposed Project would include permanent outside lighting for the safe movement of vehicles (e.g., aircraft and personnel vehicles) and people. The closest residential home is approximately 1.7 miles west of the Proposed Project beyond thick vegetation at the end of Ogilvie Road. The Proposed Project would occur entirely on-Airport property. It would not result in viewshed changes or additional light emissions for off-Airport residents.

3.2.14 Water Resources

This section describes the existing condition, the FAA's significance threshold(s), the potential wetlands, floodplains, surface water, groundwater, and wild and scenic rivers effects of the Proposed Project compared to the No Action Alternative, and the potential mitigation measures.

3.2.14.1 Affected Environment

For regulatory purposes under the Clean Water Act (CWA), wetlands are *"areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."*[21]

The CWA establishes the basic structure for regulating the discharge of pollutants into the waters of the United States, and Section 303(d), Section 404, Section 401, and Section 402 of the CWA relating to waters of the United States establishes the National Pollutant Discharge Elimination System (NPDES) permit program.

[21] USACE. (1987, January). *Wetlands Delineation Manual*. Retrieved September 2021, from USACE: https://usace.contentdm.oclc.org/digital/collection/p266001coll1/id/4530.

FIGURE 3-13: CONCEPTUAL ILLUSTRATION

Source: RS&H, Inc. 2022

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The Safe Water Drinking Act is the primary statute regulating groundwater. It prohibits federal agencies from funding actions that would contaminate an EPA-designated sole-source aquifer or its recharge area.

The following sections describe the existing condition for wetlands, floodplains, surface water and groundwater, and wild and scenic rivers.

Wetlands – The CWA defines wetlands as "…those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." ***Table 3-19*** describes wetland characteristics.

TABLE 3-8: WETLAND CHARACTERISTICS

Characteristic	Description
Water	Presence of water at or near the ground surface for a part of the year
Hydrophytic Plants	A preponderance of plants adapted to wet conditions
Hydric Soils	Soil developed under wet conditions

Source: RS&H, 2023.

Figure 3-14 shows that the Direct Study Area includes a drainage swale associated with the Airport's stormwater system and is not a wetland. According to the Master Plan Update, no wetlands are in the Direct Study Area (Ricondo & Associates, 2020).

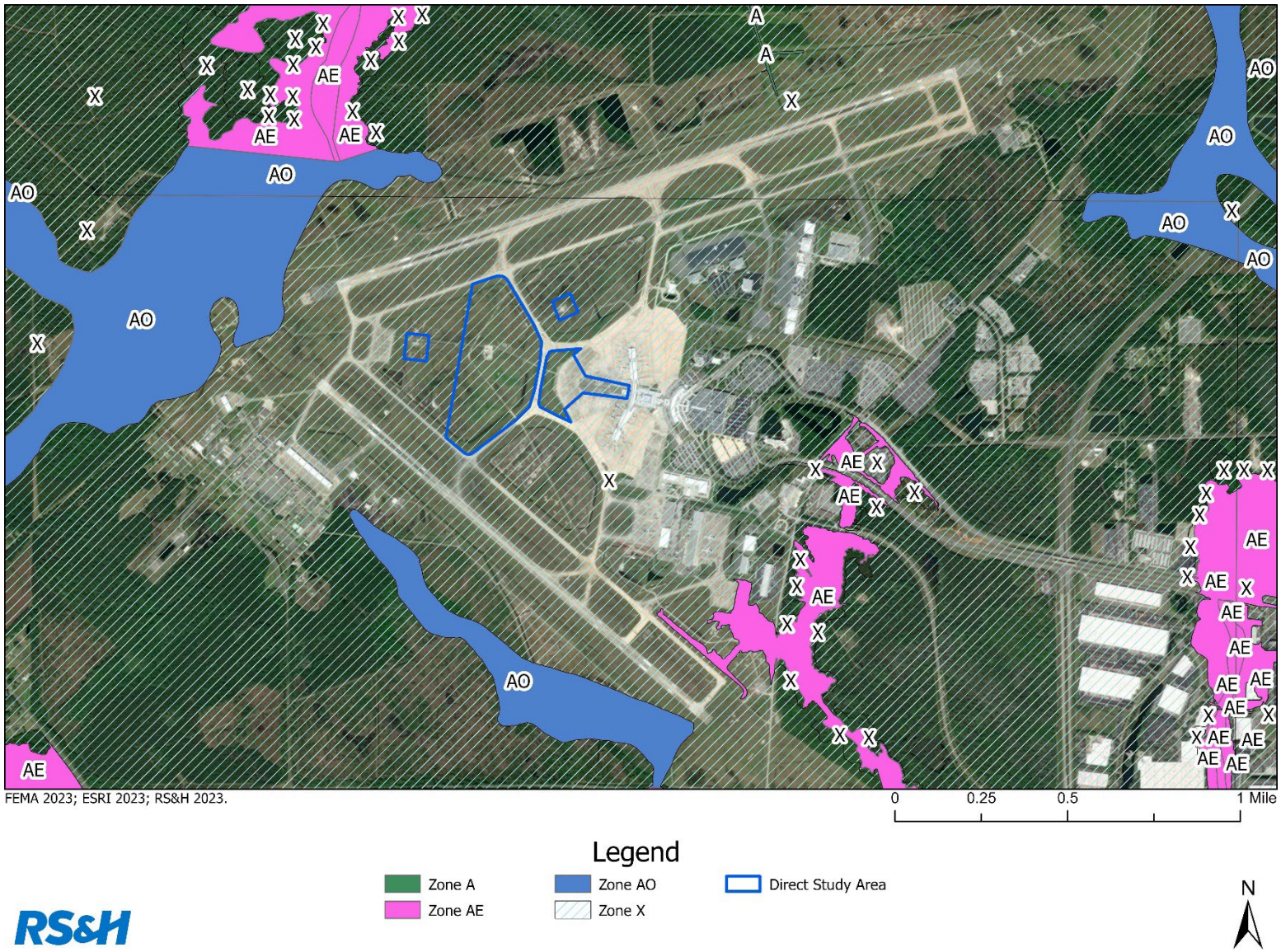
Floodplains - Floodplains are low-lying or flat areas adjoining waters with a one percent or greater chance of a flood in any given year; also referred to as a 100-year flood event. FEMA defines a "regulatory floodway" as "the channel of a river or other watercourse and the adjacent land areas that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height" (FEMA, 2021). According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the Direct Study Area is located in FIRM Map 12031C0177H and 12031C0181H. As shown in ***Figure 3-15***, the Direct Study Area is in Zone X and not within the 100-year floodplain.

Surface Water and Groundwater – Surface waters at the Airport consist of drainage swales, stormwater ponds, and ditches that capture and convey stormwater away from the aircraft movement areas (e.g., apron, taxiways, runways). The SJRWMD recognizes upland cut drainage swales as surface waters, but impacts to these swales do not require mitigation. There are no regulated surface water resources, sole source aquifers, groundwater supplies, or public water supplies in the Direct Study Area. The Direct Study Area includes about 2,000 linear feet of Airport drainage swales to temporarily detain and convey rainfall runoff.

According to FAA Order 1050.1F, Desk Reference, groundwater is subsurface water that occupies the space between sand, clay, and rock formations. The Direct Study Area is within the Broward River Watershed, Hydrologic Unit Code (HUC) 12, ID# 030801031601 (NEPAssist, 2022).

FIGURE 3-14: STORMWATER SYSTEM IN THE DIRECT STUDY AREA

FIGURE 3-15: FLOODPLAINS



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Wild and Scenic Rivers - The closest Wild and Scenic River is the Wekiva River, about 115 miles south of the Airport (National Wild And Scenic Rivers System, 2022). The closest Nationwide Rivers Inventory Segment is the St. Marys River, located about 17 miles north of the Airport (Nationwide Rivers Inventory, 2022).

3.2.14.1 Environmental Consequences

Significance Thresholds

Wetlands - FAA Order 1050.1F, Exhibit 4-1, defines the FAA's significance threshold for wetlands, which states, "The action would:

- Adversely affect a wetland's function to protect the quality or quantity of municipal water supplies, including surface waters and sole source and other aquifers;
- Substantially alter the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected;
- Substantially reduce the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety, or welfare (the term welfare includes cultural, recreational, and scientific resources or property important to the public);
- Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands;
- Promote development of secondary activities or services that would cause the circumstances listed above to occur; or 6. Be inconsistent with applicable state wetland strategies.
- Be inconsistent with applicable state wetland strategies."

Floodplains – FAA Order 1050.1F, Exhibit 4-1 defines the FAA's significance threshold for floodplains, which states, "The action would cause notable adverse impacts on natural and beneficial floodplain values."[22]

Surface Water - FAA Order 1050.1F, Exhibit 4-1, defines the FAA's significance threshold for surface waters, which states, "The action would:

- Exceed water quality standards established by Federal, state, local, and tribal regulatory agencies
- Be inconsistent with applicable state wetland strategies; or
- Contaminate public drinking water supply such that public health may be adversely affected."

Groundwater - FAA Order 1050.1F, Exhibit 4-1, defines the FAA's significance threshold for

[22] According to DOT Order 5650.2, Paragraph 4.k, "Natural and Beneficial Floodplain Values include but are not limited to: natural moderation of floods, water quality maintenance, groundwater recharge, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, and forestry."

groundwater, which states, "The action would:

- Exceed groundwater quality standards established by Federal, state, local, and tribal regulatory agencies; or
- Contaminate an aquifer used for public water supply such that public health may be adversely affected."

Wild and Scenic Rivers – FAA Order.1F, Exhibit 4-1, states that the FAA has not established a significance threshold for Wild and Scenic Rivers; however, it does provide factors to consider in evaluating the context and intensity of potential environmental impacts to Wild and Scenic Rivers. These factors include, but are not limited to:

- Destroying or altering a river's free-flowing nature;
- A direct and adverse effect on the values for which a river was designated (or under study for designation);
- Introducing a visual, audible, or other type of intrusion that is out of character with the river or would alter outstanding features of the river's setting;
- Causing the river's water quality to deteriorate;
- Allowing the transfer or sale of property interests without restrictions needed to protect the river or the river corridor (which cannot exceed an average of 320 acres per mile, which, if applied uniformly along the entire designated segment, is one-quarter of a mile on each side of the river); or

Any of the above impacts preventing a river on the Nationwide Rivers Inventory (NRI) or a Section 5(d) river that is not included in the NRI from being included in the Wild and Scenic River System or causing a downgrade in its classification (e.g., from wild to recreational).

Potential Impacts - As described below, the Proposed Project would not significantly affect water resources in the area.

Wetlands - There are no wetlands within the Direct Study Area. Therefore, compared to the No Action Alternative, the Proposed Project would not affect wetlands.

Floodplains - The Direct Study Area is in Zone X and not within the 100-year floodplain. The Proposed Project would not directly or indirectly affect a 100-year floodplain. Therefore, the Proposed Project would cause notable adverse impacts on natural and beneficial floodplain values.

Surface Water - The surface waters analysis considered potential changes in hydrology and water quality associated with the construction and operation of the Proposed Project compared to the No Action Alternative. The analysis considered changes in impervious surfaces (an additional 15.66 acres) that affect stormwater runoff and hydrology and construction activities that have the potential to affect surface waters. Federal, state, and local regulations and permitting requirements were also reviewed for applicability. The project would require an Environmental Resource Permit (ERP) from SJRWMD and NPDES Construction Generic Permit

(CGP – also called Stormwater Construction Activity Permit) from FDEP. Construction of the Proposed Project would use a silt fence, inlet protection, and ditch barriers to limit the transport of sediment and debris from the project site to the northern ditch which outfalls to a Nassau River tributary and the southern ditch outfalls to the Cedar River. Stabilization measures such as sodding and mulching would be required in disturbed areas during and following construction to reduce the potential for erosion. Additionally, stormwater management facilities designed to meet post-construction requirements would act as sediment basins during construction. The construction of the Proposed Project would add impervious surfaces but would not affect any natural surface water resources, sole source aquifers, or public water supplies near the Direct Study Area. The Proposed Project would impact existing apron drainage and treatment swales in the infield west of Taxiway V. However, new and modified existing SJRWMD-permitted drainage system and stormwater management swales would convey, store, and treat runoff. Existing outfall pipes from the infield swales have adequate capacity to convey the runoff to the Airport outfall ditches. The operation of the Proposed Project would not affect any natural surface water resources requiring mitigation.

Groundwater - Assessments of potential groundwater effects were based on location, primary planning results, and the intended function of the Proposed Project. Impacts from the Proposed Project were based on evaluations concerning groundwater recharge and any changes in operational activities for potable water consumption and domestic water treatment. Potable water is sourced from the Floridian Aquifer. JEA uses deep well turbine pumps to draw water from the aquifer to JEA's water treatment plant. JEA treats the water in its treatment plants using an aerator to remove sulfur odor and disinfect the water with chlorine (JEA, 2023). The Proposed Project's additional apron and bypass taxiway would increase the impervious surface at the Airport, which would lead to a minor increase in stormwater runoff during construction and operation. This increase can be accommodated by the Airport's existing stormwater drainage system. A NPDES Stormwater Construction Activity Permit that includes non-contaminated dewatering would be acquired before construction. The contractor would be required to meet all relevant requirements of the NPDES Generic Permit for Stormwater Discharges from Large and Small Construction Activities. Some conditions of the permit include: developing and implementing a Stormwater Pollution Prevention Plan (SWPPP), constructing temporary sedimentation basins for disturbed areas larger than 10 acres, installing silt fences on all side slopes and downslope boundaries, stabilizing inactive disturbed areas within 7 days, and achieve final stabilization (at least 70% cover) before permit coverage termination. Implementing these BMPs and construction permit conditions would minimize project-related effects on water resources. Therefore, the Proposed Project would not adversely affect groundwater.

Wild and Scenic Rivers - Given the distances of the Wekiva River and the St. Marys River to the Direct Study Area, the Proposed Project would not directly or indirectly affect any wild and scenic river within 0.25-mile of its ordinary high-water mark.

Mitigation, Avoidance, and Minimization Measures – Because the Proposed Project would not cause significant direct or indirect effects to water resources, the JAA does not propose mitigation measures.

3.3 CUMULATIVE IMPACTS

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

A qualitative cumulative impacts analysis was performed for development actions within the Indirect Study Area from 2019 - 2031. Future impacts associated with cumulative projects were qualitatively assessed where impacts are possible, but data are unavailable. The analysis considered the potential cumulative impact of these projects when combined with the potential impact of the Proposed Project on each environmental resource category.

A search of local government planning documents, capital improvement plans, transportation agency databases (e.g., DOT), and other resources was performed to identify cumulative projects within the Indirect Study Area to include in the cumulative impacts assessment. There are no known off-Airport cumulative projects within the Indirect Study Area from 2019 - 2031.

Table 3-20 lists and describes the on-Airport projects that have occurred in the past (2019-2022), present (2023-2024), and future (2025-2031). See ***Figure 3-16*** for the locations of the on-Airport cumulative projects.

3.3.1 Environmental Consequences

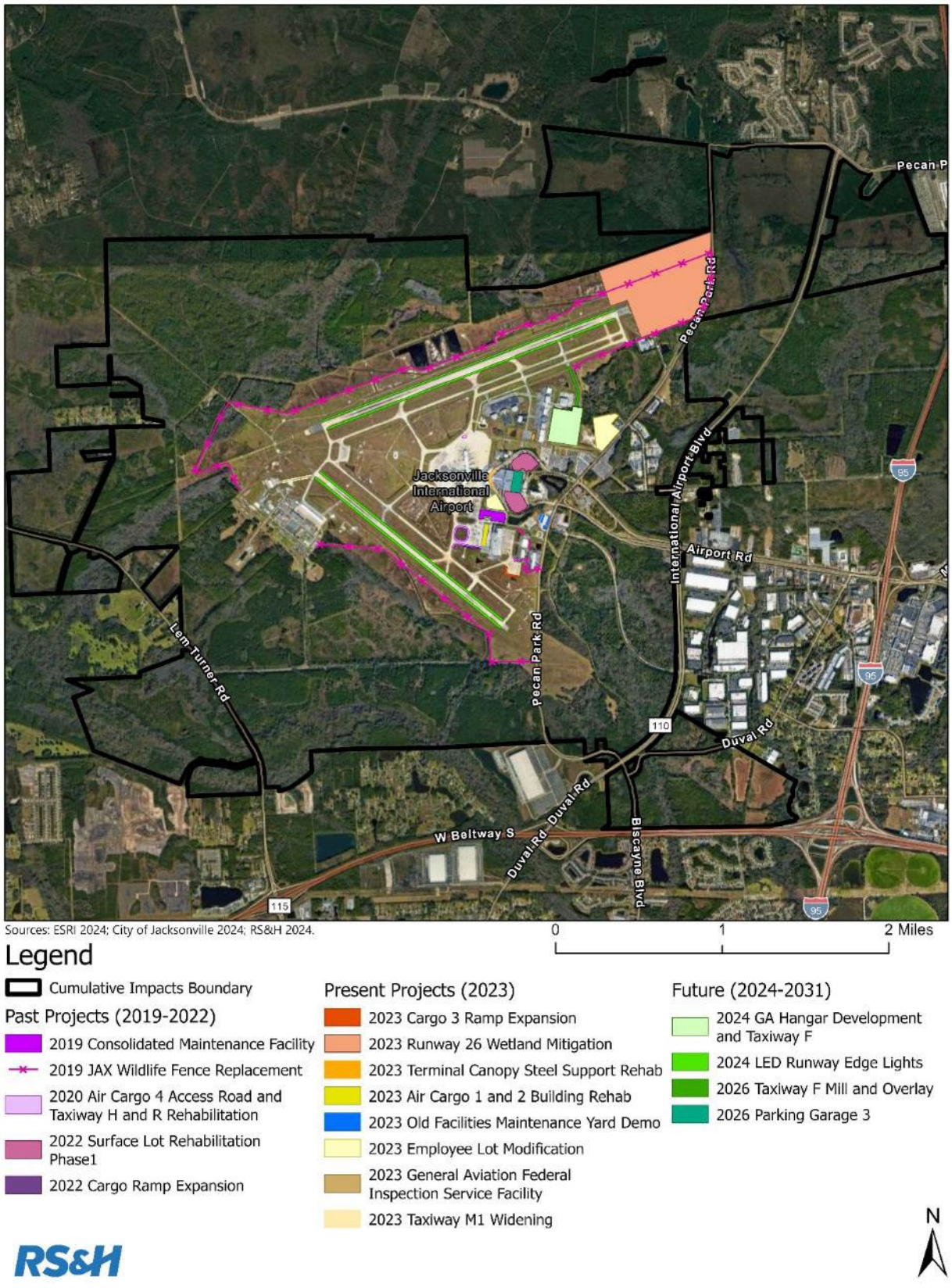
The Proposed Project is the only capacity project in the foreseeable future. Implementation of the Proposed Project would cause less than significant environmental effects related to Air Quality (temporary construction-related air emissions and a minor increase in surface transportation vehicle emissions); Biological Resources (no suitable habitats or critical habitats); Climate; Coastal Resources; DOT Act, Section 4(f) and 6(f) Resources; Farmlands; Hazardous Materials (minor increase fuel use), Solid Waste (minimal construction waste and MSW), and Pollution Prevention; Historical, Architectural, Archaeological, and Cultural Resources; Land Use; Land use; Natural Resources and Energy Supply; or Noise and Noise-Compatible Land Use.

TABLE 3-9: CUMULATIVE PROJECTS

	Cumulative Project	Description
Past	2019 Consolidated Maintenance Facility	This JAA project was the construction and operation of a relocated maintenance facility. The former facility had outlived its useful life.
	2019 JAX Wildlife Fence Replacement	This project replaced the Airport's fencing of the airport operations area with a new wildlife fence to improve the safety of the airfield.
	2020 Air Cargo 4 Access Road and Taxiways H and R Rehabilitation	This JAA project improved an existing access road and rehabilitated two airfield taxiways.
	2022 Surface Lot Rehabilitation Phase 1	This project rehabilitated a surface transportation parking lot.
	2022 Cargo Ramp Expansion	This project expanded a cargo ramp to alleviate apron congestion. It did not increase the Airport's capacity or operations.
Present	2023 Runway 26 Wetland Mitigation	This project mitigated wetland areas off the end of Runway 26 that were considered a hazardous wildlife attractant.
	2023 Terminal Canopy and Steel Support Rehab	This JAA project rehabilitated the Airport's curb-front canopy.
	2023 Air Cargo 1 & 2 Building Rehab	This project is the rehabilitation of two air cargo buildings. It is not increasing the Airport's capacity or operations.
	2023 Old Facilities Maintenance Yard Demo	JAA is demolishing old, unused facilities at the former maintenance yard.
	2023 Employee Lot Modification	JAA is relocating the existing employee surface transportation parking lot and modifying the current lot to accommodate existing demand.
	2023 General Aviation Federal Inspection Services Facility	This project is constructing and operating the Airport's general aviation federal inspection services facility. This project did not increase the Airport's capacity or operations.
	2023 Taxiway M1 Widening	JAA is widening Taxiway M1 to meet FANG standards as part of the F-35 conversion.
	2024 Cargo 3 Ramp Expansion	This JAA project will expand the existing Air Cargo 3 Ramp to better accommodate large aircraft that currently use the ramp. It will not increase the Airport's capacity or operations.
	2024 GA Hangar Development and Taxiway F	New general aviation hangars would be constructed along extended Taxiway F, increasing general aviation operations. Both fixed-base operators have a waitlist for hangar space.
	2024 LED Runway Edge Lights	JAA proposes replacing the Airport's incandescent runway edge lighting with LED lights.
Future	2026 Taxiway F Mill and Overlay	This project is the rehabilitation of Taxiway F.
	2026 Parking Garage 3	JAA is proposing constructing and operating a third parking garage, east of its two current parking garages. This project will meet existing and forecasted demand. The current parking garages close due to full utilization regularly.

Source: RS&H, 2024.

FIGURE 3-16: CUMULATIVE PROJECTS



Implementation of the Proposed Project would also cause less than significant environmental effects related to Socioeconomics (positive increase in construction and permanent jobs), Environmental Justice, and Children's Environmental Health and Safety Risks; Visual Effects; and Water Resources (small additional rainfall-runoff).

As previous sections describe, the construction and operation of the Proposed Project would have less than significant impacts. When considered with projects that have occurred, are occurring, and are planned to occur in the reasonably foreseeable future, the Proposed Project would not cause significant environmental effects. It would not cause or contribute to significant cumulative environmental effects. See ***Table 3-20*** for a summary of potential cumulative impacts. Each project's cumulative impact is assigned a rating of no impact or low impact. There would not be any moderate or high impacts associated with the cumulative projects in conjunction with the Proposed Project's potential impacts.

As shown in ***Table 3-21,*** although there is the potential for cumulative impacts to specific environmental resources, no reasonably foreseeable cumulative effects would be considered unique or of extraordinary magnitude. The likelihood that the Proposed Project would have a notable cumulative impact is generally low for most environmental resource categories. Additionally, no identified past, present, or future projects are considered enabling to, dependent upon, or otherwise connected to the Proposed Project.

All cumulative projects would result in construction activities affecting air quality, climate, hazardous waste, solid waste, pollution prevention, socioeconomics, and natural resources and energy supply. Cumulative projects that increase impervious surfaces have the potential to affect biological resources. However, each on-Airport cumulative project is located where mowed and maintained vegetation exists; therefore, cumulative impacts would be low. Cumulative projects that increase impervious surfaces have the potential to increase rainfall runoff into local waterways; however, each project would include stormwater system development or improvements; therefore, cumulative impacts would be low.

The Airport Sponsor's compliance with all federal, state, and local regulations and permit requirements outlined for the resources in the previous sections would ensure that the Proposed Project would not exceed any significance thresholds identified in FAA Order 1050.1F. All future projects involving federal funding or approval would be subject to review under NEPA to determine the potential for significant environmental impacts to result from their construction or implementation. Therefore, the construction and operation of the Proposed Project, in combination with the past, present, and reasonably foreseeable future projects, would result in no significant cumulative environmental impacts.

TABLE 3-21: SUMMARY OF POTENTIAL CUMULATIVE IMPACTS ANALYSIS

		Environmental Resource Categories													
	Cumulative Project	**Air Quality**	**Biological Resources**	**Climate**	**Coastal Resources**	**DOT Section 4(f) Resources**	**Farmlands**	**Hazardous Materials, Solid Waste, Pollution Prevention**	**Historical, Architectural, and Archaeological Resources**	**Land Use**	**Natural Resources and Energy Supply**	**Noise and Noise-Compatible Land Use**	**Socioeconomics, Environmental Justice, and Childrens Environmental Health and Safety Risks**	**Visual Effects**	**Water Resources**
Past	2019 Consolidated Maintenance Facility	L	L	L	N	N	N	L	N	N	L	N	N	L	L
	2019 JAX Wildlife Fence Replacement	L	L	L	N	N	N	L	N	N	L	N	N	L	L
	2020 Air Cargo 4 Access Road and Taxiways H and R Rehabilitation	L	N	L	N	N	N	L	N	N	L	N	N	L	N
	2022 Surface Lot Rehabilitation Phase 1	L	N	L	N	N	N	L	N	N	L	N	N	L	N
	2022 Cargo Ramp Expansion	L	L	L	N	N	N	L	N	N	L	N	N	L	L
Present	2023 Runway 26 Wetland Mitigation	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2023 Terminal Canopy and Steel Support Rehab	L	N	L	N	N	N	L	N	N	L	N	N	L	N
	2023 Air Cargo 1 & 2 Building Rehab	L	N	L	N	N	N	L	N	N	L	N	N	L	N
	2023 Old Facilities Maintenance Yard Demo	L	N	L	N	N	N	L	N	N	L	N	N	L	N
	2023 Employee Lot Modification	L	N	L	N	N	N	L	N	N	L	N	N	L	N
	2023 General Aviation Federal Inspection Services Facility	L	N	L	N	N	N	L	N	N	L	N	N	L	L
	2023 Taxiway M1 Widening	L	L	L	N	N	N	L	N	N	L	N	N	L	L
	2024 Cargo 3 Ramp Expansion	L	L	L	N	N	N	L	N	N	L	N	N	L	L
	2024 GA Hangar Development and Taxiway F	L	L	L	N	N	N	L	N	N	L	L	N	L	L
	2024 LED Runway Edge Lights	L	N	L	N	N	N	L	N	N	L	N	N	L	N
Future	2026 Taxiway F Mill and Overlay	L	N	L	N	N	N	L	N	N	L	N	N	L	N
	2026 Parking Garage 3	L	N	L	N	N	N	L	N	N	L	N	N	L	N

Notes: N – No impacts; L – Low impacts
Source: RS&H, 2024.

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4
AGENCY AND PUBLIC INVOLVEMENT

The EA coordination process described in this chapter provided applicable agencies and the public the opportunity to comment on the potential effects of the construction and operation of the Proposed Project.

As NEPA and FAA Order 1050.1F require, a public involvement process will be conducted. This process provides the opportunity for public and agency input regarding the Proposed Project analyzed in this EA. The public and agency involvement process goals were to:

- Provide information about the Proposed Project's purpose and need and the alternatives the EA discusses.
- Obtain feedback about the Proposed Project and its potential environmental impacts from the public and agencies interested in and affected by the Proposed Project.
- Inform those interested that the EA provides a full and fair discussion of project-related environmental effects.
- Provide timely public notices to the interested parties so they may submit comments concerning the Proposed Project.
- Record comments received from interested parties.

4.1 PUBLIC INVOLVEMENT AND AGENCY COORDINATION APPROACH AND PROCESS

Pertinent federal statutes, regulations, executive orders, and guidance are considered when conducting the public involvement process. ***Table 4-1*** lists the agencies that were sent an initial coordination letter providing details on the Proposed Project's components and providing the opportunity to comment (see ***Appendix A***). The agency comments received in response to coordination letters are reflected in the application sections of ***Chapter 3*** (Affected Environment and Environmental Consequences). The Florida Department of Environmental Protection (FDEP) responded to early agency coordination in October 2022. FDEP comments included guidance for potential "Planned Unit Development" application through the City of Jacksonville Planning and Development Department. Additionally, the FDEP suggested coordinating the project with the St. Johns River Water Management District (SJRWMD). The FAA is currently coordinating with the Florida State Historic Preservation Office (SHPO). The Final EA will include this agency-to-agency coordination.

Copies of the agency response letters are included in ***Appendix A***.

TABLE 4-1: EARLY AGENCY COORDINATION

Agency	Coordination Method	Date Initiated
Florida Department of Environmental Protection (FDEP) State Clearinghouse	Email	9/26/22*

*Note – An early agency coordination letter was sent to the Clearinghouse on Sept 26, 2022 (no FDEP reply). RS&H followed up on Oct 25, 2022 (no FDEP reply) and Nov 17, 2022 (FDEP replied to the wrong project on Nov 18, 2022). RS&H followed up with FDEP on Nov 18, 2022, inquiring about this project (no FDEP reply). Source: RS&H, 2024

4.2 DISTRIBUTION OF DRAFT EA

A notice of availability for the Draft EA was published in the Florida Times-Union on March 19, 2024 (see ***Appendix A***) . The Draft EA was available for a 30-day review at the Airport's administrative office during normal business hours and on the Airport's website (https://www.flyjacksonville.com/content2015.aspx?id=1389), and at the Highlands Regional Library (see ***Table 4-2***).

Electronic copies were sent to agencies who requested a copy of the Draft EA for review. ***Table 4-3*** lists the agencies that were sent a copy of the Draft EA.

TABLE 4-2: DRAFT EA AVAILABLE LOCATIONS

Location Name	Address
Jacksonville Aviation Authority	14201 Pecan Park Rd, Jacksonville, FL 32218
Highlands Regional Library	1826 Dunn Ave, Jacksonville, FL 32218

Source: RS&H, 2024

TABLE 4-3: DRAFT EA DISTRIBUTION

Agency	EA Format
Federal Aviation Administration	Electronic
Florida Department of Environmental Protection State Clearinghouse	Electronic
Florida State Historic Preservation Office	Electronic

Source: RS&H, 2024

4.3 DRAFT EA AGENCY AND PUBLIC COMMENTS

As described in the notice of availability, the public was offered the opportunity to request a public hearing by April 3, 2024 (see ***Appendix A***). The HCAA, nor its consultant, RS&H, Inc., received any written correspondence from agencies or the public requesting a public hearing. Therefore, a public hearing for the Draft EA was not conducted.

During the Draft EA comment period (March 19 – April 18, 2024), no agency or public comments were received.

5
LIST OF PREPARERS

This section lists the EA's principal preparers, including JAA and RS&H, Inc. associates.

5.1 JACKSONVILLE AVIATION AUTHORITY

Lauren Scott, A.A.E, ACE
Position: Senior Manager of Aviation Planning

Ashley Shorter
Position: Planning & Grants Administrator

5.2 RS&H, INC.

David Alberts
Position: Project Manager, Senior Environmental Planner
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Experience: Mr. Alberts has 25 years of NEPA-related experience. He is the RS&H Project Manager and is responsible for the Purpose and Need, Alternatives, technical NEPA documentation, and quality assurance of the NEPA analyses in the EA.

Dave Full, AICP
Position: Vice President, Aviation Environmental Planning Service Group
Education: M.A. Urban Planning; B.A. Urban Planning
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Mike Alberts
Position: Senior Aviation Specialist
Education: B.S. Geography
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Monica Hamblin

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Education: M.S. Geology

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Audrey Hsu

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Education: B.S. Environmental Management and Science

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6
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