# Draft Environmental Assessment

Cobb County International Airport – McCollum Field

Master Plan Improvement Projects

Cobb County, GA

**Prepared for:**Cobb County Department of Transportation

February 2020

**Prepared by:** Michael Baker International, Inc.

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

Carol L. Comer, Director
Division of Intermodal
FAA State Block Grant Program Representative

**Georgia Department of Transportation** 

# **EXECUTIVE SUMMARY**

# Introduction

Cobb County International Airport – McCollum Field (RYY) is a 323-acre public-use facility located one mile southeast of Kennesaw, Georgia, approximately 25 miles northwest of the city of Atlanta. The Airport is owned and operated by the Cobb County Department of Transportation (CCDOT) in accordance with Federal Aviation Administration (FAA) requirements, with oversight by the Georgia Department of Transportation (GDOT) on federally funded, state-funded, and locally funded projects as a designated State Block Grant Program (SBGP) participant. The proposed projects to be evaluated in this Environmental Assessment (EA) are federally funded.

The Airport has one active runway, Runway 9/27, which is 6,295 feet long and 100 feet wide. The taxiway system consists of two full-length parallel taxiways, one on each side of the runway, as well as additional access taxiways within the airfield.

The Airport currently serves as home base to 283 total aircraft: 184 single-engine, 28 multi-engine piston, 56 jets, and 15 helicopters; it accommodated 68,223 operations as of December 31, 2017 (Airport Master Records – Form 5010). Of the total operations, 40,000 (58.6 percent) were general aviation-itinerant, 25,000 (36.6 percent) were general aviation-local, 2,400 (3.5 percent) were air taxi, and 823 (1.2 percent) were military.

The Airport's ARC in the 2017 Master Plan Update – Cobb County International Airport (September 1, 2017) is C-II for Runway 9/27. In that report, the design aircraft category up until 2020 is a C-11 aircraft, such as a Challenger 600 of an Embraer 135/145. By 2020, Category D and Group II aircraft annual operations are anticipated to increase to over 500; thus the critical aircraft would be a combination of D and II aircraft and the ARC would be D-11. By 2025, the design aircraft is expected to change to D-III category aircraft, such as the Gulfstream 5.

The 2003 Georgia Aviation System Plan provides a top-down analysis of Georgia airports, with recommendations for facility improvements at each public airport in order to improve the overall state system. RYY is classified as a Level III airport, a Business Airport of Regional Impact, and an airport of significant importance to the state's aviation needs.

The Airport is taking measures to improve the safety condition of the airfield for the C-II aircraft currently utilizing the facility and to improve the existing facility to accommodate future D-III aircraft operations. A 2004 reconstruction of Runway 9/27 extended the runway from 5,000 feet to 6,311 feet with a 1,062-foot long displaced threshold at the Runway 9 End. The current runway length is sufficient for 100 percent of small airplanes, 100 percent of the large airplane (less than 60,000 pounds) fleet operating at 60 percent useful load, and 75 percent of the large airplane fleet operating at 90 percent useful load.

The existing centerline of Taxiway 'A' is located 250 feet from the centerline of Runway 9/27; that runway/taxiway separation is 150 feet short of the FAA standard for a D-III airport (400 feet). The existing centerline of Taxiway 'B' is located 300 feet from the centerline of Runway 9/27; that runway/taxiway separation is 100 feet short of the FAA design standard for a D-III airport.

Currently, the Airport has approximately 635,000 square feet of hangar storage capacity and is at 100 percent occupancy. Based on the most recent aeronautical forecast, the current deficiency of hangar space is estimated to be 83,560 square feet. By 2035, the Airport will need to increase its

hangar capacity by an additional 337,080 square feet, for a total of 972,080 square feet of hangar storage capacity. The 2017 Master Plan Update suggests that the Airport should plan for an additional 20 percent capacity beyond the forecasted projections so that the hangar capacity would be at 80 percent rather than 100 percent at the end of the planning period. Therefore, the ideal area of hangar storage space at RYY should be around 404,496 square feet by the year 2035.

There is no vacant land at the Airport that would meet the hangar space capacity requirement, and the property is enclosed on all sides by existing roadways and commercial and industrial developments. Any landside capacity improvements would have to occur beyond the current boundary of the Airport; therefore, property acquisition and/or redevelopment of current facilities would be necessary.

# Description of the Proposed Action

The Proposed Action consists of three projects that are included in the 2017 Master Plan Update and the Airport's Capital Improvement Plan (CIP) and identified for implementation within the 3-year planning period of this EA:

#### Taxiway 'A' Relocation

Objective: to meet FAA's 400-foot runway/taxiway separation standard for an ARC D-III Airport. An easement from the adjacent quarry would be required to accommodate the relocated taxiway and its Taxiway Object Free Area (TOFA). The project would include permitting and construction of a culvert extension at Noonday Creek and a culvert at the perennial stream and wetland located along the westernmost portion of the taxiway area. The grading would encroach into the existing northside basing area, displacing aircraft parking spaces that would be relocated into the proposed Southside Basing Area.

#### Southside Basing Area

<u>Objective:</u> to accommodate sideslopes for the Taxiway 'B' relocation and provide a site for aircraft parking spaces displaced from the Airport as part of the Taxiway 'A' and Taxiway 'B' projects and for future development of hangared aircraft storage. The existing structures would be demolished and the site would be graded as needed to accommodate the relocated Taxiway "b" and its TOFA, aircraft parking spaces, and future development of aircraft storage space.

#### Taxiway 'B' Relocation

<u>Objective:</u> to meet FAA's 400-foot runway/taxiway separation standard for an ARC D-III Airport. The project would require acquisition of the adjacent Parcels 1650, 1640, and 2155 to accommodate the relocated taxiway and its TOFA, as well as permitting and construction of a culvert extension at Noonday Creek. The project limits would encroach into the existing south basing area, displacing aircraft parking spaces that would be relocated into the proposed Southside Basing Area.

# Purpose and Need

The Proposed Action is needed to accommodate operational growth at the Airport over the planning period. Each element of the Proposed Action is necessary for the Airport to maintain current FAA airport design standards and safety requirements, and to help the Airport accommodate the changing operational demands of the facility.

# Requested Federal Action

The requested federal action is FAA approval of the proposed projects discussed in the EA as shown on the Airport Layout Plan, and possible federal funding.

# Description of Alternatives

# Taxiway 'A' Relocation

Alternative 1a (No Action)

• take no action to relocate Taxiway 'A.'

Alternative 1b (400-foot runway/taxiway separation)

- acquire a permanent easement from the adjacent quarry to accommodate a taxiway bridge;
- relocate Taxiway 'A' 150 feet north, bridged along the quarry edge at Taxiways A4 and A5;
- demolish/reconstruct portions of the northside ramp and the hold apron;
- relocate the existing segmented-circle NAVAID and weather equipment;
- relocate 23 tie-down spaces to Parcels 1650, 1640, and 2155 (Southside Basing Area); and
- permit/construct a 485-foot culvert at Aquatic Resource 2 / Aquatic Resource 3 and a 102-foot extension of the Noonday Creek box culvert.

Alternative 1c (321-foot to 400-foot runway/taxiway separation)

- acquire a permanent easement from the adjacent quarry to accommodate the TOFA grading;
- request a Memorandum of Agreement from the FAA to modify the runway/taxiway separation standard to meet FAA design standards for an ARC D-III Airport;
- relocate Taxiway 'A' 150 feet north along the western 2/3 of the taxiway length and 71 feet north along the eastern 1/3 of the taxiway length;
- demolish/reconstruct portions of the northside ramp and the hold apron;
- relocate the existing segmented-circle NAVAID and weather equipment;
- relocate 23 tie-down spaces to Parcels 1650, 1640, and 2155 (Southside Basing Area); and
- permit/construct a 485-foot culvert at Aquatic Resource 2 / Aquatic Resource 3 and a 102-foot extension of the Noonday Creek box culvert.

Alternative 1d (321-foot runway/taxiway separation)

- acquire a permanent easement from the adjacent quarry to accommodate the TOFA grading;
- request a Memorandum of Agreement from the FAA to modify the runway/taxiway separation standard to meet FAA design standards for an ARC D-III Airport;
- relocate Taxiway 'A' 71 feet north along the entire length of the taxiway;
- demolish/reconstruct portions of the northside ramp and the hold apron;
- relocate the existing segmented-circle NAVAID and weather equipment;
- relocate 9 tie-down spaces to Parcels 1650, 1640, and 2155 (Southside Basing Area); and
- permit/construct a 485-foot culvert at Aquatic Resource 2 / Aquatic Resource 3 and a 102-foot extension of the Noonday Creek box culvert.

Alternative 1e (300-foot runway/taxiway separation)

- acquire a permanent easement from the adjacent quarry to accommodate the TOFA grading;
- request a Memorandum of Agreement from the FAA to modify the runway/taxiway separation standard to meet FAA design standards for an ARC D-III Airport;
- relocate Taxiway 'A' 50 feet north along the entire taxiway;

- demolish/reconstruct portions of the northside ramp and the hold apron;
- relocate the existing segmented-circle NAVAID and weather equipment; and
- permit/construct a 485-foot culvert at Aquatic Resource 2 / Aquatic Resource 3 and a 102-foot extension of the Noonday Creek culvert.

# Southside Basing Area

Alternative 2a (No Action)

• take no action to construct a Southside Basing Area.

Alternative 2b (Construct Southside Basing Area)

- demolish and remove existing structures from Parcels 1650, 1640, and 2155 to be acquired as part of Alternative 3b of the Proposed Action;
- prepare the site as needed to provide developable space for future aircraft storage; and
- provide aircraft parking spaces for those displaced as part of the Taxiway 'A' and Taxiway 'B' elements of the Proposed Action.

# Taxiway 'B' Relocation

Alternative 3a (No Action)

• take no action to relocate Taxiway 'B.'

Alternative 3b (400-foot runway/taxiway separation)

- acquire Parcels 1650, 1640, and 2155 in fee to accommodate the required grading outside the existing Airport boundaries;
- relocate Taxiway 'B' 100 feet south;
- request a Modification of Standards from the FAA for the western end of the proposed taxiway as a Part 77 obstruction (primary surface violation), to avoid a ramp reconstruction;
- relocate two helicopter pads and 17 tie-down spaces to Parcels 1650, 1640, and 2155 (the Southside Basing Area); and
- permit/construct a 76-foot extension of the Noonday Creek box culvert (deed-restricted area).

Alternative 3c (300- to 400-foot runway/taxiway separation)

- relocate the segment of Taxiway 'B' between the Runway 9 End and Taxiway B2 100 feet south and the segment between Taxiways B5 and B6 100 feet south;
- request a Memorandum of Agreement from the FAA to modify the runway/taxiway separation standard to meet FAA design standards for an ARC D-III Airport;
- request a Modification of Standards from the FAA for the western end of the proposed taxiway as a Part 77 obstruction (primary surface violation), to avoid a ramp reconstruction;
- relocate two helicopter pads and 17 tie-down spaces to Parcels 1650, 1640, and 2155 (the Southside Basing Area); and
- permit and construct a 75.6-foot extension of the Noonday Creek box culvert (deed-restricted area).

# Alternatives Screening Process

The reasonable build alternatives for the two taxiway relocation projects were screened to identify the alternatives that would be evaluated in greater detail for their potential environmental impacts relative to their respective No Action alternatives in Chapter 4 of this EA. The reasonable build alternative for the Southside Basing Area project was also brought forward for an evaluation of its impacts relative to its respective No-Action Alternative in Chapter 4 of this EA.

The screening process initially considered each alternative's consistency with the purpose of and need for the Proposed Action, which is to accommodate the operational growth and meet the demand for hangared aircraft storage space while also conforming to federal and state operational, safety, and airport design requirements. Constructability and environmental impacts, as well as cost, were then assessed among the alternatives that met the purpose of and need for the Proposed Action. The three alternatives that met the screening criteria were carried forward to a more detailed evaluation of their potential environmental impacts relative to their corresponding no-action alternative, as required by the Council on Environmental Quality (CEQ) regulations.

# Results of the Alternatives Screening Process

#### No Action Alternatives

Alternatives 1a, 2a, and 3a are the no-action alternatives for the Taxiway 'A' relocation, the Southside Basing Area, and the Taxiway 'B' relocation, respectively. There would be no environmental impacts associated with selection of each of these alternatives; however, none of them would meet the purpose of and need for the Proposed Action, because there would be no change from the existing conditions at the Airport that would enable the Airport to meet current FAA design standards or safety requirements or to accommodate operational growth at the Airport. The three No Action alternatives were carried forward to a more detailed analysis of environmental impacts relative to their corresponding Sponsor-Preferred build alternatives.

# Reasonable Build Alternatives

# Taxiway 'A' Relocation

Alternative 1b would relocate Taxiway 'A' to help the Airport meet FAA design standards for a D-III airport. The construction of one culvert would join into the existing downstream culvert, impacting 485 feet of a perennial stream and 0.42 acre of associated wetland along the western portion of the taxiway area. Construction of a 102-foot extension of the existing box culvert would impact 127 feet of Noonday Creek including approximately 0.13 acre of impacts to Cherokee darter habitat. Alternative 1b would also impact 2.58 acres of floodplain resources. This alternative would have no impacts on other environmental resource categories. The project limits would encroach into the existing northside apron area, displacing 23 tie-down spaces that would be relocated to the proposed Southside Basing Area as part of Alternative 2b. The estimated cost in 2017 dollars is approximately \$19.5 million.

Alternatives 1c, 1d, and 1e also would relocate Taxiway 'A' to help the Airport meet FAA design standards for a D-III airport. However, each of these alternatives would require a Memorandum of Agreement with the FAA to modify the runway/taxiway separation standard to meet the FAA design criteria for an ARC D-III airport. Each of these alternatives also would impact 587 linear feet of stream resources, including approximately 0.13 acre of impacts to Cherokee darter habitat, and 0.42 acre of wetland resource. Alternatives 1c, 1d, and 1e would impact 2.06 acres, 1.92 acres, and 1.64 acres, respectively, of floodplain resources. Alternatives 1c, 1d, and 1e would have no impacts on other environmental resource categories. Implementation of Alternatives 1c and 1d would displace 23 and 9 tie-down spaces, respectively; no tie-down spaces would be impacted with Alternative 1e. The estimated costs in 2017 dollars for Alternatives 1c, 1d, and 1e are approximately \$11.1 million, \$10.9 million, and \$10.6 million, respectively.

**Result:** Implementation of Alternative 1b would meet the purpose of and need for the Proposed Action by relocating Taxiway 'A' to provide a 400-foot runway/taxiway separation in accordance with FAA design standards for an ARC D-III airport. The environmental impacts would be

relatively similar among Alternatives 1b, 1c, 1d, and 1e. For these reasons, Alternative 1b was selected as the Sponsor Preferred Alternative for this element of the Proposed Action.

# Southside Basing Area

Alternative 2b would provide a location to accommodate the grading for the relocated Taxiway 'B' as part of Alternative 3b (see below). The Alternative 2b site would accommodate aircraft parking spaces that would be displaced as part of the Taxiway A' and Taxiway 'B' relocation projects; it also would provide a location for the future development of hangared aircraft storage, which would help meet the Airport's forecasted need to bring the percentage of stored aircraft from 40 percent to 70 percent.

Implementation of Alternative 2b would not involve social impacts because the land would be acquired as part of Alternative 3b (see below). Implementation of Alternative 2b would include building demolition and associated site work, which would avoid impacts to Noonday Creek and its buffer and floodplain resources. With utilization of best management practices for the building demolition there would be no substantial impact to environmental resources associated with the implementation of Alternative 2b. The estimated cost in 2017 dollars is approximately \$19.3 million.

**Result:** Alternative 2b would meet the purpose of and need for this element of the Proposed Action and would minimize impacts to environmental resources; it was therefore selected as the Sponsor Preferred Alternative.

# Taxiway 'B' Relocation

Alternative 3b would relocate Taxiway 'B' to help the Airport meet FAA design standards for a D-III airport without the need to request a Memorandum of Agreement from the FAA to meet FAA design criteria. It would require a Modification of Standards from the FAA for the western end of the proposed taxiway as a Part 77 obstruction (primary surface violation), to avoid a ramp reconstruction. Construction of a 76-foot extension of the existing box culvert would impact 101 feet of Noonday Creek (including 0.28 acre of Cherokee darter habitat) as well as 1.65 acres of associated floodplain resources. Clearing and grading to accommodate the relocated taxiway and TOFA as part of Alternative 3b would remove approximately 4.0 acres of mixed pine-hardwood forest habitat and 0.02 acre of upland scrub-shrub habitat within the proposed Southside Basing Area site, as well as 0.11 acre of mixed pine-hardwood forest and 0.80 acre of upland scrub-shrub habitat from within the existing Airport property. The removal of that vegetation would represent a minor impact to terrestrial biological resources because there is ample similar habitat in the nearby vicinity. There would be no impacts on other environmental resource categories.

The Alternative 3b project limits would encroach into the existing south basing area, displacing two helicopter pads and 17 tie-down spaces. The estimated cost in 2017 dollars is approximately \$42.9 million, including \$31.5 million for property acquisition and \$11.4 million for the taxiway grading/paving, the culvert extension, and other associated site work.

Alternative 3c would relocate portions of Taxiway 'B' to help the Airport meet FAA design standards for a D-III airport; it would not relocate the central portion of Taxiway 'B' or acquire the adjacent Parcels 1650, 1640, or 2155. This alternative would require a Memorandum of Agreement with the FAA to modify the runway/taxiway separation standard, in order to meet the FAA design criteria for an ARC D-III airport, and a Modification of Standards from the FAA for the western end of the proposed taxiway as a Part 77 obstruction (primary surface violation) to avoid a ramp reconstruction. Alternative 3c would not help the Airport to meet its need for future

development of aircraft storage (hangar) capacity or accommodate aircraft parking spaces displaced as part of the Taxiway A' and Taxiway 'B' relocation projects.

Implementation of Alternative 3c would impact 76 linear feet of Noonday Creek (including 0.28 acre of Cherokee darter habitat) as well as 1.33 acres of floodplain resources. It would impact 0.11 acre of mixed pine-hardwood forest and 0.80 acre of upland scrub-shrub habitat from within the existing Airport property, which would represent a minor impact to terrestrial biological resources because there is ample similar habitat in the nearby vicinity.

There would be no impacts on other environmental resource categories. The project limits would encroach into the existing south basing area, displacing two helicopter pads and 17 tie-down spaces. The estimated construction cost in 2017 dollars is approximately \$10.8 million for the taxiway grading/paving, the culvert extension, and other site work.

**Result:** Implementation of Alternative 3b would meet the purpose of and need for the Proposed Action by relocating Taxiway 'B' to provide a 400-foot runway/taxiway separation in accordance with FAA design standards for an ARC D-III airport. This alternative would also include the acquisition of land adjacent to the Airport that would accommodate aircraft parking spaces that would be displaced with the relocations of Taxiways 'A' and 'B' and it would help the Airport to meet its need for future development of aircraft storage capacity. The environmental impacts would be relatively similar between Alternatives 3b and 3c. For these reasons, Alternative 1b was selected as the Sponsor Preferred Alternative for this element of the Proposed Action.

The Sponsor-Preferred build alternatives and their respective no-action alternatives were carried forward for a full evaluation of their potential environmental impacts in Chapter 4 of this EA.

# Affected Environment

Cobb County International Airport is located inside the political boundary of unincorporated Cobb County, southeast of the city of Kennesaw and northwest of the city of Atlanta. It is bounded by McCollum Parkway to the northwest, a rock quarry to the north and northeast, Lakes Boulevard to the east, a conservation easement to the southeast, industrial development to the south and southwest, and South Main Street to the west.

The Airport property is designated in the Cobb County 2040 Comprehensive Plan as civic land use. Land use in the immediate vicinity of the Airport is industrial to the northeast; industrial and commercial to the east and southeast; industrial to the south; and residential to the southwest, west, and northwest. The northeastern and southeastern portions of the Airport are located within the Federal Emergency Management Agency (FEMA) 100-year floodplain of Noonday Creek.

The industrial land use located to the northeast of the Airport property is a rock quarry operated and managed by Vulcan Materials Company. Commercial development to the east consists of various retail businesses located within or adjacent to the Barrett Pavilion and the Cobb Place Shopping Center. To the southeast, commercial development consists of two financial institutions and an internet security company. Commercial and industrial development to the south includes a FedEx Ground distribution center. Residential development comprises the majority of the land use located southwest, west, and northwest of the Airport property.

#### Affected Human Populations

The project study area is mostly comprised of commercial and industrial land use. However, there is some residential use within the project study area. Based on block group data from the Georgia

GIS Data Clearinghouse, between 17.1 and 38.3 percent of the population located adjacent to the Airport property identified as a race other than white. Based on data pulled from the same source, the portion of the population located in the vicinity of the Airport living below poverty ranged from 3.7 to 15.5 percent.

# Past, Present, and Reasonably Foreseeable Future Actions

Past actions at the Airport include the installation of a 1,185-foot box culvert along Noonday Creek in 2000, an extension of the runway and taxiways in 2004, and a relocation of Noonday Creek upstream of the box culvert associated with the culvert construction in 2007, which included compensatory mitigation the establishment of deed restrictions. Additional extensions of both taxiways were constructed at the Runway 9 End in 2014, and the North Apron Rehabilitation and Taxiway Connector project and the Air Traffic Control Tower Upgrade project were each completed in 2017. There are no reasonably foreseeable future projects programmed for the Airport within the 3-year planning period of this EA.

# **Environmental Consequences**

The potential adverse impacts associated with the No-Action Alternatives and the Sponsor-Preferred Alternatives for the Proposed Action were evaluated for 13 categories of the human, physical, and natural environment, as summarized in **Table E.1.** 

Table E.1 Summary of Potential Environmental Impacts				
Environmental Category	No-Action Alternatives	Sponsor Preferred Alternatives		
Air Quality	No Impacts	No Impacts		
Biological Resources – T&E Species Habitat (Aquatic)	No Impacts	Minor Impacts		
Biological Resources – T&E Species Habitat (Terrestrial)	No Impacts	Minor Impacts		
Climate	No Impacts	No Impacts		
Coastal Resources	No Impacts	No Impacts		
Department of Transportation Act: Section 4(f)	No Impacts	No Impacts		
Farmlands	No Impacts	No Impacts		
Hazardous Materials, Solid Waste, and Pollution Prevention	No Impacts	No Impacts		
Historical, Architectural, Archaeological, and Cultural Resources	No Impacts	No Impacts		
Natural Resources and Energy Supply	No Impacts	No Impacts		
Noise	No Impacts	No Impacts		
Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks	No Impacts	Minor Impacts		
Visual Effects	No Impacts	No Impacts		
Water Resources	No Impacts	Impacts		

# Agency Coordination and Public Involvement

The environmental evaluation process for the proposed improvements to the Cobb County International Airport – McCollum Field has included the use of data and information provided by various federal, state, regional, and local governmental bodies. A Notice of Availability (NOA) of the EA to the public as an opportunity to review and comment on the document will be issued by Cobb County DOT once the Draft EA is approved by GDOT and FAA for release to the public. The NOA will be published in the general circulation newspaper of Cobb County, the *Marietta Daily Journal*, and it will be posted on the Airport's website (www.cobbcountyairport.org).

The Draft EA will be made available to the public for review and comment for 30 days after the NOA is issued, at the Airport Administration Office and posted on the Airport's website (www.cobbcountyairport.org). Written comments from the public on the Draft EA will be accepted for 30 days after the NOA advertisement is published.

A copy of the approved Draft EA will be provided to each of the resource agencies that have a potential stake in the proposed improvements at the Airport. The agencies, municipalities, and organizations will be asked to provide written comments, if any, on the Draft EA within 30 days after the document is received.

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# CHAPTER 1. PROPOSED ACTION / PURPOSE AND NEED

#### 1.1 INTRODUCTION

Cobb County International Airport – McCollum Field (Airport; Airport Identifier: RYY) is a public-use facility located one mile southeast of Kennesaw, Georgia, in Cobb County, approximately 25 miles northwest of the city of Atlanta (**Figure 1.1**). The Airport is owned and operated by the Cobb County Department of Transportation in accordance with Federal Aviation Administration (FAA) requirements, with oversight by the Georgia Department of Transportation (GDOT) on federally funded, state-funded, and locally funded projects as a designated State Block Grant Program participant. The proposed projects to be evaluated in this Environmental Assessment (EA) are federally funded.

The Airport is approximately 323 acres in size (**Figure 1.2**). It has one active runway, Runway 9-27, which is 6,295 feet long and 100 feet wide. The taxiway system is comprised of two full-length parallel taxiways, one on each side of the runway, as well as additional access taxiways within the airfield. According to Airport Master Records – Form 5010, the Airport currently serves as home base to 283 aircraft: 184 single-engine, 28 multi-engine piston, 56 jets, and 15 helicopters. The same data show that the Airport accommodated 68,223 operations as of December 31, 2017. Of the total operations, 40,000 (58.6 percent) were general aviation-itinerant, 25,000 (36.6 percent) were general aviation-local, 2,400 (3.5 percent) were air taxi, and 823 (1.2 percent) were military (**Appendix A – Supporting Documents**).

Aviation-related businesses operating at the Airport include corporate flight departments, charter operations, aircraft maintenance and avionics repair, fixed-wing and helicopter flight training, aircraft scenic flight services, and Fixed Base Operators (FBOs). The Airport does not accommodate commercial airline service or regular military activity; however, medical evacuation services and a Georgia State Patrol unit do operate regularly at this facility.

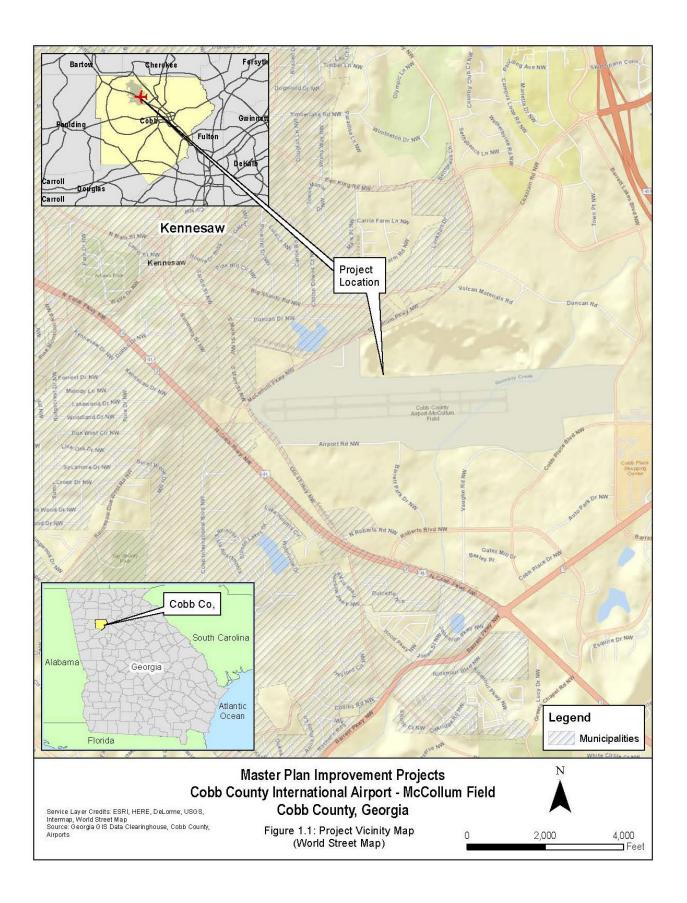
The Airport does not have a terminal building, but its FBO, Hawthorne Aviation, offers extensive services for pilots and customers including a 6,000-square foot facility with pilot lounges, conference rooms, flight planning, car rental, and after-hours fuel and emergency services. The Airport's administration offices are housed in the new Air Traffic Control Tower (ATCT) facility.

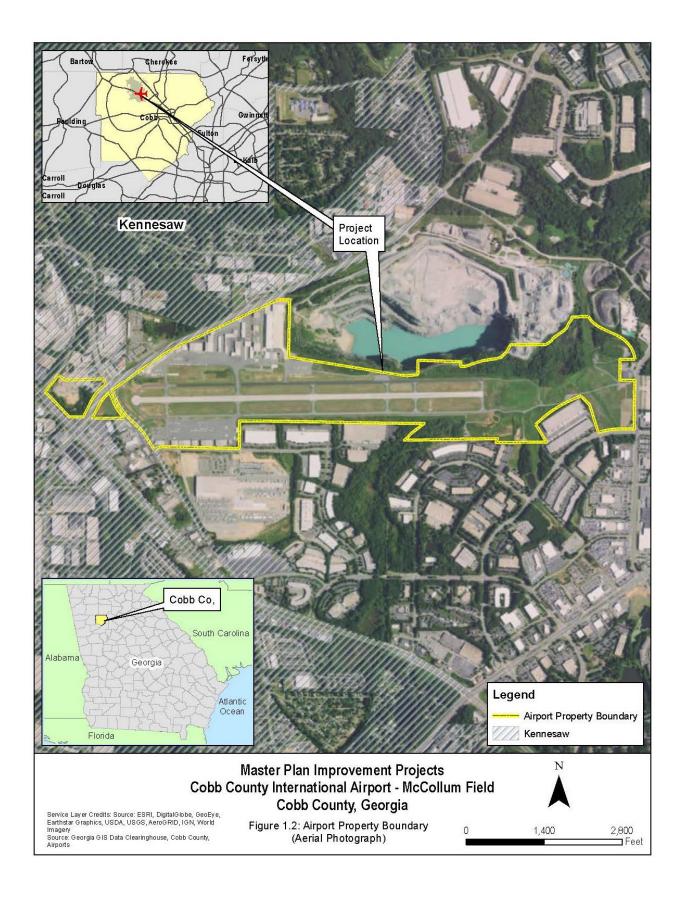
# **Airport Classification**

The Airport is categorized as a General Aviation – Reliever airport in the National Plan of Integrated Airport Systems (NPIAS). The Airport Reference Code (ARC) is a coding system that is used to relate airport design criteria to the operational and physical characteristics of an airport; it is made up of two components: the Aircraft Approach Category (AAC) and the Airplane Design Group (ADG) (FAA AC-150/5300-13A). The AAC classifications are as follows:

- Category A Aircraft with an approach speed of less than 91 knots
- Category B Approach speeds of 91 knots or greater, but less than 121 knots
- Category C Approach seeds of 121 knots or greater, but less than 141 knots
- Category D Approach speeds of 141 knots or greater, but less than 166 knots

<sup>&</sup>lt;sup>1</sup> Airport IQ 5010 (2019). Airport Master Records and Reports. Accessed on March 28, 2019 at: https://www.gcr1.com/5010WEB/airport.cfm?Site=RYY&AptSecNum=2.





The following ADG classifications are based on the wingspans of the aircraft to be served:

- Group I Aircraft having wingspans of up to but not including 49 feet
- Group II Aircraft having wingspans of 49 feet up to but not including 79 feet
- Group III Aircraft having wingspans of 79 feet up to but not including 118 feet

Aviation forecasts for Cobb County International Airport indicate that the most demanding aircraft meeting the Airport's operational threshold of 500 itinerant operations during 2014 was not a single aircraft, but a combination of C-II jet aircraft, the most demanding of which were the Gulfstream 200 and Embraer ERJ 145. The Gulfstream 200 has an approach speed of 121 knots, a wingspan of 58.1 feet, and a Maximum Take-off Weight (MTOW) of 35,450 pounds. The Embraer ERJ 145 has an approach speed of 135 knots, a wingspan of 65.8 feet, and a MTOW of 48,501 pounds. By 2025, the ultimate design aircraft is expected to include a group of D-III category aircraft. The most demanding D-III aircraft that currently utilizes the Airport is the Gulfstream 550, which has an approach speed of 155 knots, a wingspan of 94 feet, and a MTOW of 90,000 pounds.

The operations forecast illustrates the historic and anticipated operations at the Airport broken down by the aircraft ARC classification (Table 1.1). The design aircraft category up until 2020 is a C-II aircraft, as described above. By 2020, Category D and Group II aircraft operations are forecast to increase to over 500; therefore, the critical aircraft is a combination of D and II aircraft, and the ARC becomes D-II. By 2025, the design aircraft is a D-III category aircraft, such as the Gulfstream 5. The operations forecast was approved by GDOT on January 27, 2016 (see **Appendix A).** According to the approved forecast, the Airport supported 276 operations of D-III aircraft in 2014 (see Table 1.1). By the year 2020, that number is anticipated to increase to over 364 D-III operations, which is a 24.2 percent increase over the 6-year span. D-III aircraft are expected to reach 489 operations by the year 2025, which is a 25.6 percent increase over that 5year period. By 2030, the trend is expected to slow slightly, with D-III operations anticipated to reach 644, which is a 24.1 percent increase. Finally, D-III aircraft are anticipated to reach 807 operations at the Airport by the year 2035, which is a 20.2 percent increase over the 5-year period. Forecast data provided by GDOT in January 2020 suggest that the actual operations have been keeping up with the forecasted operations presented in **Table 1.1**, which supports the justification for implementation of the Proposed Action (see Appendix A).

The 2003 Georgia Aviation System Plan provides the state with a top-down analysis of its airports and provides recommendations for facility improvements at each public airport in Georgia in order to improve the overall state system. Cobb County International Airport is classified as a Level III airport, a Business Airport of Regional Impact, and an airport of significant importance to the state's aviation needs. It is taking measures to improve the safety condition of the airfield for the C-II aircraft currently utilizing the facility and to improve the existing facility to accommodate future D-III aircraft operations. A major reconstruction of Runway 9-27 was completed in 2004. This project extended the runway from 5,000 feet to 6,311 feet with a 1,062-foot long displaced threshold at the Runway 9 End. The current runway length is sufficient for 100 percent of small airplanes, 100 percent of the large airplane (less than 60,000 pounds) fleet operating at 60 percent useful load, and 75 percent of the large airplane fleet operating at 90 percent useful load.<sup>2</sup>

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<sup>&</sup>lt;sup>2</sup> Michael Baker International, Inc. (2017). 2017 Airport Master Plan Update – Cobb County International Airport (September 1, 2017).

Table 1.1				
<b>Operations Forecast Grouped</b>	by Air	rport Reference Code Elements		

2014					
	I	II	III	Total	
A	44,306	3,349	-	47,655	
В	7,902	11,549	10	19,461	
С	640	688	11	1,339	
D	69	36	276	380	
Helicopter				2,052	
Other				684	
Total	52,917	15,622	296	71,572	

2020				
	I	II	III	Total
A	43,210	3,132		46,342
В	7,807	12,332	13	20,153
С	818	888	18	1,724
D	77	118	364	559
Helicopter				2,295
Other				699
Total	51,912	16,470	395	71,771

2025				
	I	II	III	Total
A	42,685	3,085		45,770
В	7,531	12,736	15	20,282
С	872	985	23	1,880
D	77	132	489	697
Helicopter				2,633
Other				758
Total	51,165	16,937	527	72,020

2030					
	I	II	III	Total	
A	43,094	3,105		46,199	
В	7,387	13,285	16	20,688	
С	912	1,077	30	2,019	
D	77	145	644	865	
Helicopter				3,013	
Other				828	
Total	51,469	17,612	690	73,612	

2035					
	I	II	III	Total	
A	43,634	3,135		46,770	
В	7,249	13,840	17	21,106	
С	926	1,179	37	2,142	
D	76	157	807	1,039	
Helicopter				3,389	
Other				892	
Total	51,885	18,312	861	75,338	

Source: Mary Lynch RYY Airport Activity Forecast, 2015

The existing centerline of Taxiway 'A' is located 250 feet from the centerline of Runway 9-27. That runway/taxiway separation is 50 feet short of the FAA standard for a C-II airport (300 feet) and 150 feet short of the FAA standard for a D-III airport (400 feet); it is subject to operational restrictions set forth in a May 15, 2013 Letter of Agreement between the Airport and the McCollum Air Traffic Control Tower that designates movement/non-movement areas and control of vehicular traffic on Airport movement areas. The reasonable build alternatives for this component of the Proposed Action would include relocation of Taxiway 'A' to provide a 400-foot separation, a 300-foot separation, a 321-foot separation, or a partial 400-foot and partial 321-foot separation.

The existing centerline of Taxiway 'B' is located 300 feet from the centerline of Runway 9-27; that runway/taxiway separation is in compliance with the FAA design standard for a C-II airport, but it is 100 feet short of the FAA design standard for a D-III airport.

Currently, the Airport has approximately 635,000 square feet of hangar storage capacity and is at 100 percent occupancy. Based on the most recent aeronautical forecast, the current deficiency of hangar space is estimated to be 83,560 square feet. By 2035, the Airport will need to increase its hangar capacity by an additional 337,080 square feet, for a total of 972,080 square feet of hangar storage capacity. The 2017 Master Plan Update also suggests that the Airport should plan for an additional 20 percent capacity beyond the forecasted projections so that the hangar capacity would be at 80 percent rather than 100 percent at the end of the planning period. Therefore, the ideal area of hangar storage space at RYY should be around 404,496 square feet by the year 2035.

There is no vacant space at the Airport that would be available to meet the hangar space capacity requirement, and the property is enclosed on all sides by existing roadways and commercial and industrial developments. Any landside capacity improvements, including relocation of two helicopter pads and 15 tie-down spaces from the existing south basing area associated with the Taxiway 'B' relocation, would have to occur beyond the current boundary of the Airport; therefore, property acquisition and/or redevelopment of current facilities would be necessary.

#### 1.2 DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action comprises three projects that are included in the 2017 Master Plan Update and the Airport's Capital Improvement Plan (CIP) and are recommended for implementation following regulatory approvals (Exhibit A – Phasing of Master Plan Improvement Projects):

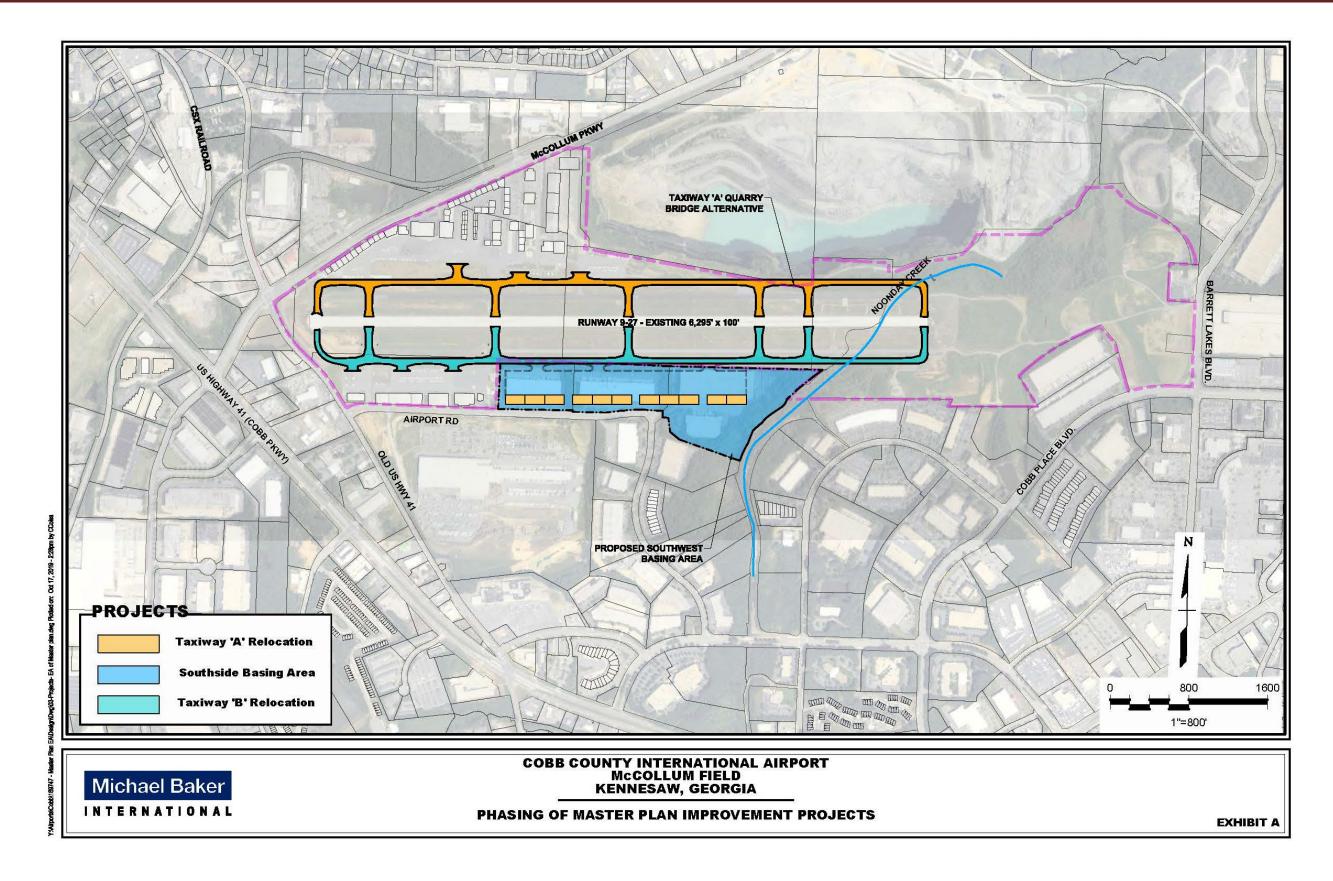
<u>Taxiway</u> 'A' Relocation – The objective of relocating the existing Taxiway 'A' is to meet FAA's 400-foot runway/taxiway separation design standard for an ARC D-III Airport. This project would relocate existing Taxiway 'A' to the north. Four build alternatives for the Taxiway 'A' relocation were assessed in the preliminary screening, as summarized below:

# Alternative 1b (400-foot runway/taxiway separation) -

- acquire a permanent easement from the adjacent quarry to accommodate the taxiway bridge;
- relocate Taxiway 'A' 150 feet north, bridged along the quarry edge at Taxiways A4 and A5;
- relocate the Taxiway Safety Area (TSA) and Taxiway Object Free Area (TOFA) 150 feet north;
- demolish/reconstruct portions of the northside ramp and the hold apron;
- relocate the existing segmented-circle NAVAID and weather equipment;
- relocate 23 tie-down spaces to Parcels 1650, 1640, and 2155 (Southside Basing Area); and
- permit/construct a 102-foot extension of the Noonday Creek box culvert and a 485-foot culvert at Aquatic Resource 2 / Aquatic Resource 3.

Cobb County International Airport

Draft Environmental Assessment



# Alternative 1c (321-foot to 400-foot runway/taxiway separation) -

- acquire a permanent easement from the owner of the adjacent quarry to accommodate the TSA and TOFA grading;
- request a Memorandum of Agreement from the FAA to modify the runway/taxiway separation standard at the relocated Taxiway 'A' to meet FAA design standards for an ARC D-III Airport;
- relocate Taxiway 'A' including TSA and TOFA 150 feet north along the western 2/3 of the taxiway length and 71 feet north along the eastern 1/3 of the taxiway length;
- demolish/reconstruct portions of the northside ramp and the hold apron;
- relocate the existing segmented-circle NAVAID and weather equipment;
- relocate 23 tie-down spaces to Parcels 1650, 1640, and 2155 (Southside Basing Area); and
- permit/construct a 102-foot extension of the Noonday Creek box culvert and a 485-foot culvert at Aquatic Resource 2 / Aquatic Resource 3.

# Alternative 1d (321-foot runway/taxiway separation) -

- acquire a permanent easement from the owner of the adjacent quarry to accommodate the TSA and TOFA grading;
- request a Memorandum of Agreement from the FAA to modify the runway/taxiway separation standard at the relocated Taxiway 'A' to meet FAA design standards for an ARC D-III Airport;
- relocate Taxiway 'A' including TSA and TOFA 71 feet north along the entire length of the taxiway;
- demolish/reconstruct portions of the northside ramp and the hold apron;
- relocate the existing segmented-circle NAVAID and weather equipment;
- relocate 9 tie-down spaces to Parcels 1650, 1640, and 2155 (Southside Basing Area); and
- permit/construct a 102-foot extension of the Noonday Creek box culvert and a 485-foot culvert at Aquatic Resource 2 / Aquatic Resource 3.

# Alternative 1e (300-foot runway/taxiway separation) -

- acquire a permanent easement from the owner of the adjacent quarry to accommodate the TSA and TOFA grading;
- request a Memorandum of Agreement from the FAA to modify the runway/taxiway separation standard at the relocated Taxiway 'A' to meet FAA design standards for an ARC D-III Airport;
- relocate Taxiway 'A' including TSA and TOFA 50 feet north along the entire taxiway;
- demolish/reconstruct portions of the northside ramp and the hold apron;
- relocate the existing segmented-circle NAVAID and weather equipment; and
- permit/construct a 102-foot extension of the Noonday Creek box culvert and a 485-foot culvert at Aquatic Resource 2 / Aquatic Resource 3.

<u>Southside Basing Area</u> – The objectives of constructing a Southside Basing Area are: (1) to accommodate grading for the Taxiway 'B' Relocation component of the Proposed Action; (2) to accommodate future development of aircraft storage space that would help bring the percentage of stored aircraft from 40 percent to 70 percent; and (3) to accommodate aircraft parking spaces for relocating the aircraft parking spaces that would be displaced as part of the Proposed Action. One build alternative for the Southside Basing Area was assessed in the preliminary screening:

# Alternative 2b (Southside Basing Area ) -

- demolish and remove existing structures from Parcels 1650, 1640, and 2155 to be acquired as part of Alternative 3b of the Proposed Action;
- prepare the site as needed to provide developable space for future aircraft storage; and
- provide aircraft parking spaces for the spaces that would be displaced from the Airport with implementation of Taxiway 'A' and Taxiway 'B' elements of the Proposed Action.

<u>Taxiway</u> 'B' <u>Relocation</u> – The objective of relocating the existing Taxiway 'B' is to meet FAA's 400-foot runway/taxiway separation design standard for an ARC D-III Airport. This component of the Proposed Action would relocate existing Taxiway 'B' to the south. Two build alternatives for the Taxiway 'B' relocation were assessed in the preliminary screening:

# Alternative 3b (400-foot runway/taxiway separation) -

- acquire Parcels 1650, 1640, and 2155 in fee to accommodate the required grading for the relocation of Taxiway 100 feet south, outside the existing Airport boundaries;
- relocate Taxiway 'B' and its TSA and TOFA 100 feet south;
- request a Modification of Standards from the FAA for the western end of the proposed taxiway as a Part 77 obstruction (primary surface violation), to avoid a ramp reconstruction;
- relocate two helicopter pads and 17 tie-down spaces to Parcels 1650, 1640, and 2155; and
- permit/construct a 76-foot extension of the Noonday Creek box culvert (Appendix B Agency Correspondence).

# Alternative 3c (300- to 400-foot runway/taxiway separation) -

- relocate the segment of existing Taxiway 'B' (and its TOFA and TSA) between the Runway 9 End and Taxiway B2 100 feet south;
- relocate Taxiway 'B' (and its TSA and TOFA) between Taxiways B5 and B6 100 feet south;
- request a Memorandum of Agreement from the FAA to modify the runway/taxiway separation standard at the relocated Taxiway 'B' to meet FAA design standards for an ARC D-III Airport;
- request a Modification of Standards from the FAA for the western end of the proposed taxiway as a Part 77 obstruction (primary surface violation), to avoid a ramp reconstruction;
- relocate two helicopter pads and 17 tie-down spaces to Parcels 1650, 1640, and 2155 in conjunction with implementation of Alternative 2b, the Southside Basing Area; and
- permit/construct a 76-foot extension of the Noonday Creek box culvert (see **Appendix B**).

#### • 1.3 PURPOSE AND NEED STATEMENT

The Proposed Action is needed to accommodate operational growth at the Airport over the planning period of this EA. Each element of the Proposed Action is necessary for the Airport to meet current FAA airport design standards and safety requirements and to help the Airport accommodate the changing operational demands of the facility.

# Runway Centerline to Parallel Taxiway Centerline

The Airport meets the current ARC C-II standard of a 300-foot runway/taxiway separation on the Taxiway 'B' (south) side of the airfield. However, the Airport does not meet this standard on the north side of the airfield, where the distance from the runway centerline to the Taxiway 'A' centerline is 250 feet. With an airfield upgrade to ARC D-III, the runway/taxiway separation standard would increase to 400 feet. As a result, both the Taxiway 'A' and Taxiway 'B' relocation projects are needed to meet the ARC D-III runway/taxiway separation design standards.

# **Landside Requirements**

Aircraft hangar requirements for a General Aviation facility are a function of the number of based aircraft and the types of aircraft to be accommodated. The Airport currently has 630,000 square feet of hangar storage space equating to 127 spaces for aircraft. These 127 spaces are provided by 63 hangars that provide less than 5,000 square feet of space and 64 spaces in hangars greater than 5,000 square feet in area. In 2014, 320 aircraft were based at the Airport: 218 single-engine, 32-multi-engine, 50 jets, and 10 helicopters. Of these aircraft, 56 percent were stored in either a T-hangar, a conventional hangar, or a corporate hangar. The Georgia Aviation System Plan recommends that Level III airports provide hangar storage for at least 70 percent of their based aircraft fleet.

Currently, only 40 percent of the single-and multi-engine piston aircraft based at the Airport occupy hangars, due to a lack of hangar space. It is anticipated that more owners would choose to store their aircraft in a hangar as opposed to a tie-down, if more hangar space was available. For planning purposes, it is typically assumed that 80 percent of the forecasted demand of single- and multi-engine piston aircraft are stored in hangars. More expensive aircraft like turbine engine aircraft, jets, and helicopters are almost always stored in hangars. Therefore, 100 percent of these types of aircraft are assumed to be stored in hangars.

In 2020, 272 aircraft would require hangar space. By 2035, the demand would increase to 302 aircraft. The anticipated percentage of aircraft requiring hangars is 85 percent in 2020 and 87 percent in 2035. If these aircraft can be accommodated, the Airport would meet the Georgia Aviation System Plan recommendation of providing hangar space to 70 percent of the based aircraft fleet. Additionally, with implementation of the Taxiway 'A' and Taxiway 'B' relocations as described in the 2017 Master Plan Update, a total of up to 42 aircraft parking spaces would be displaced from the existing north apron area and south basing area. The Southside Basing Area element of the Proposed Action would accommodate those displaced aircraft parking spaces, and would help meet the demand for more hangar space at the Airport.

#### 1.4 REQUESTED FEDERAL ACTION

The requested Federal Action is the FAA's unconditional approval of the proposed projects discussed in this EA as shown on the ALP, and possible Federal funding.

# CHAPTER 2. ALTERNATIVES ANALYSIS

#### 2.1 INTRODUCTION

FAA Order 1050.1F and the *Airport Environmental Handbook* outline the procedures to be followed in considering alternatives for a proposed action, including reasonable build alternatives and a "no-action" alternative. The *Airport Environmental Handbook* states in part that the alternatives to be considered in the preparation of an EA should be considered "... to the degree commensurate with the nature of the proposed action." An alternatives analysis of the No-Action Alternative and the reasonable build alternatives for each element of the Proposed Action was conducted as part of this EA.

#### 2.2 DESCRIPTION OF ALTERNATIVES

The following sections describe the No-Action Alternative and the reasonable build alternatives for each element of the Proposed Action.

# Taxiway 'A' Relocation

#### Alternative 1a – No Action

Alternative 1a would represent the taking of no action to relocate Taxiway 'A' (see **Chapter 1 - Figure 1.2**). Selection of this alternative would not result in any social or environmental impacts associated with construction of the proposed improvements or the operation of a modified airfield.

# Alternative 1b – Relocate Taxiway 'A' to Provide a 400-foot Runway/Taxiway Separation

Alternative 1b, the Sponsor-Preferred Alternative, would relocate Taxiway 'A' to provide a 400-foot runway/taxiway separation needed to meet FAA design standards for an ARC D-III airport (**Figure 2.1**). The relocated TOFA would encroach into the existing apron area and into the adjacent quarry property. At Taxiways A-4 and A-5, the TOFA would extend over the edge of the rock quarry, and a counterbalanced slab-style bridge structure spanning 200 linear feet would be constructed along that portion of the quarry property.

The northside ramp would be reconstructed to meet minimum grade requirements, and the existing segmented-circle NAVAID and weather equipment would be relocated. A culvert would be constructed to convey surface water from a stream and associated wetland at the western end of the taxiway and into an existing culvert inlet, and the Noonday Creek box culvert would be extended to accommodate the relocated TOFA.

# Alternative 1c – Relocate Taxiway 'A' to Provide a 321 to 400-foot Runway/Taxiway Separation

Alternative 1c would provide a 400-foot wide runway/taxiway separation along the northside ramp area, but at Taxiways A-4 and A-5 the separation would be 321 feet to avoid the need for constructing a taxiway bridge along the edge of the quarry (**Figure 2.2**). The relocated TOFA would encroach into the existing apron area and into the adjacent quarry property. The northside ramp would be reconstructed to meet minimum grade requirements, and the existing segmented-circle NAVAID and weather equipment would be relocated. A culvert would be constructed to convey surface water from a stream and associated wetland at the western end of the taxiway and into an existing culvert inlet, and the Noonday Creek box culvert would be extended to accommodate the relocated TOFA.

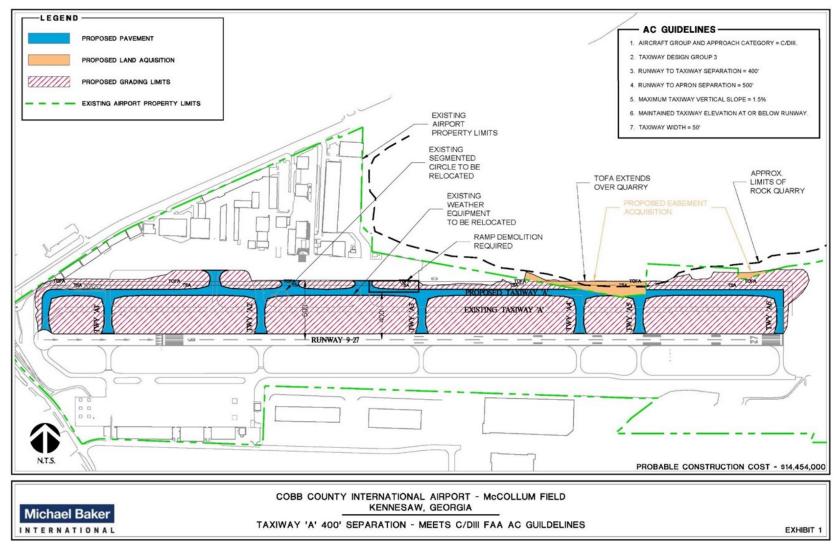


Figure 2.1 – Taxiway 'A' Relocation, Alternative 1b (400-foot Runway/Taxiway Separation)

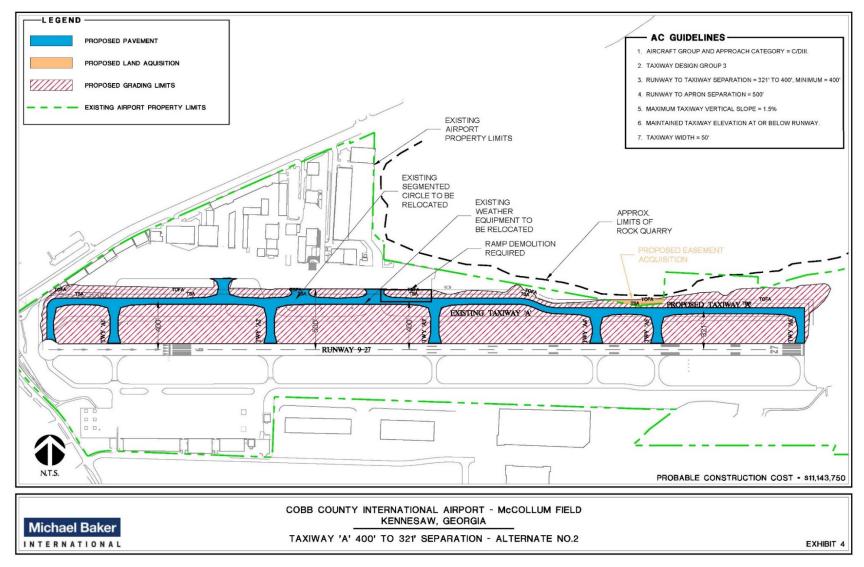


Figure 2.2 – Taxiway 'A' Relocation, Alternative 1c (321 to 400-foot Runway/Taxiway Separation)

# Alternative 1d – Relocate Taxiway 'A' to Provide a 321-foot Runway/Taxiway Separation

Alternative 1d would provide a 321-foot runway/taxiway separation along the entire length of Taxiway 'A' (Figure 2.3). The existing northside ramp and hold apron would be demolished, and the existing segmented-circle NAVAID and weather equipment would be relocated. A culvert would be constructed to convey surface water from a stream and associated wetland at the western end of the taxiway into an existing culvert inlet, and the Noonday Creek box culvert would be extended to accommodate the TOFA.

# Alternative 1e - Relocate Taxiway 'A' to Provide a 300-foot Runway/Taxiway Separation

Alternative 1e would provide a 300-foot runway/taxiway separation (**Figure 2.4**). The existing hold apron would be demolished (the northside ramp would not require demolition), and the existing segmented-circle NAVAID and weather equipment would be relocated. A culvert would be constructed to convey surface water from a stream and associated wetland at the western end of the taxiway into an existing culvert inlet, and the Noonday Creek box culvert would be extended to accommodate the relocated TOFA.

# Southside Basing Area

# Alternative 2a – No Action

Alternative 2a would represent the taking of no action to construct the Southside Basing Area (see **Chapter 1 - Figure 1.2**). Selection of this alternative would not result in any social or environmental impacts associated with construction of the proposed improvements or the operation of a modified airfield.

# Alternative 2b – Construct the Southside Basing Area

Alternative 2b, the Sponsor-Preferred Alternative, would demolish and remove three buildings on three parcels of land located adjacent to the Airport at Airport Road to provide a Southside Basing Area (**Figure 2.5**). The three parcels, totaling 41.17 acres, would be acquired as part of Alternative 3b for the Taxiway 'B' relocation, as discussed in the following section.

The Southside Basing Area would accommodate the aircraft parking spaces that would be displaced from the existing north apron as part of Alternatives 1b, 1c, or 1d, as well as those displaced from the existing south basing area as part of Alternatives 3b or 3c. Implementation of Alternative 2b would also provide a location suitable for the future development of hangared aircraft storage, which would help meet the Airport's forecasted need to bring the percentage of stored aircraft from 40 percent to 70 percent.

# Taxiway 'B' Relocation

#### Alternative 3a – No-Action

Alternative 3a would represent the taking of no action to relocate Taxiway 'B' (see **Chapter 1 - Figure 1.2**). Selection of this alternative would not result in any social or environmental impacts associated with construction of the proposed improvements or the operation of a modified airfield.

# Alternative 3b – Relocate Taxiway 'B' to Provide a 400-foot Runway/Taxiway Separation

Alternative 3b, the Sponsor-Preferred Alternative, would relocate the existing Taxiway 'B' to provide a 400-foot runway/taxiway separation as needed to meet FAA design standards for an ARC D-III Airport (**Figure 2.6**). The project area for this alternative would extend into three

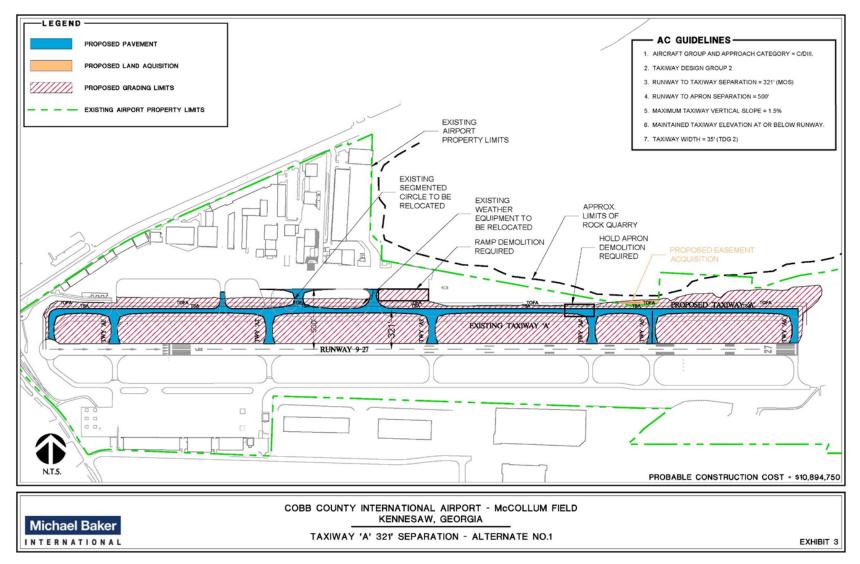


Figure 2.3 – Taxiway 'A' Relocation, Alternative 1d (321-foot Runway/Taxiway Separation)

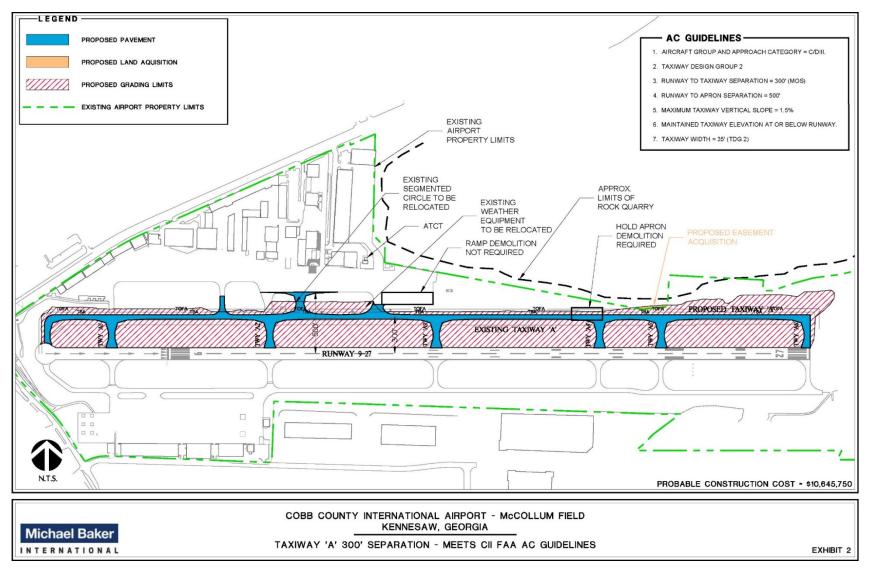


Figure 2.4 – Taxiway 'A' Relocation, Alternative 1e (300-foot Runway/Taxiway Separation)

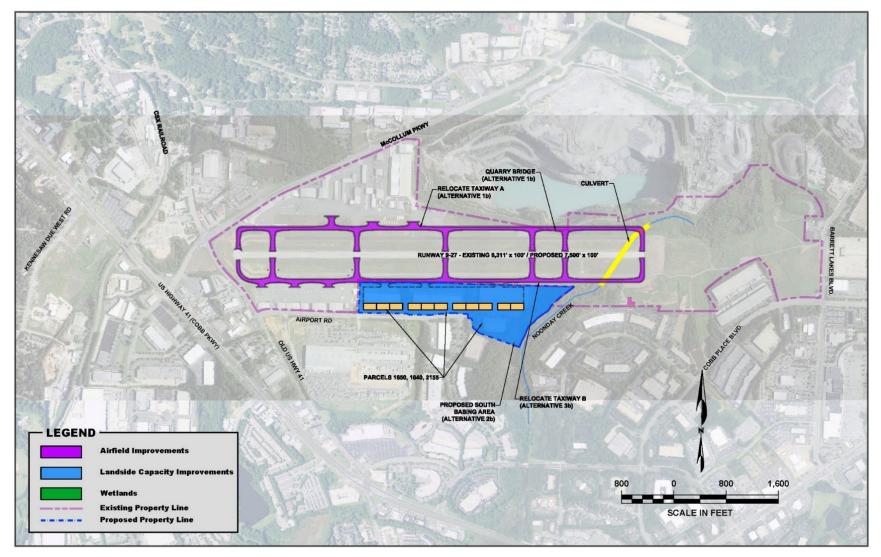


Figure 2.5 – Southside Basing Area, Alternative 2b

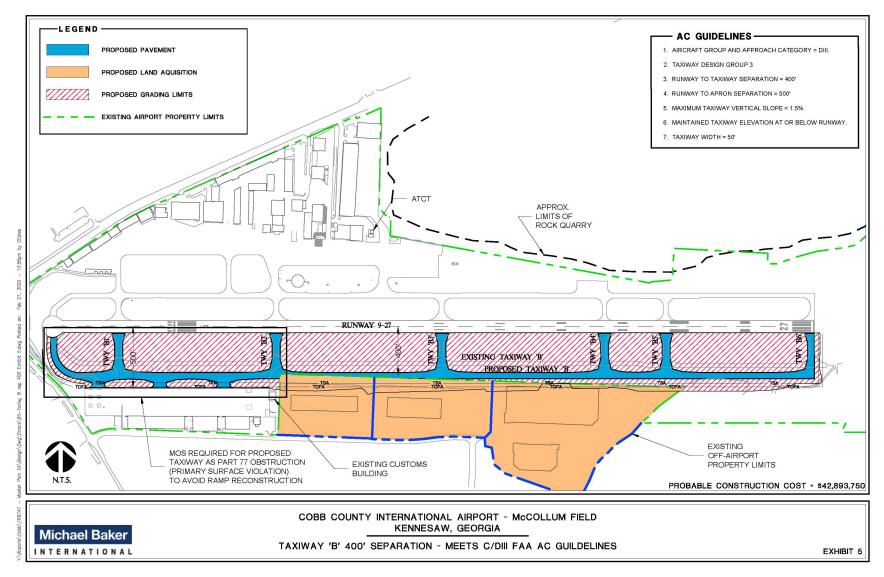


Figure 2.6 – Taxiway 'B' Relocation, Alternative 3b (400-foot Runway/Taxiway Separation)

parcels adjacent to the Airport at Airport Road (Parcels 1650, 1640, and 2155). Acquisition of the adjacent land would be necessary to accommodate the TOFA. The three parcels also would accommodate the Sponsor-Preferred Alternative for Alternative 2b, Southside Basing Area. The Noonday Creek box culvert would be extended within a deed restricted area of the Airport property to accommodate the TOFA (see **Appendix B**).

Alternative 3c - Relocate Taxiway 'B' to Provide a 300 to 400-foot Runway/Taxiway Separation

Alternative 3c would relocate portions of Taxiway 'B' to provide a 400-foot runway/taxiway separation at the eastern and western ends of the taxiway and a 300-foot separation within the central portion of the taxiway (**Figure 2.7**). This alternative would encroach on the south basing area, and it would not include acquisition of adjacent Parcels 1650, 1640, and 2155. The Noonday Creek box culvert would be extended within a deed restricted area of the Airport property to accommodate the TOFA (see **Appendix B**).

# 2.3 ALTERNATIVES SCREENING PROCESS

Three improvement projects identified in the 2017 Airport Master Plan Update – Cobb County International Airport are being evaluated in this EA: Taxiway 'A' Relocation; Southside Basing Area; and Taxiway 'B' Relocation (see **Chapter 1**). Collectively, these projects constitute the Proposed Action. The reasonable build alternative(s) for each of the three Master Plan improvement projects underwent a preliminary screening to identify the alternatives that would be evaluated in greater detail for their potential environmental impacts.

The screening process considered each alternative's consistency with the purpose of and need for the Proposed Action, which is to accommodate operational growth and meet the demand for hangar space while conforming to federal and state operational, safety, and airport design requirements. Constructability, cost, and environmental impacts were also considered in the screening. Alternatives that met the screening criteria were carried forward to a more detailed evaluation of their potential environmental impacts relative to their corresponding no-action alternative, as required by the Council on Environmental Quality (CEQ) regulations. The criteria used in the alternatives screening process are described in greater detail in the following sections.

# **Screening Criteria**

The improvements were considered to meet the purpose of and need for the Proposed Action if they were consistent with the following criteria, as applicable:

<u>Conforms to Airport Safety and Design Standards</u> – The projects would improve the airfield to support the most demanding aircraft utilizing the Airport, as well as the support the safety margins of other C and D category aircraft. The conforming improvements would provide the following:

- A 400-foot runway/taxiway separation to meet FAA ARC D-III airport design standards;
- An instrument approach minimum of 3/4-statute mile; and
- Runway approaches that are clear of obstructions.

<u>Accommodates Operational Growth</u> – The improvements would accommodate operational growth at the Airport over the planning period of this EA.

<u>Accommodates Demand for Hangar Space</u> – The improvements would meet the Georgia Aviation System Plan recommendation to provide hangar space to 70 percent of its based aircraft fleet.

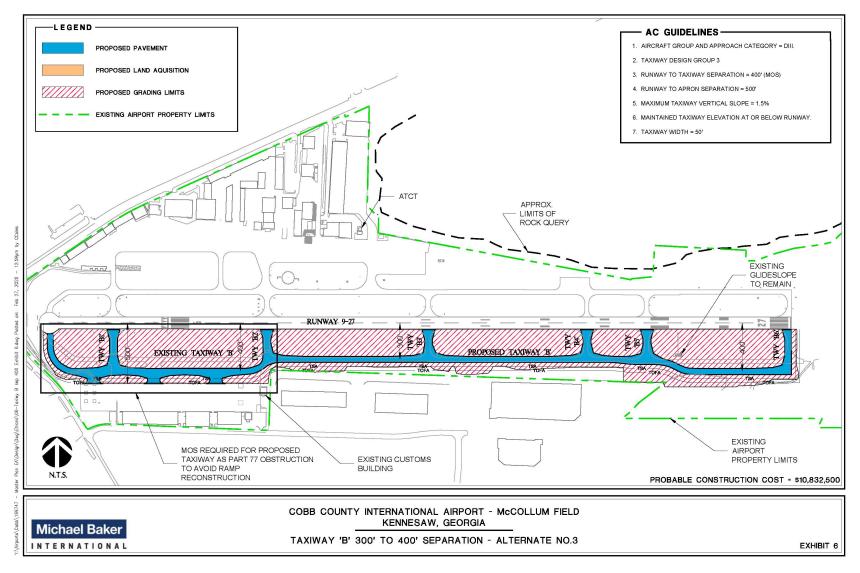


Figure 2.7 – Taxiway 'B' Relocation, Alternative 3c (300-foot to 400-foot Runway/Taxiway Separation)

A preliminary evaluation was conducted of the potential social and environmental impacts associated with each of the alternatives that would meet the purpose of and need for the Proposed Action. Constructability and cost considerations were also included in the preliminary screening analysis. The alternatives for each element of the Proposed Action that would meet the purpose of and need for the Proposed Action and that would minimize social and environmental impacts were carried forward as the Sponsor-Preferred Alternatives for a more detailed analysis of their social and environmental impacts relative to their corresponding no-action alternative.

#### 2.4 RESULTS OF THE ALTERNATIVES SCREENING

The evaluation of the No-Action and reasonable build alternatives in relation to the screening criteria is discussed in the following paragraphs.

# No-Action Alternatives 1a, 2a, and 3a

Alternatives 1a, 2a, and 3a, the No-Action alternatives, would not meet the purpose of and need for the Proposed Action, because there would be no change from the existing conditions at the Airport (see **Chapter 1 - Figure 1.2**):

- Alternatives 1a and 3a would not provide the runway to taxiway separations needed to support the most demanding aircraft utilizing the Airport, nor would they support the safety margins of other C and D category aircraft.
- Selection of Alternative 2a in conjunction with Alternative 3a would not provide an area on the Airport property that would accommodate the additional aircraft forecasted to operate at the Airport by 2020.
- Selection of Alternative 2a in conjunction with implementation of Alternatives 1b, 1c or 1d and Alternatives 3b or 3c would would result in a loss of up to 42 aircraft parking spaces from the Airport through encroachment of the relocated TOFAs into the existing northside and southside basing areas, without providing a location on the Airport for relocating those aircraft parking spaces.

# Build Alternatives 1b, 1c, 1d, and 1e for Taxiway 'A' Relocation

# Alternative 1b

Alternative 1b, the Sponsor-Preferred Alternative, would relocate Taxiway 'A' to provide a 400-foot runway/taxiway separation, to help the Airport meet FAA design standards for a D-III airport (see **Figure 2.1**). At Taxiways A-4 and A-5 where the TOFA would extend over the adjacent rock quarry, acquisition of an easement from the quarry owner would be required to allow for construction of a \$2.5 million counterbalanced slab-style bridge structure spanning 200 linear feet along the edge of the quarry.

This alternative would include permitting and construction of a culvert to carry surface water from the stream and wetland at the western portion of the taxiway area (involving approximately 485 lf of perennial stream impacts and 0.42 acre of wetland impacts) and an approximately 102-foot extension of the Noonday Creek box culvert, involving approximately 127 lf of perennial stream impacts and approximately 0.13 acre of impacts to aquatic (Cherokee darter) habitat. Construction would impact approximately 2.58 acres of regulated floodplain resources.

Construction would also involve the removal of approximately 0.42 acre of bottomland hardwood forest and 1.37 acres of upland scrub-shrub habitat; these impacts would be considered to result in

minor impacts to terrestrial biological communities, because there is ample similar habitat present in the nearby vicinity. In total, approximately 53 acres of vegetated terrestrial habitats would be altered from one habitat type to another.

The relocated TOFA would encroach into the existing apron area, displacing 23 tie-down spaces. Those spaces would be relocated to the proposed Southside Basing Area with implementation of Alternative 3b (Taxiway 'B' relocation with 400-ft runway-taxiway separation, including acquisition of Parcels 1650, 1640, and 2155). The Airport would lose the 23 existing aircraft parking spaces if Parcels 1650, 1640, and 2155 are not acquired as part of the Proposed Action.

Alternative 1b would meet the purpose of and need for the Proposed Action with the concurrent implementation of Alternative 3b. The estimated cost associated with Alternative 1b is approximately \$19.5 million in 2017 dollars, including the value of potential future lost mining revenue that would be part of the easement acquisition.

#### Alternatives 1c, 1d, and 1e

Alternatives 1c, 1d, and 1e also would relocate Taxiway 'A' to help the Airport meet FAA design standards for a D-III airport (see **Figures 2.2, 2.3, and 2.4**, respectively). However, each of these alternatives would require a Memorandum of Agreement with the FAA to modify the runway/taxiway separation standard at the relocated Taxiway 'A' in order to meet the FAA design criteria for an ARC D-III airport. That modification of standards would involve operational restrictions. The relocated TOFA would encroach into the existing apron area, necessitating acquisition of an easement from the quarry owner. A taxiway bridge would not be required.

Each of these alternatives would include permitting and construction of a culvert to carry surface water from the stream and wetland at the western portion of the taxiway area; the culvert construction would impact approximately 485 lf of perennial stream resource and 0.42 acre of wetland impacts. Each of the alternatives would also include an approximately 102-foot extension of the Noonday Creek box culvert, with each alternative involving approximately 127 lf of perennial stream impacts and minor impacts to Cherokee darter habitat. Construction of Alternatives 1c, 1d, and 1e would impact approximately 2.06 acres, 1.92 acres, and 1.64 acres, respectively, of regulated floodplain resources.

Alternatives 1c and 1d would each involve the removal of 0.42 acre of bottomland hardwood forest, and Alternative 1e would involve the removal of 0.32 acre of bottomland forest. Additionally, implementation of Alternatives 1c, 1d, and 1e would involve the removal of approximately 1.03 acres, 0.94 acres, and 0.83 acres, respectively, of upland scrub-shrub habitat. These impacts would be considered to result in minor impacts to terrestrial biological communities, because there is ample similar habitat present in the nearby vicinity. Among Alternatives 1c, 1d, and 1e, approximately 51 acres, 44 acres, and 41 acres, respectively of vegetated terrestrial habitats would be altered from one habitat type to another.

Alternative 1c would displace 23 tie-down spaces from the apron area, and Alternative 1d would displace 9 tie-down spaces from the apron area. The displaced tie-down spaces would be relocated to the proposed Southside Basing Area with concurrent implementation of Alternative 3b. The Airport would lose those existing aircraft parking spaces with implementation of Alternatives 1c, 1d, and 1e if Parcels 1650, 1640, and 2155 are not acquired as part of the Proposed Action. No tie-down spaces would be displaced with Alternative 1e.

Alternatives 1c, 1d, and 1e would not meet the purpose of and need for the Proposed Action as documented in Chapter 1 of this EA. Each of these alternatives would require an easement from

the quarry owner to accommodate grading in the TOFA, but the runway/taxiway separations would still only meet FAA design standards for an ARC C-II airport. Each of these alternatives would require a Memorandum of Agreement with the FAA to modify the runway/taxiway separation standard at the relocated Taxiway 'A' to meet FAA design standards for an ARC D-III Airport, and that modification of standards would involve operational restrictions. Alternatives 1c and 1d also would not provide a means for meeting existing aircraft parking needs unless the displaced aircraft parking spaces can be relocated to the proposed Southside Basing Area with the concurrent implementation of the Alternative 3b.

Implementation of Alternatives 1c, 1d, or 1e would be contingent upon the willingness of the quarry owner to provide an easement to accommodate grading in the TOFA. Based on the small areas of the easements, it is assumed that the potential future revenue associated with extractable materials in the proposed easement locations would be negligible. The estimated costs in 2017 dollars associated with implementation of Alternatives 1c, 1d, and 1e are approximately \$11.1 million, \$10.9 million, and \$10.6 million, respectively.

Alternative 1b was selected as the Sponsor-Preferred Alternative for the Taxiway 'A' element of the Proposed Action. This alternative would meet the purpose of and need for the Proposed Action because it would meet the ARC D-III design criteria without requiring a Memorandum of Agreement with the FAA to modify the runway/taxiway separation standard that would involve operational restrictions. Additionally, with the concurrent implementation of Alternative 3b, Alternative 1b would enable the Airport to retain the existing aircraft parking spaces displaced with relocation of the TOFA. The social and environmental impacts associated with Alternative 1b would be similar to those for Alternatives 1c, 1d, and 1e.

# Build Alternative 2b for Southside Basing Area

Alternative 2b, the Sponsor-Preferred Alternative, would demolish and remove three existing buildings to prepare a portion of the site to accommodate the future development of hangared aircraft storage (see **Figure 2.5**). This alternative would also provide a location to accommodate aircraft parking spaces that would be displaced from the existing northside and south basing area with implementation of Alternatives 1b, 1c or 1d and Alternatives 3b or 3c. Implementation of Alternative 2b would not involve social impacts because the land would be acquired as part of Alternative 3b (see below). It would minimize environmental impacts by avoiding disturbance of Noonday Creek as well as its vegetated buffer and associated regulated floodplain resources.

Alternative 2b was selected as the Sponsor-Preferred Alternative for the Southside Basing Area element of the Proposed Action. With the concurrent implementation of Alternative 3b, Alternative 2b would meet the purpose of and need for the Proposed Action as documented in Chapter 1 of this EA. It would provide a site to accommodate the Sponsor-Preferred Alternative for the Taxiway 'B' relocation, and it would accommodate parking spaces for aircraft displaced from the existing northside and south basing areas as part of the Proposed Action. It would also accommodate the future development of hangared aircraft storage to help meet the Airport's forecasted need to bring the percentage of stored aircraft from 40 percent to 70 percent. The estimated cost associated with Alternative 2b is approximately \$19.3 million in 2017 dollars.

# Build Alternatives 3b and 3c for Taxiway 'B' Relocation

#### Alternative 3b

Alternative 3b, the Sponsor-Preferred Alternative, would provide a 400-foot runway/taxiway separation along the entire length of Taxiway 'B' to meet FAA design standards for an ARC D-III airport (see **Figure 2.6**). It would require a Modification of Standards from the FAA for the western end of the proposed taxiway as a Part 77 obstruction (primary surface violation), to avoid a ramp reconstruction. Alternative 3b would include acquisition of the adjacent Parcels 1650, 1640, and 2155 to accommodate the relocated Taxiway 'B' TOFA. Acquisition of the adjacent parcels would provide a site to accommodate aircraft parking spaces that would be displaced from the northside apron and the south basing area as part of the Proposed Action. In addition, acquisition of the three adjacent parcels would provide a site to accommodate future development of hangared aircraft storage that would help meet the Airport's forecasted need to bring the percentage of stored aircraft from 40 percent to 70 percent.

Construction activity on the adjacent Parcels 1650, 1640, and 2155 would include clearing and grading along the Airport boundary, within the relocated Taxiway 'B' TOFA. That activity would involve the removal of approximately 4.0 acre of mixed pine-hardwood habitat and 0.02 acre of upland scrub-shrub habitat. Grading for the easternmost portion of the relocated TOFA would impact approximately 0.11 acre of mixed pine-hardwood habitat and 0.80 acre of upland scrub-shrub habitat on the existing Airport property. The removal of mixed pine-hardwood forest habitat would represent a minor impact to biological communities because there is ample similar habitat in the nearby vicinity. The Noonday Creek box culvert would be extended by approximately 76 feet within a deed restricted area of the Airport property (see **Appendix B**). The culvert extension would impact approximately 101 If of stream resources, approximately 0.028 acre of aquatic (Cherokee darter) habitat, and approximately 1.65 acres of regulated floodplain resources.

Implementation of Alternative 3b would also involve the displacement of two helicopter pads and 17 tie-down spaces from the existing south basing area. Those 19 aircraft parking spaces would be relocated to the proposed Southside Basing Area site.

The estimated cost associated with Alternative 3b is approximately \$42.9 million in 2017 dollars, including the estimated \$31.5 million cost for the acquisition of Parcels 1650, 1640, and 2155.

#### Alternative 3c

Alternative 3c would relocate the western and eastern portions of Taxiway 'B' to a 400-foot runway/taxiway separation (see **Figure 4.7**). The central portion would remain at the existing 300-foot runway/taxiway separation to avoid encroachment of a relocated TOFA onto the adjacent Parcels 1650, 1640, and 2155. The portion with the 300-foot runway-taxiway separation would meet FAA design standards for an ARC C-II Airport; however, it would not meet FAA design standards for an ARC D-III Airport without a Memorandum of Agreement with the FAA to modify the runway/taxiway separation standard, and that modification of standards would involve operational restrictions. Alternative 3c would also require a Modification of Standards from the FAA for the western end of the proposed taxiway as a Part 77 obstruction (primary surface violation), to avoid a ramp reconstruction.

Grading for the relocated TOFA would impact approximately 0.11 acre of mixed pine-hardwood habitat and 0.80 acre of upland scrub-shrub habitat; those habitat impacts would be considered minor impacts to biological communities. The Noonday Creek box culvert would be extended by

approximately 76 feet within a deed restricted area of the Airport property (see **Appendix B**). The culvert extension would impact approximately 101 lf of stream resources, approximately 0.028 acre of aquatic (Cherokee darter) habitat, and approximately 1.33 acres of regulated floodplain resources.

Alternative 3c would not provide a site on the Airport property for the relocation of aircraft parking spaces that would be displaced from the northside apron and the south basing area as part of the Proposed Action. Alternative 3c would also not provide a location for the future development of hangared aircraft storage.

Alternative 3b was selected as the Sponsor-Preferred Alternative for this element of the Proposed Action. Alternative 3b would provide a 400-foot runway-taxiway separation along the entire length of Taxiway 'B' to meet the ARC D-III design criteria. It would not require a Memorandum of Agreement with the FAA to modify the runway/taxiway separation standard, which would involve operational restrictions. Alternative 3b would provide a site for relocating existing displaced aircraft parking, and it would provide a site for the future development of hangared aircraft storage to help bring the percentage of stored aircraft from 40 percent to 70 percent.

# Summary of Alternatives Analysis Results

A summary of the alternatives analysis for the Taxiway 'A' and Taxiway 'B' relocation components of the Proposed Action is presented in **Tables 2.1 and 2.2**. There is only one build alternative for the Southside Basing Area component of the Proposed Action. The No-Action alternatives were carried forward for a full environmental evaluation to compare their potential impacts to those of Alternatives 1b, 2b, and 3b, the three reasonable build alternatives that were determined to meet the purpose of and need for the Proposed Action and to minimize environmental impacts, while also being considered with respect to their constructability and cost.

<b>Table 2.1</b>						
Alternatives Screening Matri	x – Taxiway 'A' Relo	cation (Altern	atives 1a throu	gh 1e)		
Screening Criteria	•	A	lternatives			
	Alternative 1a	Alternative 1b	Alternative 1c	Alternative 1d	Alternative 1e	
	(No Action; existing	(400-foot	(321- to 400-	(321-foot	(300-foot	
	250-foot separation)	separation)	foot separation)	separation)	separation)	
Environmental Impacts						
Biological Resources – T&E Species Habitat (Aquatic)	No Impacts	0.13 acre	0.13 acre	0.13 acre	0.13 acre	
Biological Resources – T&E Species Habitat (Terrestrial)	No Impacts	53 acres	51 acres	44 acres	41 acres	
Historic / Archaeological Resources	No Impacts	No Impacts	No Impacts	No Impacts	No Impacts	
Environmental Justice	No Impacts	No Impacts	No Impacts	No Impacts	No Impacts	
Farmland	No Impacts	No Impacts	No Impacts	No Impacts	No Impacts	
Floodplains	No Impacts	0.5 acre	No Impacts	No Impacts	No Impacts	
Hazardous Waste Sites	None Present	None Present	None Present	None Present	None Present	
Historic Properties	None Present	None Present	None Present	None Present	None Present	
Noise	No Impacts	No Impacts	No Impacts	No Impacts	No Impacts	
Water Resources – Streams (Perennial Stream 2)	No Impacts	485 feet	485 feet	485 feet	485 feet	
Water Resources – Streams (Noonday Creek)	No Impacts	102 feet	102 feet	102 feet	102 feet	
Water Resources – Wetlands (Wetland 3)	No Impacts	0.42 acre	0.42 acre	0.42 acre	0.42 acre	
Water Resources – Total Regulated Floodplains	No Impacts	2.58 acres	2.06 acres	1.92 acres	1.64 acres	
Airport Design Standards						
Runway-Taxiway Separation	ARC C-II (*)	ARC D-III	ARC C-II	ARC C-II	ARC C-II	
Requires MOA with FAA to meet ARC D-III Standards	Yes	No	Yes	Yes	Yes	
Constructability						
Taxiway Bridge Needed	No	Yes	No	No	No	
Navaid Relocations Needed	No	Yes	No	No	No	
Utility Relocations Needed	No	Yes	Yes	Yes	Yes	
Apron Modifications Needed	No	Yes	No	No	No	
Land Acquisition						
Quarry Easement Needed	No	Yes	Yes	Yes	Yes	
Cost						
Total Estimated Cost	No Cost	\$19.5 million	\$11.1 million	\$10.9 million	\$10.6 million	

#### **NOTE:**

(\*) Subject to operational restrictions set forth in a 2013 Letter of Agreement (LOA) between McCollum Air Traffic Control Tower and Cobb County Airport – McCollum Field, entitled "Designation of Movement / Non-Movement Areas and Control of Vehicular Traffic on Airport Movement Areas (May 15, 2013, effective August 1, 2013). At the time of the LOA the Runway 9-27 to Taxiway 'A' separation was 225 feet. Runway 9-27 was subsequently widened from 75 feet to 100 feet, the taxiway and the runway centerline was shifted to attain the current 250-foot runway-taxiway separation.

Table 2.2					
Alternatives Screening Matrix	x – Taxiway 'B' Relocation (A	<u> </u>	1 3c)		
Screening Criteria		Alternatives			
	Alternative 3a	Alternative 3b	Alternative 3c		
	(No Action; 300-foot separation)	(400-foot separation)	(300 to 400-foot separation)		
Environmental Impacts					
Biological Resources – T&E Species Habitat (All Aquatic)	No Impacts	0.028 acre	0.028 acre		
Biological Resources – T&E Species Habitat (All Terrestrial)	No Impacts	52 acres	44 acres		
Historic/Archaeological Resources	None Present	None Present	None Present		
Environmental Justice	No Impacts	No Impacts	No Impacts		
Farmland	None Present	None Present	None Present		
Floodplains	No Impacts	No Impacts	No Impacts		
Hazardous Waste Sites	None Present	None Present	None Present		
Historic Properties	None Present	None Present	None Present		
Noise	No Impacts	No Impacts	No Impacts		
Water Resources – Streams (Noonday Creek)	No Impacts	101 feet	101 feet		
Water Resources – Wetlands (None Present)	No Impacts	No Impacts	No Impacts		
Water Resources – Total Regulated Floodplains	No Impacts	1.65 acres	1.33 acres		
Airport Design Standards					
Runway-Taxiway Separation	ARC C-II	ARC D-III	ARC C-II		
Requires MOA with FAA to meet ARC D-III Standards	Yes	No	Yes		
(with operational restrictions)					
Constructability					
Navaid Relocations Needed	No	Yes	No		
Utility Relocations Needed	No	Yes	Yes		
Apron Modifications Needed	No	Yes	No		
Land Acquisition					
Parcel Acquisitions Needed (Parcels 1650; 1640; 2155)	None	Yes (41.17 ac) (*)	None		
Cost					
Total Estimated Cost	No Cost	\$42.9 million (*)	\$10.8 million		

#### **NOTE:**

<sup>(\*)</sup> Implementation of Alternative 3b at the estimated cost of \$42.9 million is contingent on and includes the estimated \$31.5 million cost for the prior or concurrent acquisition of Parcels 1650, 1640, and 2155.

#### **CHAPTER 3. AFFECTED ENVIRONMENT**

# 3.1 INTRODUCTION

Cobb County International Airport is located inside the political boundary of unincorporated Cobb County, southeast of the city of Kennesaw and northwest of the city of Atlanta. It is bounded by McCollum Parkway to the northwest, a rock quarry to the north and northeast, Lakes Boulevard to the east, a conservation easement to the southeast, industrial development to the south and southwest, and South Main Street to the west (see **Chapter 1 - Figure 1.2**).

The Airport property is designated in the Cobb County 2040 Comprehensive Plan as civic land use. Land use in the immediate vicinity of the Airport is industrial to the northeast; industrial and commercial to the east and southeast; industrial to the south; and residential to the southwest, west, and northwest (**Exhibit B**). The northeastern and southeastern portions of the Airport are located within the Federal Emergency Management Agency (FEMA) 100-year floodplain of Noonday Creek.<sup>3</sup> The industrial land use located to the northeast of the Airport property is a rock quarry operated and managed by Vulcan Materials Company. Commercial development to the east consists of various retail businesses located within or adjacent to the Barrett Pavilion and the Cobb Place Shopping Center. To the southeast, commercial development consists of two financial institutions and an internet security company. Industrial development to the south includes a FedEx Ground facility. Beyond Cobb Parkway and McCollum Parkway to the southwest, west, and northwest, residential development comprises most of the land use types in the vicinity of the Airport.

#### 3.2 ENVIRONMENTAL SETTING

# 3.2.1 Existing Land Use and Zoning

According to data available from the Cobb County 2040 Comprehensive Plan, the following zoning areas are currently designated in the area surrounding the Airport (see **Exhibit B**):<sup>4</sup>

• Airport Property: Civic and Industrial

• Northeast: Industrial

East: Industrial and Commercial

• Southeast: Industrial and Commercial

South: Industrial

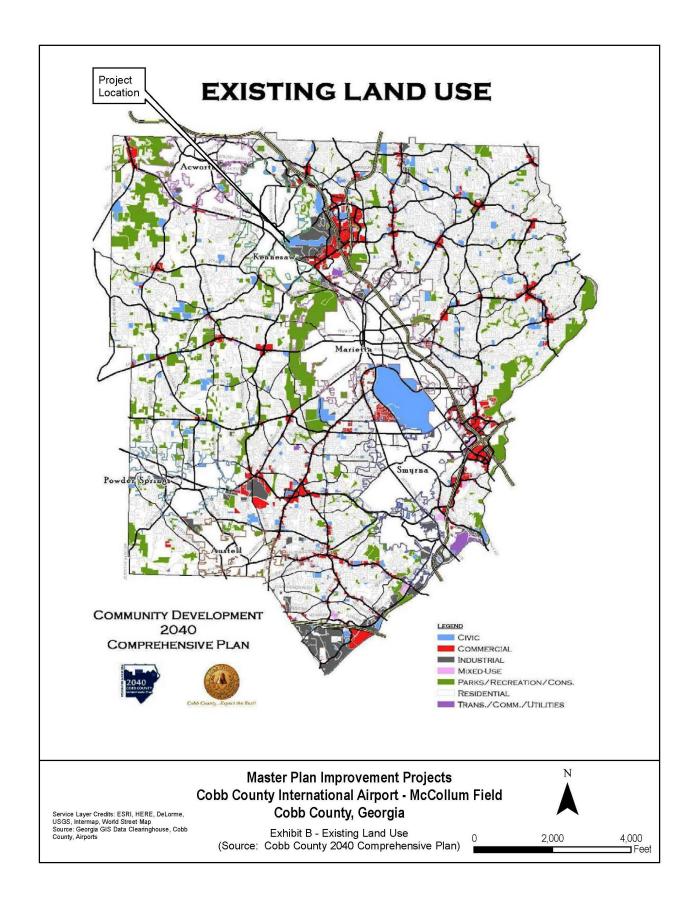
• Southwest: Residential

• West: Residential

• Northwest: Residential

<sup>&</sup>lt;sup>3</sup> FEMA (2018). Flood Map Service Center Accessed on March 15, 2019 at: https://msc.fema.gov/portal/search#searchresultsanchor.

<sup>&</sup>lt;sup>4</sup> Cobb County (2019). Cobb County 2040 Comprehensive Plan.



## 3.2.2 Future Land Use and Zoning

The Cobb County 2040 Comprehensive Plan designates the following future land uses in the vicinity of the Airport (**Table 3.1**; **Exhibit C**):

• Airport Property: Priority Industrial Area

• North: Priority Industrial Area

• Northeast: Regional Activity Center

• East: Regional Activity Center

• Southeast: Regional Activity Center and Transportation/Communication/Utilities

• South: Community Activity Center and Medium Density Residential

• Southwest: City of Kennesaw and Community Activity Center

• West: City of Kennesaw

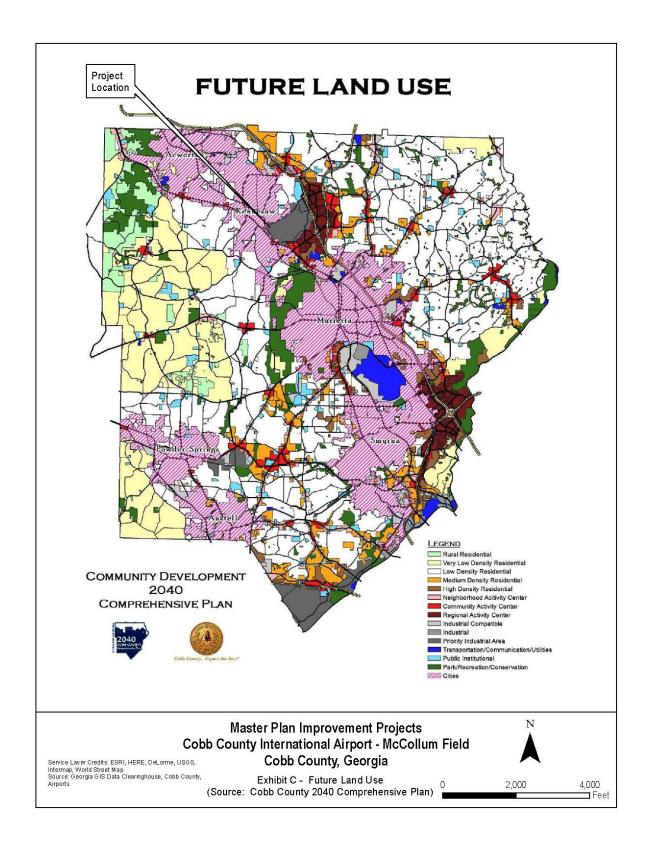
• Northwest: City of Kennesaw

Table 3.1 Future Land Use Designations in the Vicinity of the Airport					
Use	Overview				
Priority Industrial Area	Areas of the most important Industrial and Industrial Compatible land areas in unincorporated Cobb County. These areas are considered critical to the County's capacity for future industrial-type, job-producing sectors.				
Regional Activity Center	Areas that can support high-intensity development, which serves a regional market. Land use in this area typically includes high-rise office buildings, regional malls, and varying densities of residential development.				
Transportation / Communication / Utilities	Areas containing power generation plants, railroad facilities, communication towers, airports, etc.				
Community Areas that meet the immediate needs of several neighborhoods or communities. Land use in this area typically includes low to mid-rise office buildings and department stores.					
Source: Cobb County 2	040 Comprehensive Plan.				

## 3.2.3 Affected Human Populations

In accordance with 40 CFR 1508.14, NEPA documentation must address the social impacts of a proposed action. An evaluation of the "human" environment considers the relationships of people with their natural and physical environments, because people are typically affected by changes in these two types of environments.<sup>5</sup> In accordance with E.O. 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, federal agencies are required to identify community issues of concern during the NEPA planning process, particularly those issues relating to decisions that may have an impact on low income or minority populations.

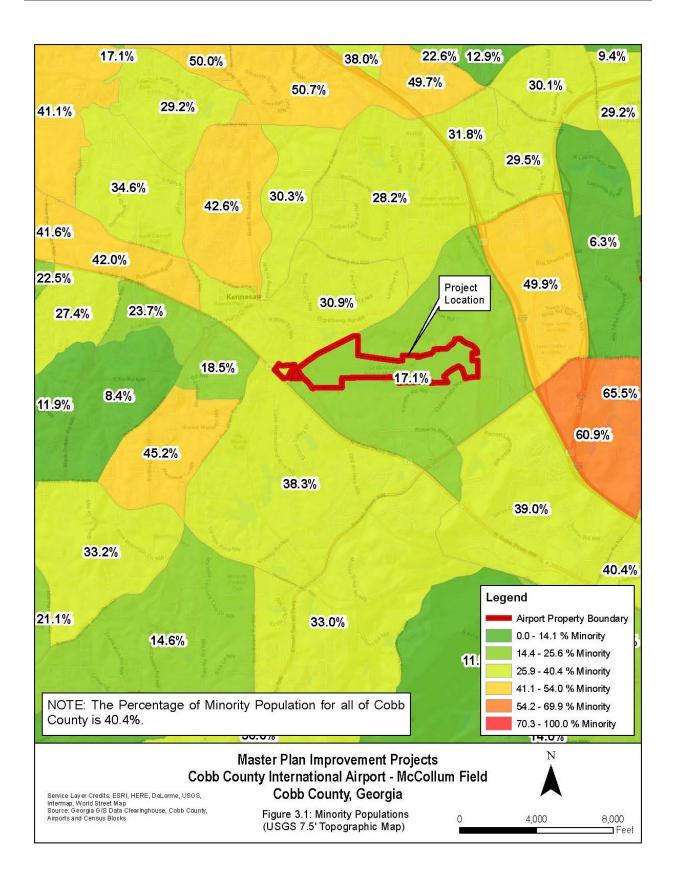
<sup>&</sup>lt;sup>5</sup> FAA (2015). 1050.1F Desk Reference. July 2015.

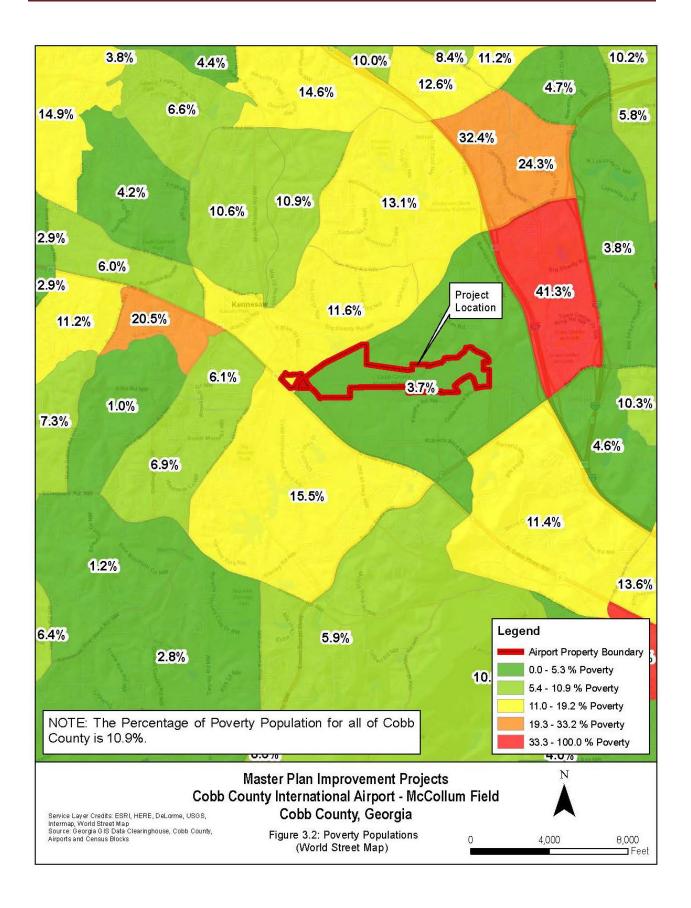


The project study area consists of mostly commercial and industrial land uses. However, there is some residential use within the project study area. Based on block group data from the Georgia GIS Data Clearinghouse, between 17.1 and 38.3 percent of the population located adjacent to the Airport property identified as a race other than white, and the portion of the population located in the vicinity of the Airport living below the poverty level ranged from 3.7 to 15.5 percent (**Figures 3.1 and 3.2**, respectively).

#### 3.3 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

Past actions that have occurred on the Airport property include the installation of a 1,185-foot box culvert along Noonday Creek beneath Runway 9-27 in 2000, the extension of Runway 9-27 and Taxiways 'A' and 'B' in 2004, and the relocation of Noonday Creek associated with the box culvert construction, including onsite and offsite enhancement and preservation and the establishment of deed restrictions, in 2007. The wetland enhancement and preservation projects were implemented to provide the compensatory mitigation specified in the Clean Water Act (CWA) Section 404 permit issued by the U.S. Army Corps of Engineers (USACE) for the 2004 runway and taxiway extension project. Additionally, extensions of Taxiways 'A' and 'B' were constructed at the approach end of Runway 9 in 2014, and the North Apron Rehabilitation and Taxiway Connector project and the Air Traffic Control Tower Upgrade project were completed in 2017. There are no reasonably foreseeable future projects programmed for the Airport within the 3-year planning period of this EA.





# **CHAPTER 4. ENVIRONMENTAL CONSEQUENCES**

#### 4.1 INTRODUCTION

In accordance with the technical guidelines set forth in FAA Orders 1050.1F and 5050.4B, this chapter describes the potential environmental impacts associated with implementing the Proposed Action. Included in the discussion of impacts are any adverse social, economic, and environmental effects that would not be avoidable should the Proposed Action be implemented, as well as the potential beneficial effects associated with the Proposed Action. The discussion also includes an assessment of the potential adverse and beneficial effects associated with the No-Action Alternative. The technical findings are intended to provide federal decision-makers and officials, as well as the public, with an understanding of the potential effects of the Proposed Action on the human, physical, and natural environments in the potentially affected areas.

As discussed in Chapter 1 of this EA, the purpose of the Proposed Action is to accommodate operational growth at the Airport. Each element of the Proposed Action is necessary for the Airport to maintain current FAA airport design standards and safety requirements, as well as help the Airport accommodate the changing operations demands of the facility. The Proposed Action includes three elements: Taxiway 'A' relocation; Southside Basing Area construction; and Taxiway 'B' relocation. Each element of the Proposed Action was carried forward for a full evaluation of potential environmental impacts, based on the results of the screening analysis of reasonable alternatives, as discussed in Chapter 2 of this EA.

The No Action alternative the Sponsor-Preferred alternative are summarized below for each of the three elements that comprise the Proposed Action. The potential social and environmental impacts of the three Sponsor-Preferred alternatives are described in greater detail in the following sections.

#### Alternatives 1a/2a/3a - No-Action

Alternatives 1a, 2a, and 3a would represent the taking of no action to relocate Taxiway 'A,' construct a Southside Basing Area, or relocate Taxiway 'B.' Selection of these no-action alternatives would not result in social or environmental impacts associated with construction of the proposed improvements or the operation of a modified airfield. However, these no-action alternatives would not meet the purpose of and need for the Proposed Action.

# Alternative 1b - Relocate Taxiway 'A' to Provide a 400-foot Runway/Taxiway Separation

Alternative 1b would relocate Taxiway 'A' to provide a 400-foot runway/taxiway separation needed to meet FAA design standards for an ARC D-III airport (see **Chapter 1, Exhibit A**). This alternative would require the reconstruction of portions of the northside ramp, relocation of the segmented-circle NAVAID and weather equipment, and an easement from the adjacent quarry that would be needed to construct a bridge over the quarry in order to maintain the 400-foot runway/taxiway separation. Permitting and construction of a 650.5-foot culvert and a 102-foot extension of the Noonday Creek box culvert would also be required. Implementation of Alternative 1b would meet the purpose of and need for the Proposed Action.

#### Alternative 2b – Construct the Southside Basing Area

Alternative 2b would construct a Southside Basing Area east of the existing Customs Facility, along the south side of existing Taxiway 'B' and north of Airport Road (see **Chapter 1**, **Exhibit A**). The total area of the land within this site (which would be acquired as part of Alternative 3b) is 41.17 acres. The site comprises three parcels currently being used as office and storage facilities.

Implementation of this alternative would provide for approximately 291,878 (sf) of storage space, if redeveloped for airport use. Implementation of Alternative 2b would meet the purpose of and need for the Proposed Action.

# Alternative 3b - Relocate Taxiway 'B' to Provide a 400-foot Runway/Taxiway Separation

Alternative 3b would relocate the existing Taxiway 'B' to provide a 400-foot runway/taxiway separation needed to meet FAA design standards for an ARC D-III Airport (see Chapter 1, Exhibit A). This alternative would involve permitting and construction of a 76-foot extension of the Noonday Creek box culvert (see Appendix B). It would also require the acquisition of three parcels of land totaling 41.17 acres that are currently used for non-Airport related office and storage facilities. The land acquisition would be necessary to correctly grade the toe of slope away from the edge of the taxiway. The parcels required for the airfield grading would also provide an area for future landside capacity improvements (see Alternative 2b). Implementation of Alternative 3b would meet the purpose of and need for the Proposed Action.

## 4.2 AIR QUALITY

This section contains a summary of existing air quality conditions in the vicinity of the Airport, including the regulatory framework and the air quality monitoring data and attainment status. The air quality impacts associated with construction of the Proposed Action are quantitatively addressed in the Air Quality Assessment Report (Appendix C – Air Quality Assessment Report).

## 4.2.1 Regulatory Framework

FAA is the primary agency responsible for ensuring that air quality impacts associated with proposed airport projects adhere to the reporting and disclosure requirements of NEPA and to the General Conformity rule of the Clean Air Act (CAA). The Environmental Protection Division (EPD) of the Georgia Department of Natural Resources (GADNR) is responsible for enforcing the CAA on behalf of the U.S. Environmental Protection Agency (EPA), including compliance with the U.S. National Ambient Air Quality Standards (NAAQS), issuance of air emission source permits, monitoring of air quality conditions, and assistance in preparation of the State Implementation Plan (SIP). The CAA requires states to develop a general plan to attain and/or maintain the primary and secondary NAAQS in all areas of the country, and to develop a SIP for approval by EPA to attain the standards for each area designated nonattainment for a NAAQS. Furthermore, the Atlanta Regional Commission (ARC), the designated Metropolitan Planning Organization (MPO) for the greater Atlanta area, is responsible for developing a long-range Regional Transportation Plan (RTP) and a short-range Transportation Improvement Plan (TIP) that must conform to the air quality goals established in the SIP (Table 4.1).

#### National Ambient Air Quality Standards

The NAAQS are set to safeguard public health and environmental welfare against the detrimental effects of ambient air pollution; they are defined as primary and secondary standards. Primary NAAQS are health-based standards geared toward protecting sensitive or at-risk populations, such as asthmatics, children, and the elderly. Secondary NAAQS are welfare-oriented, designed to prevent decreased visibility and damage to animals, vegetation, and physical structures. NAAQS have been established for six common air pollutants, referred to as "criteria" pollutants: carbon monoxide (CO); lead (Pb); nitrogen dioxide (NO<sub>2</sub>); ozone (O<sub>3</sub>); particulate matter (PM), which includes PM with diameters of 10 microns or less (PM<sub>10</sub>) and diameters of 10 microns or less (PM<sub>2.5</sub>); and sulfur dioxide (SO<sub>2</sub>). The NAAQS are historial Table 4.2.

	Regula	Table 4.1 tory Agencies Involved in Air Quality
	Agency	Roles & Responsibilities
Federal	U.S. Environmental Protection Agency (EPA)	Sets national clean air policies under the federal Clean Air Act (CAA); promulgates the National Ambient Air Quality Standards (NAAQS); reviews and approves State Implementation Plans (SIPs).
Agency	Federal Aviation Administration (FAA)	Responsible for reviewing and approving the Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) and ensuring compliance with the General Conformity Rule of the CAA.
	Environmental Protection Division (EPD) of the Georgia DNR	Charged with protecting Georgia's air, land, and water resources through the authority of state and federal environmental statutes. Responsible for the development of the Georgia SIP and for the management of air quality within Georgia.
State	Georgia Regional Transportation Authority (GRTA) <sup>1</sup>	Directed to address transportation mobility and air quality in metropolitan Atlanta. In 2017, GRTA combined with the State Road and Tollway Authority (SRTA) to jointly provide the services of both state authorities. As such, all functions for both authorities are combined under the staff and leadership of SRTA.
Agency	The Georgia Department of Transportation (GDOT)	Addresses mobility, air quality and land use and how they relate to the transportation needs of metro Atlanta, including both roads and public transit.
	Atlanta Regional Commission (ARC) <sup>2</sup>	Is the federally designated Metropolitan Planning Organization (MPO) and is responsible for developing a long-range Regional Transportation Plan (RTP) and short-range Transportation Improvement Plan (TIP) that conform to the air quality goals established in the SIP, according to the guidelines outlined in the Metropolitan Planning Regulations and Transportation Conformity Rule.
Regional	Atlanta Regional Commission (ARC) <sup>2</sup>	Is the federally designated Metropolitan Planning Organization (MPO) and is responsible for developing a long-range Regional Transportation Plan (RTP) and short-range Transportation Improvement Plan (TIP) that conform to the air quality goals established in the SIP, according to the guidelines outlined in the Metropolitan Planning Regulations and Transportation Conformity Rule.

#### Notes:

<sup>&</sup>lt;sup>1</sup> GRTA's jurisdiction encompasses 13 counties: Cherokee, Clayton, Coweta, Cobb, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale.

<sup>&</sup>lt;sup>2</sup> The ARC metropolitan planning area comprises City of Atlanta and the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale, as well as portions of the counties of Barrow, Bartow, Newton, Spalding and Walton.

Table 4.2 National Ambient Air Quality Standards						
Pollutant		Primary/ Secondary	Averaging Time	Level		
		n.	8 hours	9 ppm		
Carbon Monoxide (Co	<b>U</b> )	Primary	1 hour	35 ppm		
Lead (Pb)		Primary and secondary	Rolling 3-month average	$0.15 \ \mu g/m^3$		
		Primary	1 hour	100 ppb		
Nitrogen Dioxide (NO <sub>2</sub> )		Primary and secondary	1 year	53 ppb		
Ozone (O <sub>3</sub> )		Primary and secondary	8 hours	0.07 ppm		
		Primary	1 year	12 μg/m <sup>3</sup>		
	PM <sub>2.5</sub>	Secondary	1 year	$15 \mu g/m^3$		
Particulate Matter (PM)		Primary and secondary	24 hours	35 μg/m <sup>3</sup>		
	PM <sub>10</sub>	Primary and secondary	24 hours	150 μg/m³		
Sulfur Dioxide (SO <sub>2</sub> )		Primary	1 hour	75 ppb		
		Secondary	3 hours	0.5 ppm		

*Notes:* ppm = parts per million, and  $\mu g/m^3$  = micrograms per cubic meter.

Source: EPA, National Ambient Air Quality Standards, <a href="https://www.epa.gov/criteria-air-pollutants/naags-table">https://www.epa.gov/criteria-air-pollutants/naags-table</a>, 2019.

# **Air Quality Designations**

The EPA designates areas as either in attainment or nonattainment. An area with measured criteria pollutant concentrations that are lower than the NAAQS is designated as attainment and an area

with concentrations that exceed the NAAQS is designated as nonattainment. Once a nonattainment area meets the NAAQS and the additional re-designation requirements in the CAA, the EPA will designate the area as maintenance. Nonattainment areas are further classified as extreme, severe, moderate, or marginal. Notably, an area is designated as unclassifiable when there is lack of sufficient data to form the basis of an attainment status determination.

The Airport is located in Cobb County, which is currently designated as a "marginal" nonattainment area for the 2008 8-hour O<sub>3</sub> standard; and as of June 2, 2017, as a maintenance area for the 2015 8-hour O<sub>3</sub> standard. **Table.4.3** presents the air quality designations of Cobb County.

	Table 4.3 Air Quality Designations					
County	Pollutant	Area Name	Classification	Whole or/Part County		
Cobb	8-hour Ozone (O <sub>3</sub> ) (2008)	Atlanta, GA	Re-designation to Maintenance on 6/2/2017	Whole		
2000	8-hour O <sub>3</sub> (2015)	7 mining, G71	Marginal Nonattainment	Whole		

**Notes:** The column "Whole or/Part County" indicates whether only a part of the county or the whole county is designated nonattainment/maintenance.

Source: EPA, Green Book, https://www3.epa.gov/airquality/greenbook/anayo\_ga.html, 2019.

#### **General Conformity**

The CAA General Conformity Rule prohibits federal agencies (including FAA) from permitting or funding projects in NAAQS nonattainment or maintenance areas that do not conform to an EPA-approved SIP. As a means of demonstrating conformity with the SIP, project-related emissions of the applicable nonattainment/maintenance pollutants (and precursors) are compared to *de minimis* level thresholds.

If the emissions exceed the thresholds, a formal Conformity Determination is required to demonstrate that the action conforms to the applicable SIP. Conversely, if project-related emissions are below the *de minimis* levels, the project is assumed to conform to the SIP.

Because the improvements at the Cobb County International Airport would occur in a NAAQS "marginal" nonattainment area for the 2008 8-hour ozone standard; and as of June 2, 2017, in a maintenance area for the 2015 8-hour ozone standard, an analysis was performed to determine the applicability of the CAA's General Conformity Rule. The General Conformity *de minimis* levels for Cobb County are presented in **Table 4.4**.

Table 4.4							
	General Conformity de minimis	Levels					
Pollutant	Pollutant Precursors Tons/Year						
Ozana (O.) CO	Volatile Organic Compounds (VOC)	100					
Ozone (O <sub>3</sub> ) CO	Nitrogen oxides (NO <sub>x</sub> )	100					

*Note*: NO<sub>x</sub> and VOCs are precursors to ozone formation.

Source: EPA, General Conformity De Minimis Tables, https://www.epa.gov/general-conformity/de-minimis-tables, 2019.

## **Transportation Conformity**

The CAA also contains a Transportation Conformity Rule that functions similarly to the General Conformity Rule. The CAA Transportation Conformity Rule reserves federal funding for transportation projects sponsored by the Federal Highway Administration (FHWA) and GDOT that are consistent with the current EPA-approved SIP. It is assumed that the Proposed Action would not be subject to the Transportation Conformity Rule because it is not a roadway/highway project.

#### 4.2.2 Construction Emissions

Air pollutant emissions due to construction activity vary based on the project's duration and level of activity. These emissions occur predominantly in the engine exhaust of construction equipment and vehicles (e.g., scrapers, dozers, delivery trucks, etc.), but are also attributable to fugitive dust produced from construction materials staging, soil handling, un-stabilized land and wind erosion; as well as evaporative emissions from asphalt paving activities. The construction projects and schedules for the proposed improvements at RYY are summarized in **Table 4.5**.

Table 4.5 Construction Projects and Schedules					
Project Schedule					
Taxiway A Relocation	July 2020 - December 2022				
Taxiway B Relocation May 2023 - September 2025					
Southside Basing Area April 2021-November 2021					
Source: Michael Baker International and KB Environmental Sciences, Inc., 2019.					

The Airport Construction Emissions Inventory Tool (ACEIT) – a companion tool to the Transportation Research Board's (TRB's) Airport Cooperative Research Program (ACRP) Report 102 was used to obtain construction activities and equipment/vehicles activity data (e.g., equipment mixes/times). EPA's Motor Vehicle Emissions Simulator (MOVES) model was used to derive emission factors for both off-road construction equipment and on-road vehicles.

**Table 4.6** provides the results of the construction-related emissions for CO,  $NO_x$ ,  $SO_2$ , VOC,  $PM_{10}$ , and  $PM_{2.5}$ . The total emissions associated with construction activities are also well below the *de minimis* threshold of 100 tons/year for  $NO_x$  and VOC. A Conformity Determination is not required for the Proposed Action as it can be presumed to conform with the SIP.

<sup>&</sup>lt;sup>6</sup> Transportation Research Board, ACRP Report 102, Guidance for Estimating Airport Construction Emissions, http://onlinepubs.trb.org/onlinepubs/acrp/acrp\_rpt\_102.pdf.

<sup>&</sup>lt;sup>7</sup> EPA, MOVES (Version MOVES2014b), <u>https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves</u>.

Table 4.6 Construction Emissions Inventories (tons/year)							
Year	CO	NOx	SO <sub>2</sub>	voc	PM <sub>10</sub>	PM <sub>2.5</sub>	
2020	3.70	1.41	0.01	0.95	1.37	0.20	
2021	20.3	14.1	0.05	9.90	5.46	1.16	
2022	3.26	1.14	0.01	0.88	1.35	0.18	
2023	3.06	1.04	0.01	0.85	1.35	0.18	
2024	3.97	1.90	0.01	1.01	2.89	0.37	
2025	2.72	0.88	0.01	0.80	1.34	0.17	
De minimis Thresholds		100		100			
Exceeds de minimis? (Yes/No)		No		No			

**Notes:** Years or values are not additive. CO = carbon monoxide,  $NO_x$  = nitrogen oxide,  $SO_2$  = sulfur dioxide, VOC = volatile organic compounds,  $PM_{10}$  = particulate matter with a diameter of 10 microns or smaller, and  $PM_{2.5}$  = particulate matter with a diameter of 2.5 microns or smaller.

Source: TRB, ACRP - ACEIT, 2019.

#### Construction Emission Reduction Measures

Exhaust emissions due to construction activities can be reduced many ways, including the expansion of construction schedule duration (thereby reducing the frequency of equipment operation), reduction of equipment idling times, storing recyclable construction materials on-site to reduce the amount of haul truck trips, and using low- or zero-emissions equipment. Employees could also be encouraged to carpool in order to reduce the vehicle miles travelled associated with their trips to and from the site. Ensuring the contractor has knowledge of appropriate fugitive dust and equipment exhaust controls is also a measure to reduce emissions.

Activities that emit substantial NO<sub>x</sub> and VOC should be limited during times when atmospheric conditions are conducive to ozone formation; i.e., when air circulation is limited and temperatures are high. Hot mix asphalt with reduced VOC content should be applied whenever possible during paving operations. Fugitive dust PM emissions can be mitigated by regularly watering or applying dust suppressants to unpaved areas, installing pads to deter track-out as vehicles enter and leave the site, reducing vehicle speeds on unpaved roads, covering materials stockpiles, covering haul trucks during materials transportation, and limiting construction activity during windy conditions.

#### Construction Emission Impact Analysis

Selection of the No-Action Alternative would not involve construction activities that would contribute to increased levels of fugitive dust or criteria pollutants emissions; therefore, this alternative would have no direct impacts on air quality. Implementation of the Proposed Action would have temporary direct impacts on air quality related to construction of the three project elements. Particulates would increase slightly in the vicinity of the project as dust from construction activities collects in the air.

The construction equipment would also produce slight amounts of exhaust emissions. These emissions would be below the *de minimis* threshold of 100 tons per year for CO, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>2.5</sub>, and VOC, and; therefore, a Conformity Determination is not required, and the Proposed Action is presumed to comply with the SIP.

## 4.2.3 Operational Impacts on Air Quality

The aircraft operational-related emissions associated with the proposed improvements at RYY were computed using the FAA's Aviation Environmental Design Tool (AEDT-Version 2d). Airport operational emissions sources other than aircraft (e.g., auxiliary power units a, ground service equipment, and motor vehicles) were not considered in the analysis as emissions from these sources would not change as a result of the proposed improvements. The emissions inventory for aircraft operations at RYY was prepared for future year 2025 with (Build) and without (No Build) the proposed improvements. The future year for which the analysis was performed was based on the 2025 mid-term year of operations projected in the 2017 Master Plan Update for the airport's 20-year planning horizon.<sup>8</sup>

**Table 4.7** presents the project-related results of the 2025 operational emissions inventory for CO, NO<sub>x</sub>, SO<sub>2</sub>, VOC, PM<sub>10</sub> and PM<sub>2.5</sub> (see **Appendix C**). As shown, operational emissions under both the No-Action and Proposed Action are well below the *de minimis* of 100 tons per year (tons/year) for NO<sub>x</sub> and VOC, the applicable maintenance pollutants/precursors. Therefore, a Conformity Determination is not required, and the proposed project is presumed to comply with the SIP. As a result, neither selection of the No-Action nor implementation of the Proposed Action would result in adverse impacts on the air quality in Cobb County.

	Table 4.7									
	Operational Emissions	<b>Invento</b>	ries (to	ons/yea	r)					
Year	Year Source CO NO <sub>x</sub> SO <sub>2</sub> VOC PM <sub>10</sub> PM <sub>2.5</sub>									
	No Build	329.43	7.21	1.38	14.58	0.54	0.54			
2025	Build	328.96	7.20	1.38	14.50	0.54	0.54			
	Difference (Project-related)	-0.47	-0.01	<0.01	-0.08	<0.01	<0.01			
	de minimis Thresholds		100		100					
	Exceeds de minimis? (Yes/No)	1	No		No	-				

**Notes:** Results may reflect rounding. CO = carbon monoxide, NOx = nitrogen oxide,  $SO_2 = sulfur$  dioxide, VOC = volatile organic compounds,  $PM_{10} = particulate$  matter with a diameter of 10 microns or smaller, and  $PM_{2.5} = particulate$  matter with a diameter of 2.5 microns or smaller. **Source:** FAA's AEDT, 2019.

# 4.2.4 Indirect and Cumulative Impacts on Air Quality

There would be no change in the existing conditions at the Airport with the selection of the No-Action Alternative. Therefore, selection of this alternative would not result in indirect or cumulative impacts on air quality in the area of the Airport. Implementation of the Proposed Action would not result in cumulative adverse impacts on air quality because there are no direct adverse impacts to air quality when compared to the No-Action Alternative. There would

<sup>&</sup>lt;sup>8</sup> Michael Baker International, Inc. 2017 Airport Master Plan Update - Cobb County International Airport. Prepared for Cobb County Department of Transportation.

be no discernable change in CO, NO<sub>x</sub>, and VOC emissions between the No Action Alternatives and the Sponsor-Preferred Alternatives for the Proposed Action. Implementation of the Proposed Action also would not result in indirect adverse impacts on air quality because the future planned projects on and adjacent to the Airport property are independent projects that are not directly related to the three elements of the Proposed Action.

#### 4.3 BIOLOGICAL RESOURCES

#### 4.3.1 Introduction

The study area for the environmental analysis encompassed the entire Airport property and adjacent parcels where reasonably foreseeable airport-related projects are planned by the Airport or by others. The project study area is approximately 365.6 acres in size.

Selection of the No-Action Alternatives would have no impact on plant communities / habitats at the Airport, because there would be no land disturbance associated with construction activities. Implementation of the Taxiway 'A' relocation Sponsor-Preferred Alternative would involve approximately 67.96 acres of land disturbance (Figure 4.1). Construction of the Southside Basing Area Sponsor-Preferred Alternative would involve demolition, grading, and paving on up to approximately 40.72 acres of previously disturbed land, and the Sponsor-Preferred Alternative for the Taxiway 'B' relocation project would involve approximately 67.65 acres of land disturbance. In total, implementation of the three elements comprising the Proposed Action Sponsor-Preferred Alternatives would result in approximately 176.33 acres of land disturbance.

#### 4.3.2 Plant Communities and Habitats

Plant communities/habitats identified within the project study area included upland scrub-shrub habitat, disturbed lands, and wetland/stream resources. These resources are described below.

#### **4.3.2.1** Uplands

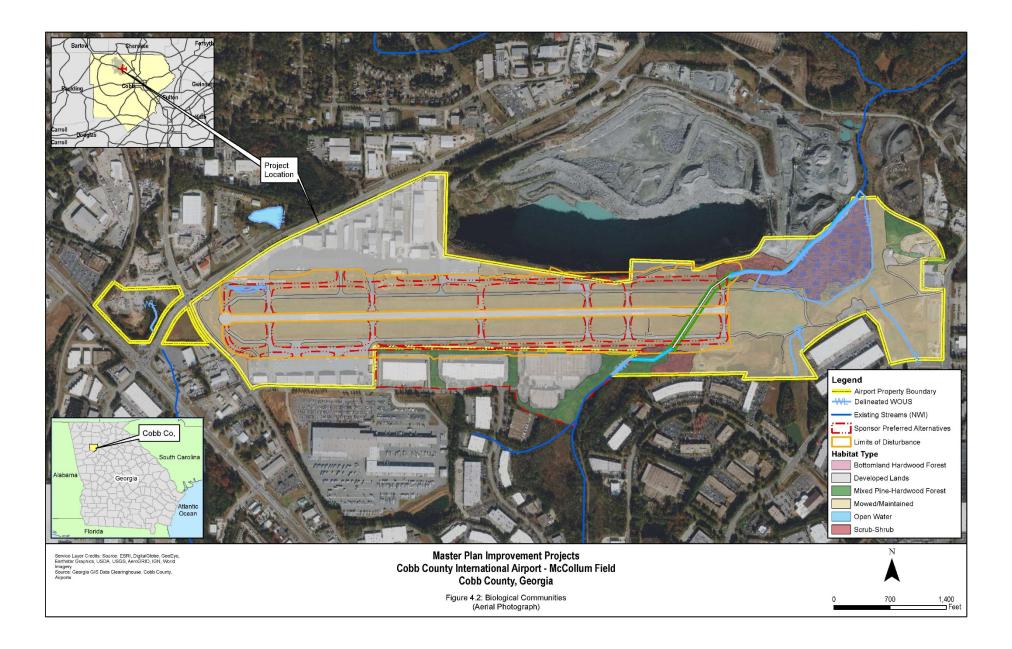
Mixed Pine/ Hardwood Forest Habitat

Approximately 23.04 acres of mixed pine/hardwood forest was identified within the project study area (Figure 4.2). The overstory of the forest was observed to be dominated by loblolly pine (Pinus taeda), northern red oak (Quercus rubra), tulip poplar (Liriodendron tulipifera), southern red oak (Quercus falcata), water oak (Quercus nigra), sweetgum (Liquidambar styraciflua), green ash (Fraxinus pennsylvanica), and eastern sycamore (Platanus occidentalis), and red maple (Acer rubrum). The understory was dominated by flowering dogwood (Cornus florida), hawthorn (Crataegus sp.), Elliot's blueberry (Vaccinium elliottii), Chinese privet, winged elm (Ulmus alata), and black cherry (Prunus serotina). Woody vine and herbaceous species included common greenbrier, Japanese honeysuckle, poison ivy (Toxicodendron radicans), and Christmas fern (Polystichum acrostichoides).

Scrub-Shrub Habitat

Approximately 8.44 acres of upland scrub-shrub habitat was identified within the study area (see **Figure 4.2**). Common species observed included red maple, sweetgum, loblolly pine, water oak, black willow (*Salix nigra*), tree-of-heaven (*Ailanthus altissima*), Chinese privet (*Ligustrum sinense*), *Lespedeza cuneata*, smooth sumac (*Rhus glabra*), winged sumac (*Rhus copallinum*), Japanese honeysuckle (*Lonicera japonica*), sawtooth blackberry (*Rubus argutus*), common greenbrier (*Smilax rotundifolia*), and tall goldenrod (*Solidago altissima*).





#### 4.3.2.2 Disturbed Lands

Disturbed lands include mowed/maintained land, agricultural land, and land developed for transportation infrastructure, residential, and other uses (see **Figure 4.2**). The project study area included approximately 176.9 acres of mowed/maintained areas and 141.5 acres of developed lands (transportation infrastructure; commercial). Transportation infrastructure in the project study area included runways, taxiways, aprons, hangar areas, parking lots, and structures.

Mowed/maintained areas are managed by the Airport to prevent vegetation from becoming an obstruction to aircraft, to control wildlife activity on the airfield, and to provide an aesthetically pleasing airport facility. Plant species observed within this habitat type included dog fennel (Eupatorium capillifolium), goldenrod, common dandelion (Taraxacum officinale), white clover (Trifolium repens), yellow clover (Trifolium campestre), common mullein (Verbascum thapsus), fescue grass (Festuca spp.), bahiagrass (Paspalum notatum), and broomsedge bluestem (Andropogon virginicus). The paved areas and structures provide limited wildlife habitat in the form of travel corridors and roosting areas.

#### 4.3.2.3 Wetlands and Open Waters

Approximately 21.3 acres of wetlands were identified within the project study area, as shown on **Figure 4.2** and discussed in detail in **Section 4.15** of this chapter. Dominant species observed within the wetlands included water oak, red maple, loblolly pine, green ash, sweetgum, button bush (*Cephalanthus occidentalis*), tag alder (*Alnus serrulata*), Pennsylvania smartweed (*Polygonum pensylvanicum*), wetland sedges (*Carex* spp.), woolgrass (*Scirpus cyperinus*), common rush (*Juncus effusus*), cattails (*Typha latifolia*), and seedbox (*Ludwigia alternifolia*).

## 4.3.2.4 Land Disturbance Impacts to Plant Communities/Habitats

Based on the proposed grading limits of the Proposed Action Sponsor-Preferred Alternatives, it is estimated that project implementation would result in the clearing of 4.52 acres of forested habitats (0.42 acre of bottomland hardwood forest and 4.10 acres of mixed pine-hardwood forest) and 2.19 acres of scrub/shrub habitat.

Implementation of the Proposed Action would not result in impacts to open water habitat; however, it would result in the filling of approximately 0.42 acre of wetland habitat (Aquatic Resource 3), as discussed in **Section 4.15** of this chapter. Additional temporary impacts to plant communities / habitats within the project study area may be necessary in order to allow vehicle access during the construction phase. Areas cleared for temporary vehicle access would be restored to conditions suitable for their future use as part of the construction activities.

#### 4.3.3 Fish Communities

Aquatic Resource 4 / Noonday Creek is the only aquatic resource located within the project study area that supports fish communities. Selection of the No-Action Alternative would have no effect on fish communities or other aquatic species because no construction-related habitat alteration would occur.

Implementation of the Proposed Action would result in 228 linear feet (lf) of direct permanent impacts to the two segments of Aquatic Resource 4 located north and south of Runway 9-27 (127 lf north of the culvert; 101 lf south of the culvert). The impacts would be associated with extensions of the existing culvert to support the Taxiway 'A' and Taxiway 'B' relocation projects.

Noonday Creek is considered to be suitable habitat for the Cherokee darter; therefore, a protected aquatic species survey was conducted on November 29, 2019. No Cherokee darters were collected within the surveyed reach of the stream. However, the stream does provide habitat for common species such as Alabama hogsucker (*Hypentelium etowanum*), blackbanded darter (*Percina nigrofasciata*), bluegill (*Lepomis macrochirus*), eastern mosquitofish (*Gambusia holbrooki*), green sunfish (*Lepomis cyanellus*), redbreast sunfish (*Lepomis auratus*), largescale stoneroller (*Campostoma oligolepis*), and yellow bullhead (*Ameiurus natalis*). Although portions of Aquatic Resource 4 would be permanently impacted as a result of implementation of the Proposed Action, (0.131 acre north of the culvert with Alternative 3b; 0.028 acre south of the culvert with Alternative 3b), the impacts to fish communities would not be considered significant because there is suitable habitat located both upstream and downstream of the impacted areas.

#### 4.3.4 Wildlife

Selection of the No-Action Alternative would have no effect on wildlife within the study area, because no construction-related habitat alteration would occur. The majority of the Airport property consists of mowed/maintained and developed land habitats, and wildlife species that have adapted to these types of habitats (e.g., small mammals, several bird species, and reptiles) would benefit from implementation of the Proposed Action because additional mowed/maintained and developed habitats would be created as a result of constructing the three elements of the proposal. However, some of these species pose hazards to aircraft by attracting large raptors, such as redtailed hawks (*Buteo jamaicensis*), red-shouldered hawks (*Buteo lineatus*), and Cooper's hawks (*Accipiter cooperi*) to the airfield that could result in a wildlife strike.

In order to prevent unwanted predatory birds from utilizing the grassed areas as a foraging location, grass seed that is less attractive to small mammals and seed-eating birds would be used in these areas. In addition, the grass in these areas would be maintained at a height that is less attractive to small mammals and grass-dwelling bird species.

There are some migratory bird species, such as cliff swallows (*Petrochelidon pyrrhonota*), barn swallows (*Hirundo rustica*), and eastern phoebes (*Sayornis phoebe*) that typically nest underneath bridges and or within large box culverts, such as the structure that carries Aquatic Resource 4 underneath the airfield. Due to the presence of suitable habitat for these migratory birds, precautions may be implemented in the construction contract to reduce the likelihood that inadvertent adverse impacts to migratory birds would occur.

Although the take of migratory birds resulting from an activity is not prohibited by the Migratory Bird Treaty Act (MBTA) when the underlying purpose of that activity is not to take migratory birds, the U.S. Fish and Wildlife Service (USFWS) recommends that steps be taken to help prevent an incidental take of migratory birds. A list of voluntary mitigation measures that could be implemented by the Airport to prevent an incidental take of migratory birds is provided, below:

- Conduct activities outside of the bird nesting season to avoid the need for active nest relocation or destruction, when appropriate;
- Perform nest surveys prior to conducting clearing activities during the breeding season; and
- If possible, contact a federally-permitted rehabilitator to provide assistance in relocating an active nest.

The USFWS Information for Planning and Consultation System (IPaC System) database lists thirteen migratory bird species of concern potentially occurring within the project study area. The IPaC System list included the following bird species: bald eagle (Haliaeetus leucocephalus), bluewinged warbler (Vermivora pinus), cerulean warbler (Dendroica cerulea), eastern whip-poor-will (Antrostomus vociferus), golden eagle (Aquila chrysaetos), Henslow's sparrow (Ammodramus henslowii), Kentucky warbler (Oporornis formosus), king rail (Rallus elegans), prairie warbler (Dendroica discolor), prothonotary warbler (Protonotaria citrea), red-headed woodpecker (Melanerpes erythrocephalus), rusty blackbird (Euphagus carolinus), and wood thrush (Hylocichla mustelina).

The conversion of mixed pine-hardwood forest habitat to mowed/maintained or developed lands at the Airport would result in minor adverse impacts to some of the species listed above that use forested habitats for nesting and foraging (i.e. cerulean warbler, eastern whip-poor-will, and redheaded woodpecker). The conversion of upland scrub-shrub habitat to mowed/maintained habitat or developed lands at the Airport would result in minor adverse impacts to some of the species listed above that use upland scrub-shrub habitats for foraging (i.e., blue-winged warbler, Kentucky warbler; prothonotary warbler; and wood thrush). However, the creation of additional mowed/maintained habitat or developed lands would benefit the bird species that prefer open areas to forage (i.e., prairie warbler and rusty blackbird). Overall, implementation of the Proposed Action would not have a significant impact on the birds listed on the USFWS list of species of concern.

In the event that an incident occurs that causes harm or injury to any migratory bird species, the contractor shall be required to report the incident immediately to the USFWS – Ecological Services Field Office at (706) 613-9493. The contractor will also be required to contact the GADNR – Wildlife Resources Division (WRD) Nongame Conservation Division at (770) 761-3035.

The 0.42-acre wetland habitat (Aquatic Resource 3) located at the Runway 9 End and the 20.9-acre wetland habitat (Aquatic Resource 5) located northeast of the Runway 27 End provide suitable foraging habitat for both the king rail and the Henslow's sparrow. These wetlands also provide suitable habitat for other birds, small mammals, small reptiles, amphibians, and insects. Aquatic Resource 3 would be concerted to developed land with implementation of the Sponsor-preferred Alternative for the relocation of Taxiway A. That loss, less than two percent of the wetland habitat within the project study area, would represent a minor adverse impact to the wildlife communities that prefer this habitat type.

#### 4.3.5 Threatened and Endangered Species

The Endangered Species Act of 1973, as amended (ESA), requires federal agencies, in consultation with and assisted by the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. In accordance with Section 7(c) of the ESA, current documentation of federally listed threatened and endangered species and designated critical habitats that could potentially occur in the vicinity of the project study area was obtained from the USFWS. The project study area is located completely within Cobb County, Georgia. Therefore, only species and habitats documented to occur in Cobb County were given consideration during the field reconnaissance of the study area.

<sup>&</sup>lt;sup>9</sup> USFWS. *Information for Planning and Consultation System* database review. Accessed on March 22, 2019 at: <a href="https://ecos.fws.gov/ipac/">https://ecos.fws.gov/ipac/</a>.

An official protected species list was obtained from the USFWS on March 22, 2019 via the IPaC database (see **Appendix B**). In addition, the Biodiversity Portal operated and maintained by the GADNR – Wildlife Resources Division (WRD) was also reviewed to determine which federally protected species are known to occur in Cobb County. **Table 4.8** provides a list of the federally protected species known to occur in Cobb County.

A literature search was performed for the federally listed species to determine their habitat requirements and to find descriptions of the species that would facilitate their identification during a field survey. Important sources of reference information included natural resource agency data and published reports, various botanical and faunal literature, and available Recovery Plans.

Table 4.8								
Federa	Federally Protected Species Known to Occur in Cobb County, Georgia							
Scientific name	entific name Common name Status Survey Season							
Amphianthus pusillus	Pool sprite	Threatened	March through April (flowering) or April through May (fruiting)	No	Both			
Etheostoma scotti	Cherokee darter	Threatened	March 1 <sup>st</sup> through November 31 <sup>st</sup>	Yes	Both			
Medionidus penicillatus	Gulf moccasinshell	Endangered	March 1 <sup>st</sup> through November 31 <sup>st</sup>	No	GADNR			
Myotis septentrionalis	Northern long- eared bat	Threatened	March 20 – Sep. 21	Yes	USFWS			
Platanthera integrilabia	White fringeless orchid	Threatened	mid-July through late August (flowering)	No	Both			
Rhus michauxii	Michaux's sumac	Endangered	June through August (flowering) or August through October (fruiting)	No	Both			

#### Sources

USFWS (2019). Information, Planning, and Conservation database review. Accessed on March 22, 2019 at: <a href="https://ecos.fws.gov/ipac/">https://ecos.fws.gov/ipac/</a>. GADNR-WRD (2019). Georgia Rare Species and Natural Community Data. Accessed on March 25, 2019 at: <a href="http://www.georgiawildlife.org/rare\_species\_profiles.">http://www.georgiawildlife.org/rare\_species\_profiles.</a>

#### Protected Species with Potentially Suitable Habitat within the Project Study Area

<u>Pool sprite (Amphianthus pusillus)</u> – This species is federally listed as "threatened." Suitable habitat for pool sprite consists of shallow, flat-bottomed depressions on granite outcrops, with thin, gravel soils and seasonal (winter through spring) inundation. The pools must be located within full sun and deep enough to hold water for several weeks. No granite outcrops containing vernal pools were identified within the project study area; therefore, suitable habitat for pool sprite is not present.

<u>Cherokee darter (Etheostoma scotti)</u> – This species is federally listed as "threatened." It is a small fish, reaching  $1^{7}/_{12}$  to  $2^{7}/_{12}$  inches in length, with a rounded snout, a distinct dark bar beneath the eye, and 7 to 8 dorsal blotches that may fuse with 7 to 8 lateral blotches. Breeding males have an anterior red window and a single broad reddish band in the first dorsal fin, red in the second dorsal fin, and a green-edged anal fin.

Cherokee darters inhabit small to medium-sized streams where they are found in association with gravel and cobble substrate. They may also occur in pools at the head or tail of riffles. This species is intolerant of streams with moderate or thick deposits of silt and sediment. The Cherokee darter can be found in the Etowah River Watershed within the upper Coosa River system. It is known from only about twenty small tributaries to the Etowah River. Noonday Creek / Aquatic Resource 4 was identified as suitable habitat for Cherokee darter; therefore, a protected aquatic species survey was conducted to determine the presence / absence of this federally listed fish. <sup>10</sup>

Gulf moccasinshell (*Medionidus penicillatus*) – This mussel is federally listed as "endangered." The gulf moccasinshell is a small, sculptured, rayed freshwater mussel. <sup>11</sup> It occurs in a wide range of habitats, including sandy areas with slight current, streams and rivers where there is a moderate current and sand and gravel substrates, and in muddy sand substrates around tree roots in medium-sized streams with moderate current." <sup>12</sup> According to the USFWS, this species inhabits channels of medium-sized creeks to large rivers with sand and gravel or silty sand substrates in slow to moderate currents. The historic range of this species includes the ACF River system in Georgia, Florida, and Alabama. This species does not occur within the Etowah River watershed; therefore, no suitable habitat for gulf moccasinshell was identified within the project study area.

Northern long-eared bat (*Myotis septentrionalis*) – This species is a federally threatened bat that has a fur color of medium to dark brown on the back and tawny to pale brown on the underside. <sup>13</sup> This bat is distinguished by its long ears, and when folded alongside the head, the tips of the ears extend past the tip of the nose. This species is medium-sized with a body length of 3 to  $3^2/_3$  inches, the forearm length ranges from  $1^1/_3$  to  $1^1/_2$  inches, the wingspan ranges from 9 to 10 inches, and the weight ranges from  $3^1/_{16}$  to  $3^1/_{16}$  ounce.

This species of bat spends their winter hibernating in caves and mines. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. They are found most often in small crevices or cracks within their hibernacula. During the summer, the bats roost singly or in colonies underneath bark or in cavities or crevices of both live trees and snags. However, males and non-reproductive females may also roost in caves and mines. This species of bat appears to choose roost trees based on suitability to retain bark or provide cavities or crevices. A Habitat Suitability Assessment Study was conducted on March 26, 2019 to determine the presence / absence of suitable habitat for northern long-eared bat within the project study area. The mixed pine-hardwood and bottomland hardwood forest habitats were considered to provide potentially important roosting, foraging, and commuting habitat for northern long-eared bats. In addition, the mowed/maintained, scrub/shrub, developed lands, and open water habitats were determined to provide suitable foraging and commuting habitat for northern long-eared bats.

White fringeless orchid (*Platanthera integrilabia*) – This plant is federally listed as "threatened." It is a slender, erect, white-flowered perennial orchid reaching a height of approximately 24

<sup>&</sup>lt;sup>10</sup> Edwards-Pitman Environmental, Inc. (2019). Protected Aquatic Species Survey Report, Cobb County: Cobb County International Airport – Master Plan Improvement Projects. March 2019.

<sup>&</sup>lt;sup>11</sup> NatureServe Explorer (March 2018). Accessed on 3/25/19 at: <u>www.natureserve.org</u>.

<sup>12</sup> Ihid

<sup>&</sup>lt;sup>13</sup> USFWS – Midwest Region (October 29, 2018). Endangered Species – Northern Long-Eared Bat (*Myotis septentrionalis*). Accessed on March 25, 2019 at: <a href="https://www.fws.gov/Midwest/endangered/mammals/nleb/index.html">https://www.fws.gov/Midwest/endangered/mammals/nleb/index.html</a>.

<sup>&</sup>lt;sup>14</sup> Ecological Solutions, Inc. (2019). Habitat Assessment Survey Report for Northern Long-eared bat (*Myotis septentrionalis*). Master Plan Improvement Projects, Cobb County International Airport – McCollum Field. March 2019.

inches.  $^{15}$  The inflorescence is a terminal spike with up to 20 white, long-spurred flowers. This plant blooms from mid-July through late August.

The white fringeless orchid is generally found in wet, flat, boggy areas at the head of streams or seepage slopes. It is often found in association with *Sphagnum* species and cinnamon fern (*Osmunda cinnamomea*), netted chain fern (*Woodwardia areolata*), and New York fern (*Thelypteris noveboracensis*), in acidic muck or sand, and in partially, but not fully shaded areas. The range of white fringeless orchid in Georgia includes the Blue Ridge Province. Aquatic Resource 3 and Aquatic Resource 5 are wetlands located adjacent to streams; however, none of the typical associate species (e.g., cinnamon fern, netted chain fern, or New York fern) were identified within the wetland. Therefore, this wetland is not considered suitable habitat for white fringeless orchid, and no suitable habitat is present.

Michaux's sumac (*Rhus michauxii*) – is federally listed as "endangered." It is a colonial shrub with erect stems approximately 1 to 3 feet tall. <sup>16</sup> The leaves are deciduous, alternate, compound with 9 to 13 leaflets on a reddish leaf stalk. The leaf stalk is winged between the second and third uppermost pairs of leaflets. The leaflets are 1½ to 3½ inches long, oval to oblong, sharply toothed, and mostly opposite. Female and male flower are on separate plants. The flowers are arranged in a dense, tightly branched cluster at the top of the stem. The flowers have four to five, greenish-yellow petals, and the fruit is less than ¼ long, dark red, arranged in dense clusters. All parts of this plant are densely hairy.

Michaux's sumac is shade-intolerant and inhabits sandy or rocky open woods, highway rights-of-way, roadsides, or the edges of artificially maintained clearings; it appears to survive best in areas where some form of disturbance has provided an open area. <sup>17</sup> This species is endemic to the coastal plain and piedmont of Virginia, North Carolina, South Carolina, Georgia, and Florida. Surveys for Michaux's sumac are best conducted during flowering (June through August) or during fruiting (August through October); however, the hairy stems are identifiable year-round.

The project study area contains disturbed grassed habitats that are mowed on a regular basis, as well as scrub shrub habitats at two locations on the airfield. However, the level of mowing activity within the grassed habitats is so high that it prevents shrub species like Michaux's sumac from recruiting these areas. The scrub/shrub habitat located just north of the Runway 27 End is so densely covered with *Lespedeza cuneate* that no other plants can recruit the area. No individual Michaux's sumac plants were observed within the scrub/shrub habitat located to the south of the Runway 27 End.

#### **Biological Effect Determinations**

No granite outcrops containing vernal pools were identified within the project study area; therefore, there is no suitable habitat for this species present. Gulf moccasinshell is not known to occur within the Etowah River Watershed; therefore, there is no suitable habitat for this species present within the project study area. Due to the lack of suitable habitat, it is recommended that implementation of the Proposed Action would have **no effect** on pool sprite or gulf moccasinshell.

<sup>&</sup>lt;sup>15</sup> NatureServe Explorer (March 2018). "An Online Encyclopedia of Life." Accessed on March 25, 2019 at: <a href="https://www.natureserve.org">www.natureserve.org</a>.

<sup>&</sup>lt;sup>16</sup> GADNR-WRD (2019). Rare species profile – Michaux's sumac (*Rhus michauxii*). Accessed on March 25, 2019 at: <a href="https://georgiabiodiversity.org/natels/general-info.html">https://georgiabiodiversity.org/natels/general-info.html</a>.

<sup>&</sup>lt;sup>17</sup> USFWS – Raleigh Ecological Field Office (Last updated: 8/24/17). Michaux's sumac species profile. Accessed on March 25, 2019 at: <a href="https://www.fws.gov/raleigh/species/es\_michauxs\_sumac.html">https://www.fws.gov/raleigh/species/es\_michauxs\_sumac.html</a>.

A protected aquatic species survey was conducted to determine the presence / absence of Cherokee darter within the project study area. Although no individual species were identified during the survey, Aquatic Resource 4 / Noonday Creek is considered suitable habitat for this species. As a result, it is recommended that implementation of the Proposed Action may affect, but is not likely adversely affect the Cherokee darter.

Based on the results of the Habitat Suitability Assessment Study, it was determined that there is suitable roosting, foraging, and commuting habitats for northern long-eared bat present within the project study area.

Implementation of the Taxiway 'A' element of the Proposed Action would result in the clearing of 0.42 acre of bottomland hardwood forest habitat that is classified as suitable roosting habitat for the northern long-eared bat. Implementation of the Taxiway 'B' relocation element of the Proposed Action would result in the clearing of 4.10 acres of mixed pine-hardwood forest habitat that is also classified as suitable roosting habitat for this species. Because these habitats are considered suitable roosting habitat for this species, seasonal clearing restrictions are recommended at the Airport. For the protection of foraging, roosting, and flyway habitat, tree clearing activities at the Airport should be restricted from April 1st through October 15th, which is the normal season for bats in Georgia. Due to the anticipated impacts to suitable northern long-eared bat habitat, it is recommended that implementation of the Proposed Action may affect, but is not likely adversely affect this species.

Aquatic Resources 3 and 5 are located adjacent to streams; however, none of the plant species associated with white fringeless orchid were observed during the field investigation. As a result, these resources were not considered suitable habitat for this species. Due to the lack of suitable habitat within the project study area, it is recommended that implementation of the Proposed Action would have **no effect** on white fringeless orchid.

The project study area contains disturbed habitats considered suitable for Michaux's sumac. The grassed habitats are mowed so often that recruitment of this shrub species is not likely. The two areas of scrub/shrub habitat were surveyed for Michaux's sumac as part of the field investigation. The habitat located north of the Runway 27 End is covered with a dense monoculture of *Lespedeza cuneate*, which does not allow other species to recruit the area. The habitat to the south of the Runway 27 End was surveyed for Michaux's sumac and no individual plants were observed. Based on the presence of suitable habitat and results of the field investigation for Michaux's sumac, it is recommended that implementation of the Proposed Action may affect, but is not likely adversely affect this species.

# 4.3.6 Indirect and Cumulative Impacts on Plants, Fish, Wildlife, and Threatened and Endangered Species

Selection of the No-Action Alternative would not result in changes to the existing conditions at the Airport; therefore, it would have no indirect or cumulative impacts on plant communities, fish communities, wildlife, or threatened and endangered species. Implementation of the Sponsor-Preferred Alternatives that comprise the Proposed Action would not result in indirect impacts to plant communities and threatened species habitat because no future projects directly associated with any of the three elements of the Proposed Action are planned in areas that include those

habitats. However, implementation of the Proposed Action would result in cumulative impacts on plant communities.

Past projects at the Airport between 2000 and 2017 have not resulted in clearing impacts to forested habitats. Implementation of the Proposed Action would result in the clearing of approximately 4.52 acres of forested habitats (0.42 acre of bottomland hardwood forest and 4.10 acres of mixed pine-hardwood forest). As a result, the total cumulative impacts on forested habitat (mixed pine-hardwood and bottomland hardwood) would total approximately 4.52 acres.

Implementation of the Proposed Action would also result in cumulative impacts on fish communities, because Aquatic Resource 4 is known to support aquatic species. The box culvert installation project in the year 2000 resulted in approximately 1,185 lf of permanent impacts to the stream. Implementation of the Proposed Action would result in an additional 228 lf of impacts to the stream as a result of the Taxiway 'A' and Taxiway 'B' relocations; therefore, cumulative impacts to Aquatic Resource 4 would total approximately 1,413 lf.

Implementation of the Proposed Action and reasonably foreseeable future actions on the Airport property would also result in cumulative impacts on threatened species habitat. There are no future projects programmed for the Airport within the 3-year planning period of this EA. As mentioned above, the total cumulative impacts on forested habitats (mixed pine-hardwood and bottomland hardwood) on the Airport property would total approximately 4.52 acres. Therefore, cumulative impacts to suitable northern long-eared bat habitat would also total 4.52 acres.

#### 4.4 CLIMATE

Executive Order (EO) 13514 (74 FR 52117, October 8, 2009) made it the policy of the U.S. that federal agencies "... measure, report, and reduce their GHG emissions from direct and indirect activities." This EO has been revoked. Executive Order 13653 (78 FR 66817, November 6, 2013) builds on EO 13514 and establishes "... direction for federal agencies on how to improve on climate preparedness and reliance strategies." EO 13693 (80 FR 15869) reaffirms the policy of the United States that federal agencies measures, report, and reduce their GHG emissions from direct and indirect activities; sets sustainability goals for all agencies to promote energy conservation, efficiency, and management while reducing energy consumption and GHG emissions; and builds on the adaption and resiliency goals in EO 13653 to ensure agency operations and facilities prepare for the impacts of climate change.

Research has shown that there is a direct correlation between fuel combustion and greenhouse gas (GHG) emissions. The International Energy Agency estimates that GHG emissions from aircraft account for approximately 1.5 percent of all anthropogenic GHG emissions globally. The effect of GHG emissions on climate change is a global concern; therefore, the effects of a proposed action on climate change must be evaluated on a global scale.

Implementation of the Proposed Action would not result in a change in aircraft fleet mix or an increase in aircraft operations at the Airport when compared with the No-Action Alternative. However, for the Build alternative, aircraft taxi times were adjusted to reflect the relocation of the Taxiways 'A' and 'B' (**Table 4.9**). Airport operational emissions sources other than aircraft (i.e.,

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<sup>&</sup>lt;sup>18</sup> International Energy Agency (2008). *Intergovernmental Panel on Climate Change 2007*; Kim, Fleming et al. 2007.

auxiliary power units, ground service equipment and motor vehicles) were not considered in the analysis as these source emissions would not change as a result of the proposed improvements.

Table 4.9 Derived Total Aircraft Taxi Times (minutes)							
Scenario Delay Time (taxiing-in) Travel Time Total Taxi-in Total Taxi-out  (taxiing-out) Time Time							
No Build	0.30	2.14	3.33	2.44	3.63		
Build 0.30 2.10 3.29 2.40 3.59							
Source: USDOT	FAA Advisory Circ	ular (AC) Report No.	150/5060-5, Airport	Capacity and Delay,	September 9, 1983.		

Based on the results of the taxiing time analysis, implementation of the Proposed Action would result in a reduction in both taxi-in and taxi-out times. Therefore, it is estimated that GHG emissions created by taxiing aircraft would be reduced as a result of the two taxiway relocation projects. As discussed in **Section 4.2**, **Air Quality**, both the construction and operational emissions for the Proposed Action are well below the *de minimis* thresholds for the six criteria pollutants. Therefore, it is anticipated that implementation of the Proposed Action would have a minimal impact on GHG emissions when compared to the No-Action Alternative.

There are no significance thresholds for aviation GHG emissions, nor has the FAA identified specific factors to consider in making a significance determination for GHG emissions. <sup>19</sup> There are currently no accepted methods of determining significance applicable to aviation projects given the small percentage of emissions they contribute.

CEQ has noted that "it is not currently useful for the NEPA analysis to attempt to link specific climatological changes, or the environmental impacts thereof, to the particular project or emissions, as such direct linkage is difficult to isolate and to understand."<sup>20</sup> Accordingly, it is not useful to attempt to determine the significance of such impacts. There is a considerable amount of ongoing scientific research to improve understanding of global climate change and FAA guidance will evolve as the science matures or if new Federal requirements are established.

#### 4.5 COASTAL RESOURCES

Cobb County is not one of the eleven counties located within the coastal zone of Georgia. Therefore, neither selection of either the No-Action Alternatives nor implementation of one or more elements of the Proposed Action would result in any direct, indirect, or cumulative impacts to coastal resources under the applicable state coastal management programs, which are the Coastal Zone Management Act of 1972, the Coastal Barrier Resources Act of 1982, or the Coastal Barrier Improvement Act of 1990. 21,22

<sup>&</sup>lt;sup>19</sup> FAA (2015). 1050.1F Desk Reference. July 2015.

<sup>&</sup>lt;sup>20</sup> CEQ (2010). Draft Guidance, Consideration of the Effects of Climate Change and Greenhouse Gas Emissions, 75 FR 8046. February 23, 2010.

<sup>&</sup>lt;sup>21</sup> 16 U.S.C.§ 1456(c)

<sup>&</sup>lt;sup>22</sup> USFWS (2018) Coastal Barrier Resources System. April 16, 2018.

## 4.6 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f)

Section 4(f) of the U.S. Department of Transportation (DOT) Act of 1966 protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites. There is one public park, Aviation Park, within the Airport property and located at the easternmost boundary of the Airport property (**Figure 4.3**). The 3-acre park was constructed as part of the Town Center Community Alliance and provides the following amenities:

- An aviation-themed playground with an air traffic control tower themed restroom building and airplane wing picnic pavilion;
- Open green space, landscaping and lighting, and public art display areas;
- A Town Center Bike Share station; and
- A dog water bowl.

There are no other Section 4(f)-protected resources located within or adjacent to the Airport property. With selection of the No-Action Alternative, the Airport would remain in its present condition, and no construction activities would occur that would adversely impact Aviation Park. Therefore, selection of this alternative would not result in direct, indirect, or cumulative impacts on properties protected under Section 4(f) of the DOT Act.

Implementation of the Proposed Action also would not result in adverse impacts to Aviation Park. Therefore, no direct impacts to Section 4(f)-protected properties would occur as a result of the three projects associated with the Proposed Action. Because there would be no direct impacts, there also would be no indirect or cumulative impacts to Section 4(f) properties.

#### 4.7 FARMLANDS

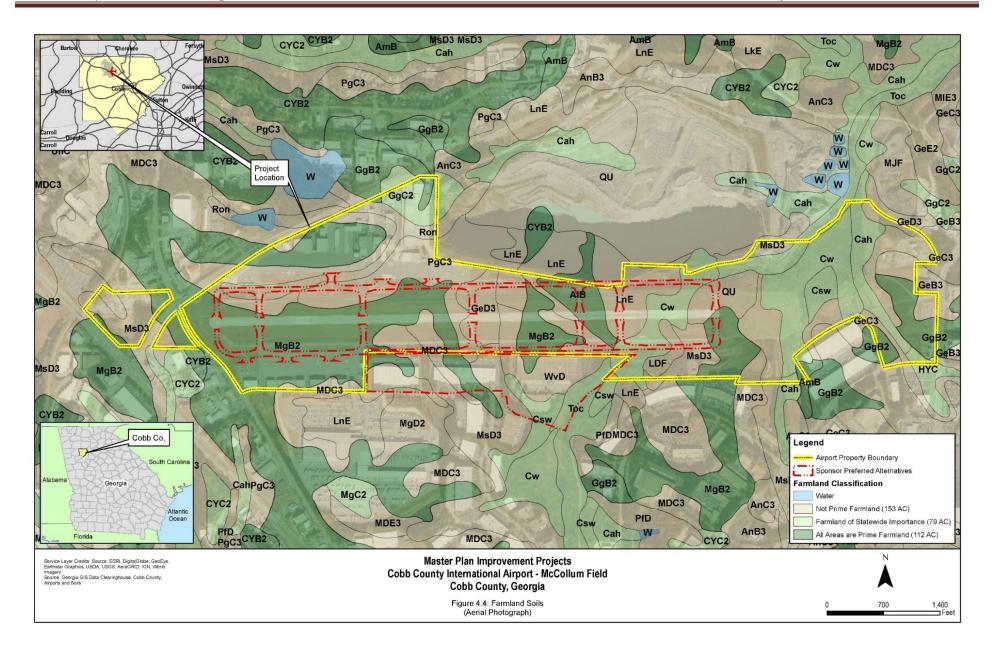
The Farmland Protection Policy Act (FPPA) is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses.<sup>23</sup> It encourages alternative actions in order to lessen adverse effects on farmland. It also assures that federal programs are operated in a manner that is compatible with state, local governments, and private programs that protect farmland.

No direct impacts to farmland would occur with selection of the No-Action Alternative, because there would be no change from the current conditions at the Airport. Therefore, there also would be no adverse indirect or cumulative impacts to farmlands as a result of selection of the No-Action Alternative.

The project study area contains approximately 112 acres of soils classified as prime farmland and approximately 79 acres of soils classified as farmland of statewide importance (**Figure 4.4**). Although the project study area contains 191 acres of farmland soils, implementation of the Proposed Action would not result in impacts to farmland protected by the FPPA as none of the property is currently being used for agricultural purposes. Therefore, no direct, indirect, or cumulative impacts on farmland would occur as a result of implementation of the Proposed Action.

<sup>&</sup>lt;sup>23</sup> USDA (2012). Farmland Protection Policy Act Manual. August 2012. Accessed on March 25, 2019.





#### 4.8 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

#### 4.8.1 Hazardous Materials

Hazardous materials are those substances defined by the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act, and those substances defined by the Toxic Substances Control Act. In general, hazardous materials include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may present substantial danger to public health or welfare, or to the environment, when released or otherwise improperly managed.<sup>24</sup>

A review of regulatory database records was performed to identify known or potential hazardous materials sites, hazardous waste generators, and hazardous materials users associated with the project study area. These environmental databases contain information about hazardous sites from multiple federal and state regulating agencies, including the U.S. EPA and the GADNR-EPD (**Appendix D – Hazardous Materials Report**). The database search identified twenty-two hazardous materials sites and hazardous waste sites within a 1-mile radius of the Airport (**Figure 4.5; Table 4.10; Exhibit D**). The Airport is listed in the database review as Map ID# A.

There has been one hazardous materials incident at the Airport since 1991. There have been six other confirmed releases at various facilities located within a 1-mile radius of the Airport property. Each of these incidents received a "No Further Action" (NFA) Required statement from the GADNR-EPD; therefore, each incident is considered closed by the enforcement regulatory agency (see **Appendix D**).

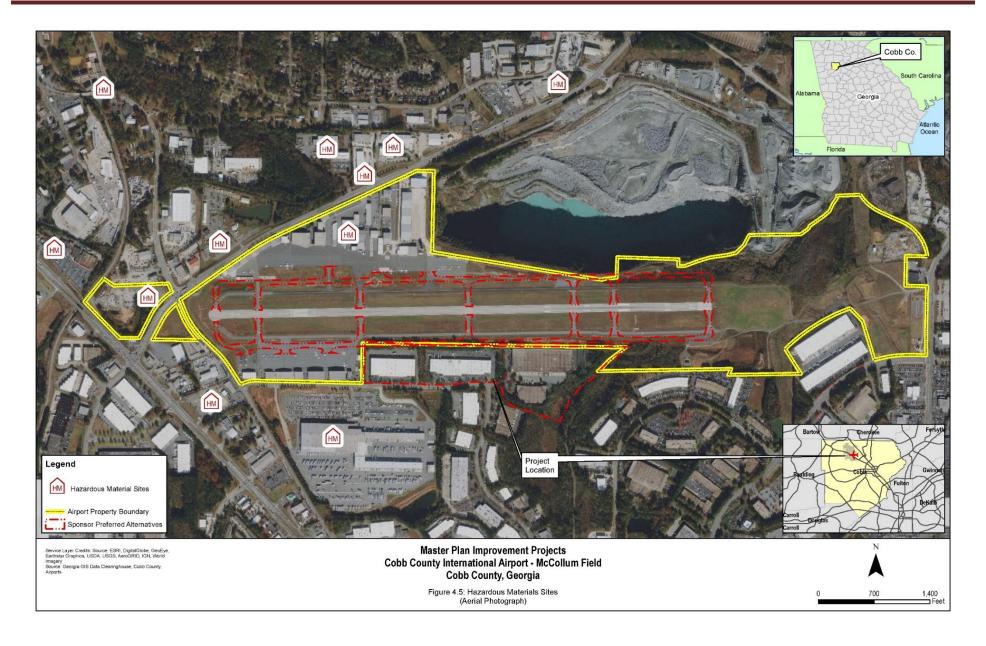
The Airport property contains five Aboveground Storage Tanks (ASTs). Three of the tanks are located on the north apron near the ATCT, and two of the tanks are located on the existing south apron. The Airport provides both Avgas 100 LL aviation fuel as well as Jet A fuel. As mentioned previously, there has been only one confirmed release of fuel at RYY that occurred on 3/11/94. The incident involved a release of approximately 20 gallons of fuel that escaped containment; however, no additional information regarding this incident was available in the database review report (see **Appendix D**).

Selection of the No-Action Alternative would not result in any changes to the Airport that could potentially lead to direct, indirect, or cumulative impacts to hazardous materials sites. None of the five ASTs containing hazardous materials that are located on the Airport property would be affected as a result of implementation of the Proposed Action. Therefore, no direct or cumulative impacts to hazardous materials sites would occur as a result of the Proposed Action. Implementation of the Proposed Action also would not result in indirect impacts to hazardous materials sites because there are no future planned project associated with any of the three elements of the Proposed Action that contain hazardous materials.

#### 4.8.2 Solid Waste

The potential for the generation of solid waste was examined for the No-Action Alternatives and the three elements that comprise the Proposed Action. The areas of concern include potential long-term generation of solid waste from Airport operations; potential temporary generation of solid waste from construction activities; potential operation of runway facilities adjacent to active landfills that accept putrifiable waste where a bird-strike hazard may be present; and the Airport's ability to comply with FAA Order 5200.5A, "Waste Disposal Sites on or near Airports."

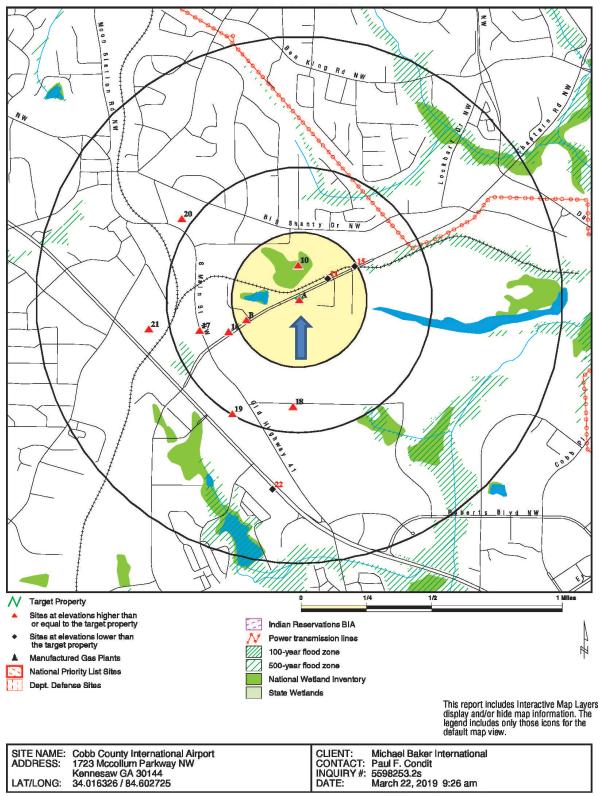
<sup>&</sup>lt;sup>24</sup> Resource Conservation and Recovery Act (RCRA) Subtitle C, 40CFR Part 251.



**TABLE 4.10** Potential Hazardous Materials Sites in the Vicinity of the Airport

Map ID <sup>(1)</sup>	Site Name	Events	Distance / Direction (miles)
A1 & A8	Big Shanty Aviation, Inc.	Release: 10/24/95 No Further Action (NFA): 1/25/96	0.0
A2, A6, A7, & A9	Cobb County Airport	Release: 3/11/94 NFA: not reported	0.0
A3	ARFF Fire Station 31	None	0.0
A4 & A5	Gem City Aviation, Inc.	None	0.0
10	Consolidated Engineering	None	0.125 mile north
11	Aeros Engines	None	0.128 mile northeast
B12	Kennesaw Readiness Center and field Maintenance	None	0.209 mile west- southwest
B13 & B14	Georgia Air National Guard	Release: 6/8/04 NFA: 9/1/04	0.209 mile west- southwest
15	Guardian Industrial Services, Inc.	None	0.241 mile east- northeast
16	Thomas M Anderson Trucking Company	Release: 8/5/9 NFA: 2/7/97	0.289 mile west- southwest
17	Hugh L. Smith	None	0.391 mile west- southwest
18	FedEx Ground	Release: 10/8/15 NFA: 10/15/15 Release 4/6/11 NFA: 6/14/11	0.401 mile south
19	Tidwell Jim Ford, Inc.	Release: 12/13/93 NFA: 4/18/94	0.497 mile south- southwest
20	Sardis Road Creosote Site	None	0.538 mile northwest
21	Plaza Cleaners	None	0.578 mile west
22	Pavilion Cleaners (former)	None	0.723 mile south

(1) Map IDs listed are shown on **Exhibit D**.



**Exhibit D Hazardous Materials Site Locations** (Source: EDR 2019)

According to FAA Order 5200.5A, waste disposal sites that have the potential to attract birds are considered incompatible if they are located within 10,000 lf of a runway that is being used (or is planned to be used) by turbine-powered aircraft, or that are located within a 5-mile radius of a runway that attracts or sustains hazardous bird movements into or across the runways and/or approach and departure patterns of aircraft.

There would be no development on the Airport associated with the No-Action alternatives. No construction activities would occur, and therefore no demolition debris would be generated. Selection of the No-Action Alternatives would not result in adverse direct, indirect, or cumulative impacts regarding the generation of solid waste.

All earthwork materials (soil) would be expected to remain onsite. Any trees removed would be made available for recycling by a third party for a use such as lumber or firewood, and other vegetation that would be removed during construction would be mulched and recycled or disposed of at the nearest landfill. Construction of any or all of the three elements of the Proposed Action would result in the generation of waste in the form of construction debris; however, all of the waste would be disposed of at a facility that accepts commercial and industrial waste.

The nearest landfill located in the vicinity of the Airport property is the Dixie Landfill, which is approximately 27,652 lf (5.24 miles) northeast of the Airport property. As a result, implementation of the Proposed Action would not result in an encroachment on the 10,000-foot buffer between the Airport and the Dixie Landfill. No indirect or cumulative impacts in the form of the generation of solid waste would be anticipated for future projects within the planning period of this EA.

#### 4.8.3 Pollution Prevention

Selection of the No-Action Alternative would not result in any changes to the existing conditions at the Airport; therefore, there would be no need to update the current Stormwater Pollution Prevention Plan (SWPPP). Selection of this alternative also would not result in indirect or cumulative impacts that would affect pollution prevention at the Airport or developments adjacent to the Airport. Implementation of the Proposed Action would result in the need for the Airport to update its current SWPPP in order to account for the additional impervious surface on the property.

## 4.9 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

The National Historic Preservation Act of 1966 (NHPA) mandates that districts, sites, buildings, structures, and objects that are significant to American history, architecture, archaeology, engineering, and culture be cataloged on the National Register of Historic Properties (NRHP).<sup>25</sup> Section 106 of the NHPA, *Protection of Historic and Cultural Resources*, requires federal agencies to consider the effects of their actions on resources listed on the NRHP, as well as on resources that are determined to be eligible for listing on the NRHP.

Historic architectural and archaeological resources, such as houses, churches, monuments, and cemeteries, as well as prehistoric sites, are to be avoided wherever possible when constructing or performing improvements at airports. Resources identified during the planning or construction of a project must be evaluated to determine whether they are listed on or are potentially eligible for listing on the NRHP.

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<sup>&</sup>lt;sup>25</sup> National Park Service (2019). National Register of Historic Places. Access on March 28, 2019 at: <a href="https://www.nps.gov/subjects/nationalregister/index.htm">https://www.nps.gov/subjects/nationalregister/index.htm</a>.

As defined in 36 CFR Part 800.16(d), the APE is defined as "... the geographical area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist." Based on this definition and on the nature and scope of the Proposed Action, the APE was defined as all properties physically affected by project implementation, all properties visible from the project area, and locations where the Proposed Action may alter or disturb surface and subsurface soils that contain, or may contain, archaeological sites.

Brockington and Associates, Inc. conducted a Phase I survey of the Area of Potential Effects (APE) for the Proposed Action from December 17, 2018 to December 18, 2018.<sup>26</sup> The background research identified 35 previously recorded archaeological sites within 0.6 mile of the APE or within one kilometer of the APE. Four of these sites are located on Airport property, three of which are within the APE of the Proposed Action.

#### 4.9.1 Historic Architectural Resources

The APE was surveyed for historic architectural resources (**Appendix E – Phase I Cultural Resources Survey Report**). The field survey consisted of a pedestrian inspection of the APE. The architectural resources field survey found no historic architectural resources in the project area. The field survey found that the project viewshed consists of non-historic commercial and industrial developments; therefore, there were no unrecorded resources over 50 years old in the APE.

Selection of the No-Action alternatives would not result in adverse impacts to historic architectural resources because there would be no changes in the current conditions at the Airport. There are no NRHP-eligible historic architectural resources located within the APE; therefore, it is recommended that implementation of the Proposed Action would have no direct or cumulative impacts on historic architectural resources. Furthermore, since there are no NRHP-listed or eligible historic sites in the vicinity of the Airport property, it is anticipated that implementation of any or all elements comprising the Proposed Action also would have no indirect adverse impacts on historic properties.

#### 4.9.2 Archaeological Resources

The APE was surveyed for archaeological resources (see **Appendix E**). The archaeological field survey consisted of a pedestrian inspection and systematic and judgmental shovel testing. Shovel testing took place in less disturbed sections but were not excavated on steeply sloping terrain (greater than 20 percent), in standing water, in extremely wet areas, in areas that have been highly disturbed (i.e., excavated by heavy equipment), or where subsoils are present on the surface.

Most of the APE consists of disturbed soils from previous Airport construction projects; therefore, the majority of the APE did not require shovel testing. However, judgmental shovel testing was conducted in the proposed Southside Basing Area, on a low terrace above Noonday Creek.<sup>27</sup> Judgmental shovel testing was also performed at the previous locations of archaeological Sites 9CO312 and 9CO913; however, no artifacts were recovered from either site.<sup>28</sup>

<sup>&</sup>lt;sup>26</sup> Brockington & Associates, Inc. (2019). Phase I Cultural Resources Survey, Cobb County International Airport – McCollum Field. Master Plan Improvement Areas. March 2019.

<sup>&</sup>lt;sup>27</sup> *Ibid*.

<sup>&</sup>lt;sup>28</sup> *Ibid*.

Selection of the No-Action alternatives would not result in impacts to archaeological resources because there would be no changes in the current conditions at the Airport. There are no NRHP-eligible archaeological sites located within the APE; therefore, it is recommended that implementation of any or all elements comprising the Proposed Action would have no direct or cumulative impacts on archaeological resources. Furthermore, since there are no future planned projects associated with any of the three elements of the Proposed Action, it is anticipated that implementation of the Proposed Action also would have no indirect adverse impacts on archaeological resources.

#### 4.10 LAND USE

Selection of the No-Action Alternatives would not result in direct, indirect, or cumulative adverse impacts on compatible land use in the vicinity of the Airport property because the existing land uses on the Airport property would not change. Relocation of Taxiway A and/or Taxiway B would result in the conversion of undeveloped land within the Airport property to transportation use, and construction of the Southside Basing Area would require the acquisition of adjacent light industrial parcels and their conversion to transportation use. These land use changes would not be considered adverse because the new uses would remain compatible with the current and future land use plans of Cobb County (see **Chapter 3**, **Exhibits B and C**).

Implementation of the Proposed Action would not result in indirect impacts on land use because there are no future planned projects associated with any of the three elements of the Proposed Action.

#### 4.11 NATURAL RESOURCES AND ENERGY SUPPLY

In accordance with FAA guidelines, the EA must evaluate potential changes in energy requirements and the use of consumable natural resources at the Airport for the proposed construction activities. Energy supply requirements typically fall into two categories: those that relate to changing demand from stationary facilities (e.g., major airfield lighting and terminal building heating demands) that might exceed local supplies or capacities; and those involving the increased movement of air and ground vehicles to the extent that demand exceeds energy supplies. An evaluation of potential impacts on natural resources includes considerations such as the local availability of construction materials and the use of scarce or unusual consumable natural resources for construction of the proposed project.

Selection of the No-Action alternatives would not result in any changes to the existing condition of the Airport property. Therefore, there would be no direct, indirect, or cumulative impacts related to natural resources and/or the local energy supply.

Energy supply requirements associated with the Proposed Action would be associated with energy demand from additional lighting on the relocated taxiways. The amount of additional lighting would be anticipated to be minimal with the Sponsor-preferred alternatives, and it would not be expected to exceed available local or regional supplies or capacities. The demand for additional petroleum-based fuels and paving materials needed for construction and operation of the Proposed Action also would not represent a significant increase in demand when compared to the No-Action alternatives. No indirect or cumulative impacts on natural resources or energy supplies would be associated within the Proposed Action because there are no future planned projects associated with any of the three elements that comprise the Proposed Action.

#### 4.12 NOISE AND NOISE-COMPATIBLE LAND USE

#### 4.12.1 Introduction

Noise is defined as "... a sound that lacks agreeable musical quality or is noticeable unpleasant." <sup>29</sup> The FAA has a national policy that airports be constructed and operated to minimize current and future noise impacts on surrounding communities.<sup>30</sup>

## **4.12.2** Construction Noise Impacts

The extent of noise from construction activity is defined as the limit where noise from construction equipment is indistinguishable from noise or sound generated by the baseline conditions, either background (such as roadway traffic or ambient conditions, whichever is loudest).<sup>31</sup> Selection of the No-Action alternatives would not result in any changes to the existing condition of the Airport property or adjacent parcels; therefore, no construction-related noise would be generated with selection of these alternatives. There are no noise sensitive receptors in the vicinity of any elements of the Proposed Action, because the area consists of commercial and industrial land uses that are compatible with the Airport. The area is also highly developed, and the ambient noise levels caused by surface and air traffic are high enough that any noise generated as a result of construction activities for the Proposed Action would not result in impacts to properties in the area.

### 4.12.3 Airside Noise Impacts

Selection of the No-Action alternatives would not result in any changes to the existing conditions of the Airport; therefore, air traffic generated noise levels would not change as a result of selection of this alternative. Implementation of any or all elements of the Proposed Action would result in a change in the noise environment as the trend in aircraft usage moves from a C-II facility to a D-III facility. As the types of aircraft arriving and departing from RYY changes over time, so do the Day-Night Average Sound Levels (DNL) in the vicinity of the Airport.

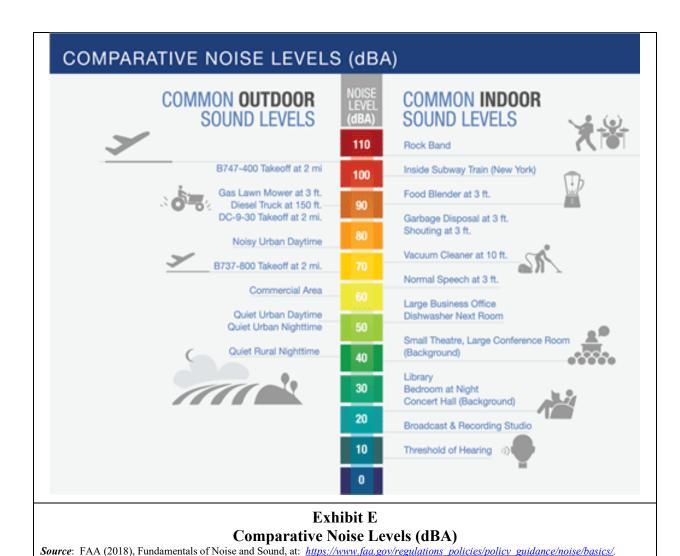
DNL is a 24-hour logarithmic average sound level expressed in decibels on the A-weighted scale, which is a scale that simulates the human perception of sound. An annual average of DNL is used by the FAA to describe exposure to airport noise. Nighttime operations (between 10:00 PM and 7:00 AM) are attributed a 10-decibel penalty (two times as loud) within the DNL calculation. The cumulative noise exposure levels at various reference points are then plotted to create noise exposure contours. These noise contours are then used to determine areas in the vicinity of the Airport that are adversely affected by noise generated by aircraft operating at the facility. The FAA establishes guidelines for evaluating various land uses inside airport noise contours. Various noise-producing activities are keyed to DNL values (Exhibit E).

These guidelines reflect statistical variability of the large groups of people to noise exposure, and a specific noise level may not accurately assess one individual's perception of a noise generator. All land uses are considered compatible with noise levels less than 65 DNL (Table 4.11). Areas of residential development, mobile homes, or transient housing are considered impacted if they are located within the 65 DNL contour.

<sup>&</sup>lt;sup>29</sup> Merriam-Webster Online Dictionary (2019). Accessed on March 28, 2019 at: https://www.merriamwebster.com/dictionary/noise.

<sup>&</sup>lt;sup>30</sup> 14 CFR Part 150.

<sup>&</sup>lt;sup>31</sup> Washington State Department of Transportation (2015). Biological Assessment Preparation, Advanced Training Manual, Version 02-2015. Chapter 7.0 – Construction Noise Assessment.



#### **Table 4.11 FAA Land Use Compatibility Guidelines** Yearly Day-Night Average Sound Level (DNL) in A-weighted decibels Land Use Type **Residential Use** Below 65 65-70 70-75 75-80 80-85 Over 85 Residential, other than mobile homes $N^{(1)}$ $N^{(1)}$ Y N N N and transient lodgings Y Mobile home parks N N N N N Y $N^{(1)}$ N<sup>(1)</sup> $N^{(1)}$ Transient lodgings N N 65-70 Below 65 70-75 75-80 80-85 Over 85 **Public Use** $N^{(1)}$ Schools $N^{(1)}$ Y N N N Y Hospitals and nursing homes 25 30 N N N Churches; auditoriums; concert halls Y 25 30 N N N Y Governmental services Y 25 30 N N $\overline{Y^{(2)}}$ $\overline{Y^{(3)}}$ $\overline{Y^{(4)}}$ $Y^{(4)}$ Y Y Transportation $Y^{\overline{(2)}}$ $\overline{Y^{(4)}}$ Y<sup>(3)</sup> Parking

	Table 4.11 (cont	inued)				
Land Use Type	Yearly Day-Night Av	erage Sou	nd Level	(DNL), A	-weighte	d decibels
Commercial Use	Below 65	65-70	70-75	75-80	80-85	Over 85
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail	Y	Y	Y <sup>(2)</sup>	$Y^{(3)}$	$Y^{(4)}$	N
Retail trade	Y	Y	25	30	N	N
Utilities	Y	Y	Y <sup>(2)</sup>	$Y^{(3)}$	$Y^{(4)}$	N
Communications	Y	Y	25	30	N	N
Manufacturing & Production Use	Below 65	65-70	70-75	75-80	80-85	Over 85
Manufacturing	Y	Y	Y <sup>(2)</sup>	$Y^{(3)}$	$Y^{(4)}$	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture	Y	Y <sup>(6)</sup>	$Y^{(7)}$	Y <sup>(8)</sup>	Y <sup>(8)</sup>	Y <sup>(8)</sup>
Livestock farming and breeding	Y	Y <sup>(6)</sup>	$Y^{(7)}$	N	N	N
Mining and fishing	Y	Y	Y	Y	Y	Y
Recreational Use	Below 65	65-70	70-75	75-80	80-85	Over 85
Outdoor sports	Y	Y <sup>(5)</sup>	Y <sup>(5)</sup>	N	N	N
Outdoor music amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusement parks; resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables, and water recreation	Y	Y	25	30	N	N

Source: 14 CFR Part 150. Appendix A, Table 1.

#### Kev:

Y = Land use and related structure are compatible without restrictions.

N = Land use and related structures are not compatible and should be prohibited.

25 or 30 = Land use and related structures are generally compatible; measures to achieve a noise level reduction of 25 or 30 dBA must be incorporated in the design and construction of the structure.

#### Notes:

- (1) In circumstances where the residential or school use must be allowed, measures to achieve outdoor to indoor noise level reduction of at least 25 dBA and 30 dBA should be incorporated into the building codes.
- (2) Measures to achieve noise level reduction of 25 dBA must be incorporated into the design and construction of the portions of the buildings where the public is received, office areas, noise sensitive areas, or where normal noise levels are low.
- (3) Measures to achieve noise level reduction of 30 dBA must be incorporated into the design and construction of the portions of the buildings where the public is received, office areas, noise sensitive areas, or where normal noise levels are low.
- (4) Measures to achieve noise level reduction of 35 dBA must be incorporated into the design and construction of the portions of the buildings where the public is received, office areas, noise sensitive areas, or where normal noise levels are low.
- (5) Land use is compatible provided that special sound reinforcement systems are installed.
- (6) Residential buildings require noise level reduction of 25 dBA.
- (7) Residential buildings require noise level reduction of 30 dBA.
- (8) Residential buildings are not permitted.

Other noise sensitive land uses such as hospitals, nursing homes, and churches area also considered impacted if they are located within the 65 DNL contour. Land uses that are less sensitive to noise levels, such as commercial businesses. are considered to be compatible within the 70 and 75 DNL contours. The compatible land use map provided in the 2017 Master Plan Update shows the 65 DNL, 70 DNL, and 75 DNL noise contours for the Airport serving a D-III category facility fleet mix (Exhibit F). The runway extension to the east is not a programmed project for the Airport within the 3-year planning period of this EA. Nevertheless, the 65 DNL would not extend onto any residential properties or other land use types that would be considered incompatible with the noise levels produced by the Airport.

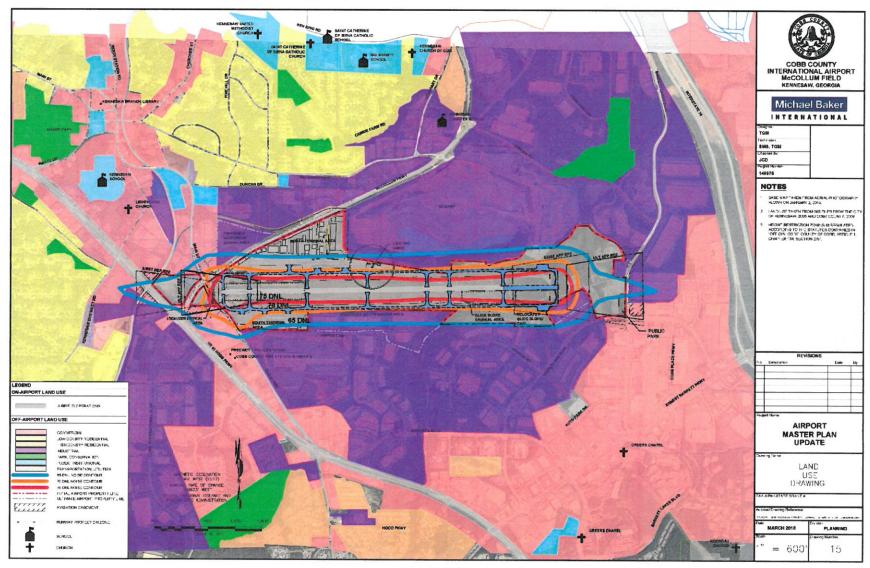


Exhibit F Noise-Compatible Land Use

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The 70 DNL contour does extend over commercial land use properties located adjacent to the western boundary of the Airport property; however, the 75 DNL contour does not encroach upon any commercial land use properties. As a result, noise mitigation measures would not be required for the existing structures located on these parcels as the Airport moves towards becoming a category D-III facility. The 75 DNL contour extends to the edge of a distribution facility located within an industrial use property located near the eastern boundary of the Airport property. Large diesel powered trucks are frequently arriving and departing the facility; therefore, the ambient noise levels at the facilities can be estimated to exceed 75 dBA. As a result, it is anticipated that noise reduction measures would not be required at this location.

## 4.13 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Selection of the No-Action Alternatives would not involve any residential or business relocations, changes in transportation patterns, disruption to planned/established communities or developments, or changes in employment. Selection of the No-Action Alternatives also would not result in any direct impacts to minority or low-income communities in the area because there would be no construction or land acquisition associated with that alternative, and thus no relocations would be required. Furthermore, selection of the No-Action Alternatives would not result in an increase of risk to the health and safety of children, as there would be no change to the current configuration or condition of the Airport facility.

Implementation of the Southside Basing Area element of the Proposed Action would result in socioeconomic impacts associated with the acquisition of four warehouse buildings located along Airport Road. The two westernmost warehouses are currently occupied by existing businesses (SkyZone and MicroBilt Corporation), while the two easternmost warehouses are currently vacant. All property acquisitions would be conducted in accordance with Georgia law, and fair compensation would be offered to each of the business owners affected by the Proposed Action.

Implementation of the Proposed Action would also result in indirect socioeconomic impacts, as the relocation of McCollum Parkway and Old Highway 41 / South Main Street (by others) would require the relocation of businesses that are located on the parcels needed to relocate these surface transportation facilities.

It is anticipated that implementation of the Proposed Action would not result in cumulative socioeconomic impacts on business relocations in the vicinity of the Airport. The relocation of McCollum Parkway and Old Highway 41 / South Main Street (by others) would result in cumulative impacts on the businesses that currently occupy the parcels needed to relocate these surface transportation facilities. All businesses affected by the roadway relocation project would be offered fair compensation in accordance with Georgia law.

A future Northwest Basing Area project (planned to be implemented by others) would be located on a parcel that was formerly occupied by the Georgia Army National Guard but is currently vacant. A future planned Firefighting Station project would be constructed on the existing Airport property and would not require relocations. A future planned Runway 27 extension project also would not require the relocation of any businesses, because the extension and its associated improvements would be constructed on existing Airport property.

Implementation of the Proposed Action would not result in disproportionate impacts on minority or low-income populations, because no residential communities or properties would be adversely

affected by any of the three elements of the Proposed Action. In addition, implementation of the Proposed Action would not result in changes in flight patterns or an increase in operations that could result in noise impacts on local communities, because there are no residential communities located within the future condition 65 DNL contour (see Exhibit F).

There is one school located in the vicinity of the project study area (**Figure 4.6**). The Creekstone Academy is a day care center for pre-school children. The facility is located at 2400 Ellison Lakes Drive, which is approximately 0.33 mile southwest of the western Airport property boundary.

Implementation of any or all elements that comprise the Proposed Action would not result in adverse impacts to this facility, because it is located outside the project limits of each of these Proposed Action elements, and it is outside of the future condition 65 DNL contour. In addition, there would be no increase in risk to the children at this facility, because implementation of the Proposed Action elements would not result in an alteration of flight patterns that would send additional arriving or departing flights over that facility.

Aviation Park, which is located at the easternmost boundary of the Airport property, is currently open to the public and is used regularly by local residents, including families with children. Implementation of the Proposed Action elements would not result in an increased risk to children visiting Aviation Park, because no element of the Proposed Action would result in changes at the park or changes to its usage when compared to the No-Action Alternative.

#### 4.14 VISUAL IMPACTS

In accordance with the FAA *Airport Environmental Handbook*, the sponsor of an airport development project shall "... consider the extent to which any lighting associated with an airport action will create an annoyance among people in the vicinity of the installation." It is also prudent to consider whether lighting associated with a proposed project might confuse or interfere with the vision of air traffic controllers directing aircraft in the vicinity of the airport, or with the vision of pilots on approach to an airport runway.

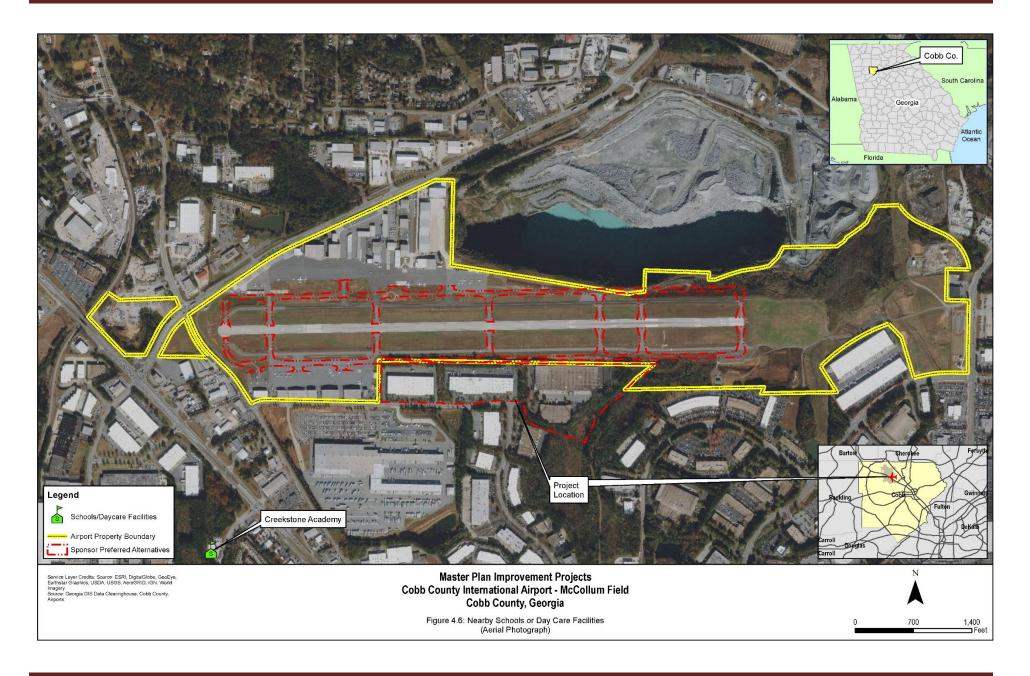
FAA Order 1050.1F also states that consideration should be given to impacts on Section 303 lands of the DOT Act Section 4(f) lands. Light-sensitive areas in the vicinity of an airport could include historic properties, parks, recreational areas, or residential communities. This environmental category considers the extent to which lighting associated with the Proposed Action might create an annoyance among people near the airport or lighting installation. Visual, or aesthetic, effects represent the "... extent to which airport development contrasts with the existing environment, architecture, historic or cultural setting, or land use planning."<sup>32</sup>

The Airport property is surrounded by developed lands consisting of commercial and industrial land use. The existing lighting on the property includes taxiway and runway lighting, building exterior safety lights, parking lot lights, and landscape lighting. Airports use low-, medium-, or high- intensity lights to illuminate their runways, taxiways, and gate areas, as well as to supply the visual approach navigational aids that are critical to the safe operation of aircraft at the Airport. This section assesses the impact of airport-related light emissions and the potential visual effects the various airport lighting systems may have on historic properties, recreation areas, residential communities, or other visually sensitive areas.

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 $<sup>^{32}\,\</sup>mathrm{FAA}$  (2015)  $\,1050.1F\,Desk\,Reference.\,$  July 2015.



Selection of the No-Action Alternatives would not involve the installation of any additional light systems at the Airport. Therefore, selection of these alternatives would not result in any additional light emissions or visual impacts to the surrounding environment. Selection of the No-Action Alternatives also would not result in any indirect or cumulative impacts related to light emissions or visual impacts.

Potential light emission and visual effects associated with the three elements comprising the Proposed Action were evaluated to determine whether there is a potential for adverse impacts on people in the vicinity, from interference with their normal activities (e.g., the locations or characteristics of proposed lights or lighting systems) or from a disturbance of nearby visually sensitive areas. Implementation of the Proposed Action elements would not result in visual impacts to residential properties, because there are no residential properties located in the vicinity of the Airport property. There also are no historic properties with a visually sensitive viewshed located in the vicinity of any of the three elements of the Proposed Action.

Implementation of the Proposed Action elements would not result in direct or cumulative adverse visual impacts on the local community. Implementation of the Proposed Action also would not result in indirect adverse visual impacts on the local community, because there are no future planned projects associated with any of the three elements of the Proposed Action.

#### 4.15 WATER RESOURCES

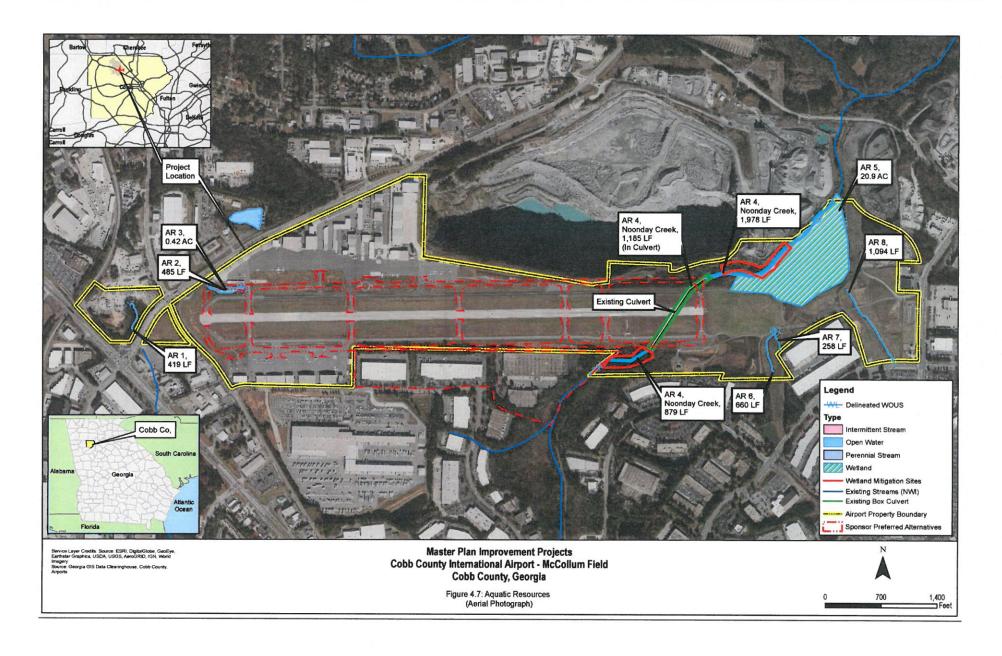
#### 4.15.1 Survey Methodology

USGS quadrangle maps, county soil survey maps, USFWS National Wetlands Inventory (NWI) maps, and aerial photographs of the project study area were reviewed prior to the Aquatic Resource reconnaissance. The project study area encompassed the Airport property and adjacent parcels that were included in the project at the time of the field investigations. Field investigations were conducted on December 17, 2018 to ground-truth the information gathered during the preliminary research. Wetlands were identified in the field on the basis of soils, hydrology, and vegetation (USACE 1987). Resource locations and habitat descriptions were recorded, and that information was later utilized to determine the extent of resources within the project study area (**Figure 4.7**).

#### 4.15.2 Description of Aquatic Resources

Aquatic Resource 1 (AR 1) – This resource has the characteristics of a perennial stream; it is located at the westernmost portion of the Airport property. Approximately 419 lf of AR 1 are located within the project study area. An Ordinary High Water Mark (OHWM) was observed within the channel. The stream had a bankfull width of approximately 4 feet and a bankfull depth of approximately 3 feet, with moderate entrenchment and high sinuosity. The substrate consisted of sand, gravel, and cobble. At the time of the survey the stream had a wetted width of approximately 2 feet and a wetted depth ranging from 1 to 12 inches, with a moderate flow condition and low turbidity. According to the USACE Definition of Factors, the stream is considered to be "somewhat impaired" due to a low biodiversity index.

Aquatic Resource 2 (AR 2) – This resource has the characteristics of a perennial stream; it is located just north of the Runway 9 End, within the Airport property. AR 2 flows from west to east and through Aquatic Resource 3 (described below). Approximately 485 lf of this stream are located within the project study area. An OHWM was observed within the channel. The stream had a bankfull width of approximately 3 feet and a bankfull depth of approximately 6 inches, with moderate entrenchment and moderate sinuosity.



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The substrate consisted of sand and silt. At the time of the survey the stream had a wetted width of approximately 2 feet and a wetted depth ranging from 1 to 4 inches., with a moderate flow condition and low turbidity. According to the USACE Definition of Factors, the stream is considered to be "somewhat impaired" due to a low biodiversity index.

Aquatic Resource 3 (AR 3) – This resource has the characteristics of a depressional emergent wetland; it is located just north of the Runway 9 End and is approximately 0.42 acre in size. Vegetation observed within the wetland included black willow, tree-of-heaven, multiflora rose (Rosa multiflora), Chinese privet, bladder sedge (Carex intumescens), cattail (Typha latifolia), common rush (Juncus effusus), boneset (Eupatorium perfoliatum), Japanese honeysuckle, and cat greenbrier. Primary hydrologic indicators observed included surface water, high water table, saturation, and iron deposits. Secondary hydrologic indicators observed included drainage patterns and geomorphic position. The primary hydric soil indicator observed was a depleted matrix.

Aquatic Resource 4 (AR 4) / Noonday Creek — This resource has the characteristics of a perennial stream; it flows from southwest to northeast through the Airport and beneath the airfield within an existing 1,185-lf box culvert. Within the project study area the northeastern reach is free flowing for 1,978 lf downstream of the culvert, and the southwestern reach is free-flowing for 879 lf upstream of the culvert, each of which includes a mitigation site (see Appendix B).

The 1,978-If downstream reach had an average bankfull width ranging from 20 to 45 feet and a bankfull depth ranging from 4 to 8 feet; at the time of the survey this stream reach had an average wetted width of 22 feet and a wetted depth ranging from 1 to 5 feet, with a moderate flow condition and low turbidity. The 879-If upstream reach had an average bankfull width of 12 feet and a bankfull depth of approximately 5 feet; at the time of the survey this stream reach had an average wetted width of 10 feet and a wetted depth ranging from 1 to 5 feet, also with a moderate flow condition and low turbidity. The stream reaches had moderate entrenchment and high sinuosity, with substrates of sand, gravel, and cobble both upstream and downstream of the box culvert. The free-flowing segments of this resource have an OHWM within the channel, and both segments are considered suitable habitat for the federally threatened Cherokee darter. According to the USACE Definition of Factors, the stream is considered to be "fully functional" due to a high biodiversity index and low entrenchment.

Aquatic Resource 5 (AR 5) – This resource has the characteristics of a palustrine forested wetland; it is located adjacent to the downstream reach of AR 4. Approximately 20.9 acres of this resource are located within the project study area. At the time of the field survey the wetland was inundated due to the presence of beaver dams along AR 4. Vegetation observed within the wetland included water oak, red maple, sweetgum, loblolly pine, black willow, tag alder, buttonbush, Chinese privet, common rush, woolgrass, giant cane (*Arundinaria gigantea*), poison ivy, cat greenbrier, and Japanese honeysuckle. Primary hydrologic indicators observed included the presence of surface water, high water table, saturation, and the presence of reduced iron. Secondary hydrologic indicators observed included drainage patterns, saturation visible on aerial imagery, and geomorphic position. The primary hydric soil indicator observed was a depleted matrix.

Aquatic Resource 6 (AR 6) – AR 6 has the characteristics of a perennial stream; it is located southeast of the Runway 27 End, flowing from south to north through approximately 660 lf of the project study area. The stream had a bankfull width of approximately 4 feet, a bankfull depth ranging from 3 to 4 feet, and an OHWM within the channel; it showed low entrenchment and moderate sinuosity. At the time of the survey the stream had a wetted width of approximately 3 feet and a wetted depth of approximately 1 foot, with a moderate flow condition and low turbidity.

sinuosity. The substrate was clay. According to the USACE Definition of Factors, AR 6 is considered to be "somewhat impaired" due to a low biodiversity index.

Aquatic Resource 7 (AR 7) – AR 7 has the characteristics of a perennial stream; it is located east of AR 6, flowing from south to north through approximately 258 lf of the project study area. The stream had a bankfull width of approximately 4 feet and a bankfull depth of approximately 3.5 feet, with strong continuity of bed and bank, moderate sinuosity, and an OHWM within the channel. The substrate was clay. At the time of the survey it had a wetted width of approximately 1 foot and a wetted depth of approximately 2 inches, with a moderate flow condition and low turbidity. According to the USACE Definition of Factors, AR 7 is considered to be "somewhat impaired" due to a low biodiversity index.

Aquatic Resource 8 (AR 8) — AR 8 has the characteristics of an intermittent stream. Approximately 1,095 lf of AR 8 are located within the project study area, southeast of AR 5. The stream had a bankfull width of approximately 3 feet and a bankfull depth of approximately 2 feet, with high entrenchment, low sinuosity, a wetted width of approximately 2 feet, a wetted depth of 3 to 6 inches, moderate flow condition, and low turbidity. The substrate is gravel and sand. According to the USACE Definition of Factors, AR 8 is considered to be "somewhat impaired" due to a low biodiversity index.

#### 4.15.3 Impacts to Aquatic Resources

For the three projects comprising the Proposed Action, selection of the No-Action alternatives would result in no impacts to wetlands or surface waters. With no construction activities taking place there would be no dredging or filling within the boundaries of any wetlands or other aquatic resources. Also, selection of the three No-Action alternatives would result in no changes to the existing conditions at the Airport, and no indirect or cumulative impacts on aquatic resources.

There are no open waters located within the project study area (Table 4.12). Grading for Alternative 1b, the Sponsor-Preferred Alternative for the Taxiway 'A' relocation, would impact approximately 485 lf of AR 2 and 0.42 acre of AR 3 to accommodate the relocated taxiway and its TOFA. Grading for Alternative 1b also would impact 127 lf of AR 4 downstream (north) of the existing box culvert, where the culvert would be extended by 102 feet. Grading for the culvert extension would not encroach within the deed restricted area that is located approximately 280 feet downstream of the existing culvert outfall (see Figure 4.7 and Appendix B). There would be no impacts to AR 4 associated with grading for Alternative 2b, the Sponsor-Preferred Alternative for the Southside Basing Area, because the grading would avoid disturbance within the stream and its vegetated buffer. Construction of Alternative 3b, the Sponsor-Preferred Alternative for the Taxiway 'B' relocation, would impact approximately 101 If of AR 4 upstream (south) of the existing box culvert, where the culvert would be extended by approximately 76 feet. The grading would encroach within a deed restricted area if it is determined to be infeasible to construct a retaining wall to accommodate the relocated TOFA Extinguishment of the deed restriction would require USACE authorization and additional compensatory mitigation.

Cumulative impacts to aquatic resources would result from past actions at the Airport and implementation of the current Proposed Action. The 2014 Taxiway 'A' and Taxiway 'B' Extension and West Apron Expansion project resulted in approximately 1,108 lf of impacts to AR 2. The Sponsor-Preferred Alternative for the Taxiway 'A' relocation component of the Proposed Action would result in an additional 485 lf of impacts to AR 2. There are no other current projects at the Airport, and no reasonably foreseeable future projects are programmed within the 3-year planning period for this EA.

Direct Impacts	to Aquatic	Table 4.12 c Resources in the	Project Stud	y Area
Resource Label	Area (ac)	Impact (ac)	Length (lf)	Impact (lf)
AR 1	0	0	419	0
AR 2	0	0	485	485
AR 3	0.42	0.42	0	0
AR 4 (downstream of culvert)	0	0	1,978	127
AR 4 (within culvert)	0	0	1,185	0
AR 4 (upstream of culvert)	0	0	879	101
AR 5	20.9	0.0	0	0
AR 6	0	0	660	0
AR 7	0	0	258	0
AR 8	0	0	1,094	0
Totals	21.32	0.42	6,958	713

**Abbreviations:** AR = Aquatic Resource; ac = acre or acres; lf = linear feet.

There are no other current projects and no reasonably foreseeable future actions programmed within the 3-year planning period for this EA that would affect this resource. Thus, there would be approximately 1,593 lf of cumulative permanent impacts to AR 2 associated with the 2014 project and the current Proposed Action.

At AR 3, the 2014 Taxiway 'A' and Taxiway 'B' Extension and West Apron Expansion project resulted in approximately 0.10 acre of filling impacts to this wetland. The Sponsor-Preferred Alternative for the Taxiway 'A' relocation element of the Proposed Action would impact the remaining 0.42 acre of AR 3. Thus, there would be approximately 0.52 acre of cumulative impacts to AR 3 associated with the 2014 project and the current Proposed Action.

At AR 4, the 2000 box culvert installation project resulted in approximately 2,150 lf of permanent impacts to AR 4 (1,450 lf of stream relocation to accommodate the culvert and 700 lf of stream relocation within the free-flowing reach upstream of the culvert). Implementation of the Sponsor-Preferred Alternatives for the Taxiway 'A' and Taxiway 'B' relocation components of the Proposed Action (Alternatives 1b and 3b, respectively), would result in 228 lf of impacts to AR 4). Grading for the Southside Basing Area component of the Proposed Action would be designed to avoid impacts to AR 4 and its vegetated buffer, and further development of that site is not programmed within the 3-year planning period for this EA that would affect this resource. Thus, there would be approximately 2,150 lf of cumulative impacts to AR 4 associated with the 2000 project and the current Proposed Action.

#### 4.15.4 Section 404 Permit and 401 Certification

Total avoidance of impacts to aquatic resources within the project study area would not be possible with implementation of the Proposed Action because of: (1) the abundance and widespread distribution of aquatic resources and riparian areas within the construction limits of the Proposed Action; (2) the need to avoid significant impacts on commercial and industrial businesses; and (3) limitations on the possible locations to construct the three elements of the Proposed Action. While impacts to aquatic resources would not be completely avoided, practicable measures to minimize

impacts were utilized during the preliminary design phase of the project. Every consideration was given to developing a design that would reduce potential impacts to all aquatic resources and other environmental resources to the greatest extent possible, as long as the project design would remain consistent with engineering standards and FAA safety requirements. Where possible, fill would be reduced by using 2:1 fill slopes in areas that are adjacent to aquatic resources and their vegetated buffers.

The construction contractor would be required to implement BMPs in order to minimize temporary construction impacts on water quality.<sup>33</sup> Control measures, such as the installation and maintenance of hay bale barriers, silt fencing, and sedimentation basins, as well as the seeding of slopes in disturbed areas, would be required throughout the construction period until the establishment of a permanent vegetative cover in any unpaved areas.

A CWA Section 404 permit is required for authorization of projects with unavoidable impacts to waters of the U.S., and for impacts greater than 0.1 acre of wetlands/open waters or 100 linear feet of stream, compensatory mitigation is required. The approach preferred by regulatory agencies is for the project sponsor to purchase mitigation credits from one or more USACE-approved mitigation banks whose Primary Service Area includes the location of the proposed project. Onsite mitigation is not practicable for airport projects, according to FAA policy, because such areas tend to attract waterfowl and other wildlife and can increase the potential for bird and other wildlife strikes with aircraft.<sup>34</sup>

Based on the anticipated impacts to aquatic resources associated with implementation of the proposed project, compensatory mitigation would be required. The impacts discussed in this EA are a conservative (worst-case) estimate of the impacts that would potentially result from project implementation, pending completion of the final engineering design. A site visit at the Airport will be conducted with the USACE to verify the jurisdictional classification of each resource identified within the project study area.

Once the aquatic resources have been verified by the USACE and the final impacts have been determined, a mitigation plan that involves the purchase of compensatory mitigation credits from a USACE-approved commercial mitigation bank would be implemented prior to project implementation. At this time, the total compensatory mitigation for impacts to waters of the U.S. is estimated to require 4,715 grandfathered stream credits and 1.68 grandfathered wetlands credits, for a total cost of \$392,000.

A USACE-approved mitigation bank having a Primary Service Area (PSA) or Secondary Service Area (SSA) that includes the Etowah River Watershed (HUC 03150104) would be utilized as the source for mitigation credits, based on credit availability. Based on the current information provided on the USACE's Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) database there are active USACE-approved commercial mitigation banks with sufficient credits available that list HUC 03150104 as occurring within their Primary Service Area (PSA). Table 4.13 provides a list of these banks, including the number and type of credits available at each bank.

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<sup>&</sup>lt;sup>33</sup> FAA AC 150/5370-10E, Standards for Specifying Construction of Airports.

<sup>&</sup>lt;sup>34</sup> FAA AC 150/5200-33A, Hazardous Wildlife Attractants on or Near Airports.

<sup>&</sup>lt;sup>35</sup> U.S. Army Corps of Engineers (2019). "Regulatory In-Lieu Fee and Bank Information Tracking System." Accessed on November 1, 2019 at: <a href="https://ribits.usace.army.mil">https://ribits.usace.army.mil</a>.

USACE-Approved M	Table 4 [itigation Banks that]	4.13 Include HUC 03150104 wi	thin the PSA
Bank Name	Stream Credits Available	Wetland Credits Available	Status
Cochran's Creek	0.34	0	Approved
Deerleap Preserve Conservation Bank	0	0	Approved
Etowah River Stream	0	0	Approved
Etowah River Preserve	515.09	0	Approved
Etowah River Road	336.2	2.16	Approved
Good Neighbor Creek	0.14	0	Approved
Source: USACE (2019) Regulate	ory In-lieu Fee and Bank Info	rmation Tracking System Accessed	on November 1 2019

Source: USACE (2019). Regulatory In-lieu Fee and Bank Information Tracking System. Accessed on November 1, 2019

It is anticipated that the proposed project would be eligible for authorization under a CWA Section 404 Regional General Permit 34 (RGP 34). The USACE's Savannah District issues authorizations under this RGP, which applies to statewide transportation projects, because the impacts associated with the Sponsor-Preferred alternatives for the Proposed Action would be within the thresholds specified in the special conditions for that permit. The schedule for processing a General Permit application is typically 4 to 6 months.

All General Permits issued by the USACE are assumed to comply with the CWA Water Quality Certification (WQC) requirements. The CWA Section 404 Pre-Construction Notification to be submitted to the USACE will also be transmitted to the GADNR- EPD for its review, and with their concurrence and coordination with the USACE; a separate issuance of a WQC would not be required for this project.

#### 4.15.5 Section 402 National Pollutant Discharge Elimination System

Section 402 of the Clean Water Act (CWA) prohibits the discharge of any pollutant into waters of the U.S. from a point source, unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. A NPDES permit is also required for any construction activities that disturb greater than one acre of land. The GADNR-EPD, in compliance with NPDES regulations under the CWA, holds general permits authorizing discharges of stormwater for the following three categories of construction activities:

- Stand-alone construction activities (General Permit GAR100001),
- Infrastructure (i.e. linear) construction site (General Permit GAR100002), and
- Common development construction (General Permit GAR100003)

The Proposed Action would require authorization under Section 402 of the CWA. A Notice of Intent (NOI) would be required for use of the State's National Pollutant Discharge Elimination System (NPDES) General Permit No. GAR100002 (Construction Stormwater Discharges).

#### 4.15.6 State and Local Permits and Certifications

#### GADNR-EPD Section 305(b)/303(d) Listing

The project study area is located in the Etowah River Watershed. Section 305(b) of the CWA requires each state to submit a biennial report to the EPA that describes water quality conditions across the state. Section 303(d) of the CWA requires every state to establish requirements for

pollutants in order to implement water quality standards, and to then identify water bodies that exceed these requirements. Georgia has adopted numeric standards for toxic limits, as required by the EPA in a 1987 amendment to the CWA. The GADNR-EPD *Rules and Regulations for Water Quality Control* (2001) established Water Use Classifications that include Drinking Water, Recreation, Fishing, Coastal Fishing, Wild Rivers, and Scenic Rivers.

The GADNR-EPD also has developed a priority list of waterbodies, pursuant to Section 303(d) of the CWA and codified in 40 CFR Part 130.7. Waterbodies that are targeted for water quality management action are listed on the State of Georgia 2018 Draft Integrated 305(b)/303(d) List. Listed streams appear on either the support list, which identifies streams that support their designated use classification, or they appear on the list as not supporting their designated use, which indicates that they are impaired to an extent that they no longer support their use classification. The 303(d) List identifies Georgia waterbodies that do not meet State water quality standards after the application of required controls for point- and nonpoint-source pollutants. It also prioritizes waterbodies to which the GADNR-EPD can direct its attention when developing required controls for waterbodies that do not support their designated use, as follows:

- **Priority 1** waters require actions to achieve water quality standards;
- **Priority 2** waterbodies have excess concentrations of metals from nonpoint sources and/or dissolved oxygen concentrations that do not meet water quality standards;
- **Priority 3** waterbodies are segments where urban runoff and other general nonpoint sources have resulted in water quality standards being violated for metals or for fecal coliform bacteria.

Noonday Creek is a tributary to the Little River and comprises the main drainage system for the Airport, which is located within the Coosa River Basin. Noonday Creek is listed on the GADNR-EPD 2018 Integrated 305(b)/303(d) List (approved by EPA June 14, 2019) as "not supporting" its designated use of fishing. Therefore, all tributaries within one mile and flowing into this reach of Noonday Creek are also considered impaired. The criterion violated is commercial fishing ban. The listed causes of the criteria violations include residual, an industrial source, and nonpoint sources. During construction of the Airport improvements, the contractor would be responsible for implementing at least four of the possible twenty listed BMPs to help reduce erosion, sedimentation, and the introduction of other pollutants into any water located in the vicinity of the impaired streams. The four BMP measures can be selected from the list provided in Part III. Section C.2 of GAR100002.<sup>36</sup>

#### Potential Water Quality Impacts

Selection of the No-Action Alternative would have no impacts on water quality, because no construction activities would take place at the Airport. Implementation of the Sponsor-Preferred Alternatives for the Proposed Action could potentially impact water quality because construction activities would result in approximately 713 lf of permanent stream impacts (see **Table 4.12**). There would be a potential for temporary impacts on water quality during clearing and grading activities. To minimize turbidity and sedimentation impacts, as well as potential pollution impacts from the use of construction equipment, the contractor would be required to implement BMPs, as described further below.

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<sup>&</sup>lt;sup>36</sup> State of Georgia (September 24, 2013). "Authorization to Discharge Under the National Pollutant Discharge Elimination System Storm Water Discharges Associated with Construction Activity for Infrastructure.

Implementation of the Proposed Action would be classified as an infrastructure project under Georgia's NPDES General Permit (GAR 100002); therefore, a NOI to disturb greater than one acre of land would be submitted to the GADNR-EPD prior to beginning land clearing/grading activities. Also, in accordance with NPDES regulations, an Erosion, Sedimentation, and Pollution Control Plan would be prepared and submitted in conjunction with the NOI. This plan would outline the BMPs to be implemented during construction to control erosion, sedimentation, and other potential pollutants from entering surface waters. Components of this plan would include the following:

- several temporary sedimentation basins would be constructed in upland areas around the
  construction site, designed to trap suspended sediment and provide a controlled release
  point for the treated stormwater from the construction site to onsite streams;
- silt fencing would be installed around the construction limits; and
- clearing and grading activities would be staged such that the entire site would not be disturbed at the same time, which would allow for seeding and stabilization of disturbed areas prior to carrying out additional clearing/grading actions.

Minimization of impacts would be achieved by implementing temporary and permanent erosion and sediment control devices in accordance with FAA Advisory Circular 150/5370-10E, entitled *Standards for Specifying Construction of Airports*.<sup>37</sup> Implementation of the three Sponsor-Preferred Alternatives for the Proposed Action would not require issuance of a separate CWA Section 401 Water Quality Certification (WQC) from the GADNR-EPD, because all projects authorized by the USACE under a CWA Section 404 General Permit in coordination with the GADNR-EPD are assumed to comply with the WQC standards, as discussed in **Section 4.15.4**.

Selection of the No-Action Alternative would not result in any indirect or cumulative water quality impacts because no construction activities would occur, and the existing conditions at the Airport would remain unchanged. Implementation of the Proposed Action would not be expected to result in indirect impacts to water quality because there are no future projects programmed for the Airport within the 3-year planning period of this EA.

### Georgia Erosion and Sedimentation Control Act of 1975

The Georgia Erosion and Sedimentation Control Act of 1975 regulates a 25-foot vegetated buffer around waters of the State, including perennial streams, intermittent streams, and open waters that are connected to other waters of the State.<sup>38</sup> Projects that would impact a State-regulated buffer require a State Buffer Variance (SBV) from the GDNR-EPD. Impacts within 50 feet of an existing culvert footprint would be exempt from the buffer requirements.<sup>39</sup> Implementation of the Proposed Action is not anticipated to result in any non-exempt impacts to the 25-foot protected vegetative buffer of any State waters identified within the project study area. Therefore, a Request for 25-foot Vegetative Buffer Encroachment would not be required as part of the Proposed Action.

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<sup>&</sup>lt;sup>37</sup> Construction Projects." Part III. Special Conditions, Management Practices, Permit Violations, and Other Limitations

<sup>&</sup>lt;sup>38</sup> Official Code of Georgia Annotated (O.C.G.A.) 12-7-6-(15).

<sup>&</sup>lt;sup>39</sup> Rules of the Georgia Department of Natural Resources - Environmental Protection Division, Chapter 391-3-7, Erosion and Sedimentation Control.

#### 4.15.7 Floodplains

Executive Order (E.O.) 11988, *Floodplain Management*, requires that efforts be made to avoid, to the extent possible, the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains. It also requires that efforts be made to avoid direct or indirect support of development in floodplains wherever there is a practicable alternative, and it prohibits floodplain encroachments that would cause a substantial flood risk, a critical interruption of an emergency transportation facility, or an adverse impact on the floodplain's natural values.

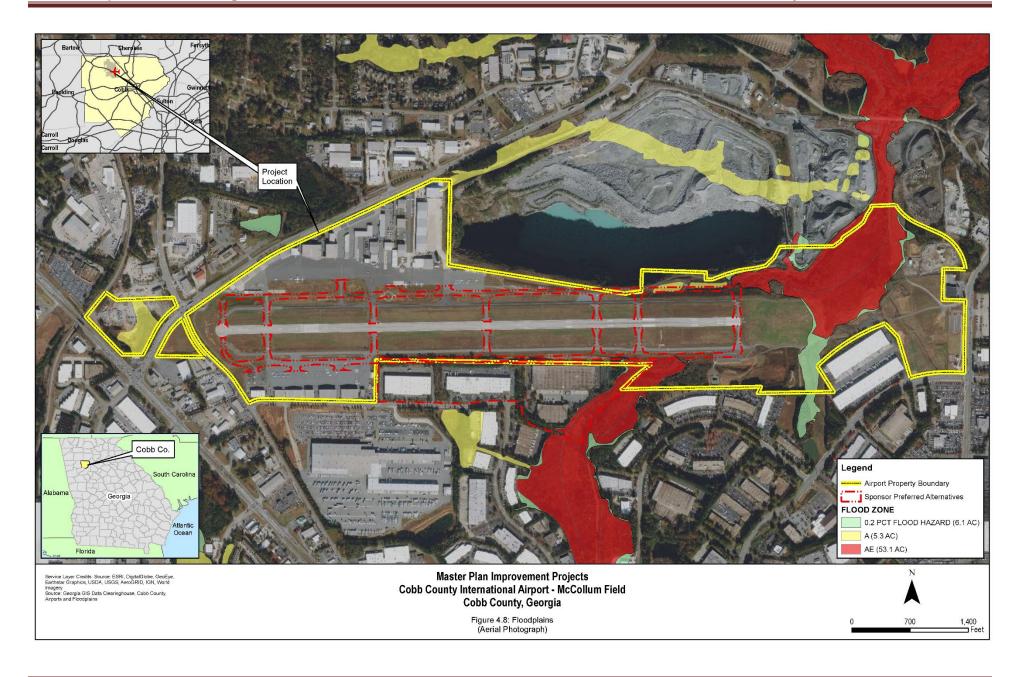
Development in a FEMA-designated 100-year floodplain (Flood Hazard floodplains) is permitted by federal regulations if hydrologic and hydraulic analyses demonstrate that the development would not result in an increase of more than one foot of the Base Flood Elevation (BFE). However, floodways must retain the ability to convey the 100-year flood by remaining unobstructed.

[NOTE: The BFE is the computed elevation to which floodwater is anticipated to rise during the base flood. The base flood is defined as having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the "100-year flood." The base flood is the national standard used by the National Flood Insurance Program (NFIP) and all Federal agencies for the purposes of requiring the purchase of flood insurance and regulating new development. BFEs are typically shown on Flood Insurance Rate Maps (FIRMs) and on the flood profiles.]

There would be no direct impacts to floodplains associated with the No-Action Alternative, because there would be no change in the current conditions at the Airport. Therefore, there would be no indirect or cumulative floodplain impacts associated with selection of this alternative. Based on a review of the Federal Emergency Management Agency (FEMA) floodplain elevations in the project study area, there are floodplains associated with AR 4 / Noonday Creek located within the areas of disturbance for the Proposed Action (**Figure 4.8**).

Implementation of the Taxiway 'A' element of the Proposed Action would impact approximately 2.58 acres of regulated floodplains (0.21 acre of Flood Hazard Zone, 1.38 acres of Zone A, and 0.99 acre of Zone AE). Implementation of the Taxiway 'B' element of the Proposed Action would impact approximately 1.65 acres of regulated floodplains (0.18 acre of Flood Hazard Zone and 1.47 acres of Zone AE). The Southside Basing Area element of the Proposed Action would avoid impacts to Noonday Creek, its vegetated buffer, and regulated floodplains by utilizing best management practices for the building demolition and site work. The hydrologic studies and hydraulic analysis to be performed for the design of the Proposed Action would have to demonstrate that the impacts from the filling of the floodplain would not result in a rise of more than 1 foot of the 100-year floodplain elevation. If it is determined that the impacts would result in a rise of more than 1 foot in base floodplain elevation, a request for a Conditional Letter of Map Revision (CLOMR) would be requested from FEMA. Unlike the mitigation requirements for impacts to waters of the U.S. and to the buffers of State waters, there are no mitigation requirement for floodplain impacts.

Implementation of the Proposed Action would result in cumulative impacts to floodplains when considering past, present, and reasonably foreseeable actions at or adjacent to the Airport property. The year 2000 box culvert installation project resulted in approximately 0.01 acre of Flood Hazard Zone floodplains and approximately 0.06 acre of impacts to Zone AE floodplains. The cumulative impacts to floodplains would comprise 0.40 acre of Flood Hazard Zone floodplains, 2.52 acres of Zone AE floodplains, and 1.38 acres of Zone A floodplain impacts.



#### 4.15.8 Groundwater

The Safe Drinking Water Act (42 U.S.C. 300 (f)-300j-26) prohibits federal agencies from funding actions that would contaminate an EPA-designated sole source aquifer or its recharge area. The No-Action Alternative would have no effect on any aquifer or its recharge area because no construction would occur at the Airport. There are no aquifers located in the vicinity of the Airport property; therefore, implementation of the Proposed Action would have no direct, indirect, or cumulative impacts on aquifers or a groundwater recharge area.

#### 4.15.9 Wild and Scenic Rivers

The National Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271-1287) protects rivers that are listed as significant resources for their wild, scenic, or recreational values, along with those that are under consideration for inclusion on the list. In addition, under a 1979 Presidential Directive, federal agencies are required "... to take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory." There are no federally protected wild, scenic, or recreational rivers, nor are there any rivers listed on the Nationwide River Inventory in the project study area. The only river listed on the National Wild and Scenic River System within Georgia is the Chattooga River, which is located in the northeastern corner of the state.

The State of Georgia also designates some state rivers for their cultural or natural resources value under the Georgia Scenic Rivers Act of 1969.<sup>42</sup> The Georgia Scenic Rivers Act is administered by the GADNR-EPD. None of the rivers comprising the Georgia Scenic River Systems are located within the study area for the No-Action Alternative or the Proposed Action. There are no designated Wild and Scenic Rivers located in Cobb County. Therefore, no impacts to these resources would be anticipated in association with either the No-Action Alternative or the Proposed Action.

#### 4.16 SUMMARY OF ENVIRONMENTAL IMPACTS

A comparative summary of the potential environmental impacts directly associated with the No-Action Alternatives and the Sponsor-Preferred Alternatives for the three elements that comprise the Proposed Action is presented in **Table 4.14.** 

<sup>&</sup>lt;sup>40</sup> U.S. National Park Service (2019). Wild and Scenic Rivers Program. Accessed on April 1, 2019 at: <a href="https://www.nps.gov/orgs/1912/index.htm">https://www.nps.gov/orgs/1912/index.htm</a>.

<sup>&</sup>lt;sup>41</sup> U.S. National Park Service (2019). Nationwide Rivers Inventory. Accessed on April 1, 2019 at: <a href="https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm">https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm</a>.

<sup>&</sup>lt;sup>42</sup> O.C.G.A §§ 12-5-350, Georgia Scenic Rivers Act.

Environmental Health and Safety Risks

Visual Effects

Water Resources

No Impacts

No Impacts

No Impacts

Impacts

Table 4.14 Summary of Potential Environme	ental Impacts	
Environmental Category	No-Action Alternatives	Sponsor Preferred Alternatives
Air Quality	No Impacts	No Impacts
Biological Resources – T&E Species Habitat (Aquatic)	No Impacts	Minor Impacts
Biological Resources – T&E Species Habitat (Terrestrial)	No Impacts	Minor Impacts
Climate	No Impacts	No Impacts
Coastal Resources	No Impacts	No Impacts
Department of Transportation Act: Section 4(f)	No Impacts	No Impacts
Farmlands	No Impacts	No Impacts
Hazardous Materials, Solid Waste, and Pollution Prevention	No Impacts	No Impacts
Historical, Architectural, Archaeological, and Cultural Resources	No Impacts	No Impacts
Natural Resources and Energy Supply	No Impacts	No Impacts
Noise	No Impacts	No Impacts
Socioeconomic Impacts, Environmental Justice, and Children's	No Impacts	Minor Impacts

# CHAPTER 5. AGENCY COORDINATION AND PUBLIC INVOLVEMENT

#### 5.1 AGENCY COORDINATION

The environmental evaluation process for the proposed improvements to the Cobb County International Airport – McCollum Field has included the use of data and information provided by various federal, state, regional, and local governmental bodies. Various materials reviewed and considered during the environmental analysis are provided in **Appendix C – Agency Coordination**.

A list of the various agencies referenced during the environmental evaluation is provided below:

- ➤ Cobb County Office of Community Development
- ➤ Georgia Department of Natural Resources Environmental Protection Division
  - Air Quality Branch
  - Watershed Protection Branch
- ➤ Georgia Department of Natural Resources Wildlife Resources Division
- ➤ Atlanta Regional Commission
- ➤ U.S. Army Corps of Engineers Savannah District
- ➤ U.S. Department of Agriculture Natural Resources Conservation Service
- > Federal Emergency Management Agency
- ➤ U.S. Department of the Interior National Park Service
- ➤ U.S. Environmental Protection Agency Region 4
- ➤ U.S. Fish and Wildlife Service
- ➤ U.S. Geological Survey

## 5.2 NOTICE OF AVAILABILITY OF THE ENVIRONMENTAL ASSESSMENT

Cobb County DOT has prepared this EA for the proposed improvements at the Cobb County International Airport – McCollum Field in accordance with the provisions of NEPA, the Airports and Airway Safety, Capacity, Noise Improvement, and Intermodal Transportation Act of 1992, and FAA requirements. Once the Draft EA is approved by GDOT, Cobb County will advertise a Notice of Availability (NOA) of the EA for public review and comment [Appendix F – Public Notices (reserved)]. The NOA will be published two times in the general circulation newspaper of Cobb County, the *Marietta Daily Journal*.

A copy of the approved Draft EA will be provided to each of the resource agencies mentioned above. Written comments from agencies, municipalities, and organizations on the Draft EA will be accepted for 30 days after the second advertisement of the NOA is published [Appendix G – Agency Comments (reserved)].

The Draft EA will be made available to the public for review and comment for 30 days after the NOA is issued. Written comments from the public on the Draft EA will be accepted for 30 days after the second advertisement of the NOA is published. Persons desiring to review the Draft EA will able to do so during normal working hours at the following locations:

Cobb County International Airport – McCollum Field
Airport Administration Office
1723 McCollum Parkway NW
Kennesaw, Georgia 30144
Monday – Friday: 8:00 AM – 5:00 PM

An electronic version of the Draft EA will also be made available to the public on the Airport's website. Persons who would like to review the document in PDF format will be able to do so by visiting www.cobbcountyairport.org.

Please direct all comments to Mr. Karl Von Hagel, Airport Manager, at: <a href="mailto:karl.vonhagel@cobbcounty.org">karl.vonhagel@cobbcounty.org</a> or (770) 528-1615. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

#### **CHAPTER 6. LIST OF DOCUMENT PREPARERS**

#### 6.1 MICHAEL BAKER INTERNATIONAL, INC.

Joseph Snyder, P.E. Engineering Project Manager

Mary Best, Ph.D. Environmental Manager

Paul Condit Environmental Specialist II

James Duguay Senior Aviation Planner

Cleo Coles, P.E. Engineering Support

Renee Flinchum-Bowles GIS Support

#### **6.2 SUBCONSULTANTS**

Brockington & Associates, Inc. Cultural Resources Special Studies

Ecological Solutions, Inc.

Bat Habitat Assessment Survey Report

Edwards-Pitman Environmental, Inc. Protected Aquatic Species Survey

Environmental Data Resources, Inc. Hazardous Materials Database (Vendor)

KB Environmental Sciences, Inc. Air Quality Assessment Report

# APPENDIX A Supporting Documents



#### **AIRPORT MASTER RECORD**

PRINT DATE: 3/29/2019 **AFD EFF** 03/28/2019

FORM APPROVED OMB 2120-0015

ATLANTA FAA SITE NR: 03642.\*A > 1 ASSOC CITY: 4 STATE: GA LOC ID: RYY > 2 AIRPORT NAME COBB COUNTY INTL-MCCOLLUM FIELD 5 COUNTY: COBB GA 3 CBD TO AIRPORT (NM): 21 NW 6 REGION/ADO: ASO/ATL 7 SECT AERO CHT: ATLANTA **SERVICES GENERAL** BASED AIRCRAFT 10 OWNERSHIP: **PUBLIC** > 70 FUEL: 100LL A1+ UL94 90 SINGLE ENG: 184 **COBB COUNTY** 91 MUI TI FNG: > 11 OWNFR: 28 > 12 ADDRESS: 100 CHEROKEE STREET > 71 AIRFRAME RPRS: **MAJOR** 92 JET: 56 > 72 PWR PLANT RPRS: MARIETTA, GA 30060 **MAJOR** TOTAL: 268 > 13 PHONE NR: 770-528-1615 > 73 BOTTLE OXYGEN: NONE 93 HELICOPTERS: 15 > 14 MANAGER: KARL A VON HAGEL HIGH/I OW > 74 BULK OXYGEN: 94 GLIDERS: 0 > 15 ADDRESS: 1723 MCCOLLUM PKWY BLDG 100 75 TSNT STORAGE: HGR, TIE 95 MILITARY: 0 KENNESAW, GA 30144 76 OTHER SERVICES: 96 ULTRA-LIGHT: 0 > 16 PHONE NR: 770-528-1615 AMB, AVNCS, CHTR, INSTR, RNTL, SALES > 17 ATTENDANCE SCHEDULE: **FACILITIES OPERATIONS** ALL 0600-0000 > 80 ARPT BCN: CG 100 AIR CARRIER: 0 > 81 ARPT LGT SKED: SEE RMK 102 AIR TAXI: 2 400 18 AIRPORT USE: **PUBLIC BCN LGT SKED:** SS-SR 103 G A LOCAL: 25,000 34-00-47.4000N ESTIMATED 19 ARPT LAT: > 82 UNICOM: 122.700 104 G A ITNRNT: 40,000 20 ARPT LONG: 084-35-49.3000W > 83 WIND INDICATOR: 105 MILITARY: YES-L 823 21 ARPT FI FV: 1040.4 SURVEYED 84 SEGMENTED CIRCLE: YES TOTAL: 68 223 22 ACREAGE: 85 CONTROL TWR: YFS 309 **OPERATIONS FOR** > 23 RIGHT TRAFFIC: 09 86 FSS: MACON 12 MONTHS > 24 NON-COMM LANDING: NO 87 FSS ON ARPT: NO 12/31/2017 ENDING: 25 NPIAS/FED AGREEMENTS: NGY 88 FSS PHONE NR: > 26 FAR 139 INDEX: 89 TOLL FREE NR: 1-800-WX-BRIEF **RUNWAY DATA** 09/27 > 30 RUNWAY INDENT: 6,295 > 31 LENGTH: 100 > 32 WIDTH: CONC-G > 33 SURF TYPE-COND: **GRVD** > 34 SURF TREATMENT 35 GROSS WT: S 36 (IN THSDS) D 2D 37 2D/2D2 > 39 PCN: **LIGHTING/APCH AIDS** HIGH > 40 EDGE INTENSITY: NPI-G / PIR-G > 42 RWY MARK TYPE-COND: P4L / P4L > 43 VGSI: 46 / 45 44 THR CROSSING HGT 4.00 / 3.00 45 VISUAL GLIDE ANGLE: > 46 CNTRLN-TDZ: - / -> 47 RVR-RVV: / N > 48 REIL: / MALSF > 49 APCH LIGHTS: **OBSTRUCTION DATA** C / PIR 50 FAR 77 CATEGORY 1,062 > 51 DISPLACED THR: ROAD > 52 CTLG OBSTN: > 53 OBSTN MARKED/LGTD: > 54 HGT ABOVE RWY END: 26 > 55 DIST FROM RWY END: 0B / > 56 CNTRLN OFFSET 3.1 / 50.1 57 OBSTN CLNC SLOPE: 58 CLOSE-IN OBSTN: Y / N **DECLARED DISTANCES** 6.311 / 6.311 > 60 TAKE OFF RUN AVBL (TORA): > 61 TAKE OFF DIST AVBL (TODA): 6.311 / 6.311 > 62 ACLT STOP DIST AVBL (ASDA): 6,311 / 5,374 5.233 / 5.374 > 63 LNDG DIST AVBL (LDA) (>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY > > 110 REMARKS INDEX B AIRCRAFT RESCUE AND FIRE FIGHTING EQUIPMENT AVAILABLE UPON REQUEST. 24 HOUR PRIOR PERMISSION REQUIRED. CONTACT AIRPORT A 026 MANAGER 770-528-1615 A 057 RWY 09 RY 09 APCH RATIO 34:1 TO DSPLCD THLD. +89FT TREES, 3,226FT 0B LEFT OR RIGHT. A 058 RWY 09 ROAD 0-200 FROM RUNWAY END, 380' RIGHT AND 180' LEFT. A 081 ATC-CTL. WHEN ATCT CLSD, ACTVT MALSF RWY 27; HIRL RY 09/27 - CTAF. A 110-001 BLASTING SR-SS MON-FRI 2000 FT AFR 27 A 110-003 ARPT MOWING IN PROGRESS SPRING THRU AUTUMN. A 110-004 COYOTES ON & INVOF ARPT. RY 9 IS CALM WIND RY IN VFR CONDS. A 110-007 A 110-009 NORTH APRON AT TWY A-1 CONNECTOR IS RESTRICTED TO GROUP 1 AFCT ONLY. TWY B CLSD FM TWY B5 TO B6 TO ACFT WITH WINGSPANS OF 79 FT OR GTR. A 110-011 A 110-012 TURBINE/JET AIRCRAFT OPERATORS ARE REQUESTED TO USE NBAA NOISE ABATEMENT PROGRAM PROCEDURES OR COMPARABLE PROCEDURES OF AIRCRAFT MANUFACTURER. A 110-013 INT'L OPS ARPT OF ENTRY - USER FEE AIRPORT

(S)

112 LAST INSP:

03/05/2018

113 LAST INFO REQ:

08/17/1993

111 INSPECTOR:



#### **AIRPORT MASTER RECORD**

PRINT DATE: 3/29/2019 **AFD EFF 03/28/2019**FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY: \*\*\*CONTINUED\*\*\* 4 STATE: GA LOC ID: FAA SITE NR: 03642.\*A RYY > 2 AIRPORT NAME 5 COUNTY: 3 CBD TO AIRPORT (NM): 6 REGION/ADO: ASO/ATL 7 SECT AERO CHT: **SERVICES GENERAL BASED AIRCRAFT** 10 OWNERSHIP: > 70 FUEL: 90 SINGLE ENG: > 11 OWNFR: 91 MULTI FNG: > 12 ADDRESS: > 71 AIRFRAME RPRS: 92 JET: > 72 PWR PLANT RPRS: TOTAL: > 13 PHONE NR: > 73 BOTTLE OXYGEN: 93 HELICOPTERS: > 14 MANAGER: > 74 BULK OXYGEN: 94 GLIDERS: > 15 ADDRESS: 75 TSNT STORAGE: 95 MILITARY: 76 OTHER SERVICES: 96 ULTRA-LIGHT: > 16 PHONE NR: > 17 ATTENDANCE SCHEDULE: **FACILITIES OPERATIONS** > 80 ARPT BCN: 100 AIR CARRIER: > 81 ARPT LGT SKED : 102 AIR TAXI: 18 AIRPORT USE: **BCN LGT SKED:** 103 G A LOCAL: 19 ARPT LAT: > 82 UNICOM: 104 G A ITNRNT: 20 ARPT LONG: > 83 WIND INDICATOR: 105 MILITARY: 21 ARPT FLEV: 84 SEGMENTED CIRCLE: TOTAL: 22 ACREAGE: 85 CONTROL TWR: **OPERATIONS FOR** > 23 RIGHT TRAFFIC: 86 FSS: 12 MONTHS 87 FSS ON ARPT: > 24 NON-COMM LANDING: ENDING: 25 NPIAS/FED AGREEMENTS: 88 FSS PHONE NR: > 26 FAR 139 INDEX: 89 TOLL FREE NR: **RUNWAY DATA** > 30 RUNWAY INDENT: > 31 LENGTH: > 32 WIDTH: > 33 SURF TYPE-COND: > 34 SURF TREATMENT: 35 GROSS WT: S 36 (IN THSDS) D 37 2D 2D/2D2 > 39 PCN: **LIGHTING/APCH AIDS** > 40 EDGE INTENSITY: > 42 RWY MARK TYPE-COND: > 43 VGSI: 44 THR CROSSING HGT 45 VISUAL GLIDE ANGLE: > 46 CNTRLN-TDZ: > 47 RVR-RVV: > 48 REIL: > 49 APCH LIGHTS: **OBSTRUCTION DATA** 50 FAR 77 CATEGORY > 51 DISPLACED THR: > 52 CTLG OBSTN: > 53 OBSTN MARKED/LGTD: > 54 HGT ABOVE RWY END: > 55 DIST FROM RWY END: > 56 CNTRLN OFFSET: 57 OBSTN CLNC SLOPE: 58 CLOSE-IN OBSTN: **DECLARED DISTANCES** > 60 TAKE OFF RUN AVBL (TORA): > 61 TAKE OFF DIST AVBL (TODA): > 62 ACLT STOP DIST AVBL (ASDA): > 63 LNDG DIST AVBL (LDA) (>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY > > 110 REMARKS

111 INSPECTOR: (S) 112 LAST INSP: 03/05/2018 113 LAST INFO REQ:

			Col Aircre	bb County aft Operati	Cobb County International Airport - McCollum Field Aircraft Operations History and Forecast, 2016 and 2017	rport - Mc	Collum Field 2016 and 2017			
					AAC Summary	nary				
	2016	2017	<b>Growth Rate</b>	2018	<b>Growth Rate</b>	2019	<b>Growth Rate</b>	AAGR	*020	2021*
∢	4,858	2,090	2%	5,478	%8	4,070	-26%	-4%	3890	3717
В	2,886	000′9	7%	7,434	24%	6,150	-17%	3%	6326	9059
J	1184	1,448	22%	1,670	15%	1,506	-10%	%6	1646	1798
D	436	308	-79%	394	78%	464	18%	2%	489	516
Total	12,364	12,846	4%	14,976	17%	12,190	-19%	1%	12266	12343
*Forecast	using AAGR	of last 4 ye	*Forecast using AAGR of last 4 years, 500 operations reached in 2021 of AAC D aircraft	ons reache	d in 2021 of AAC	D aircraft				
					ADG Summary	nary				
	2016	2017	<b>Growth Rate</b>	2018	<b>Growth Rate</b>	2019	Growth Rate	AAGR	2020**	2021**
_	6932	9669	1%	7800	11%	6232	-20%	-3%	6072	5917
=	5040	5572	11%	6762	21%	5504	-19%	4%	5748	6003
≡	388	274	-29%	408	49%	438	7%	%6	477	520
≥	4	4	%0	9	20%	16	167%	72%	28	47
Total	12364	12846	4%	14976	17%	12190	-19%	1%	12266	12343
**Forecast	t using AAGF	ર of last 4 પ્ર	**Forecast using AAGR of last 4 years, 500 operati	ions reach	rations reached in 2021 of ADG III aircraft	G III aircraí	£			
Source: G	eorgia Depa	irtment of 1	<b>Source</b> : Georgia Department of Transportation, January 10, 2020.	anuary 10,	2020.					
		•								

# APPENDIX B Agency Correspondence

Deed Book 13670 Pg 551 Filed and Recorded Jan-17-2003 04:16pm 2003-0013675

Jay C. Stephenson Clerk of Superior Court Cobb Ctv. Ga.

County No

## DECLARATION OF COVENANTS AND RESTRICTIONS (On-Airport Noonday Creek Floodplain Preservation Area)

THIS DECLARATION OF COVENANT AND RESTRICTIONS ("Covenant") is hereby made by Cobb County, the undersigned owner/covenantor. Covenantor is the owner in fee simple of a certain tract of real property in Cobb County, Georgia. These tracts of land attached hereto as Exhibit B and C are property having been conveyed to Cobb County, Grantee and recorded in Cobb County, Georgia in the Office of the Clerk of Superior Court and is by reference incorporated herein for a description of all other legal purposes.

#### **PREMISES**

WHEREAS, Covenantor was issued permit number (PN960010730) pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344), and/or Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C.403) by the Department of the Army, Corps of Engineers, Savannah District, for certain dredge and/or fill activities in wetlands and/or waters of the United States, including wetlands and streams, and,

WHEREAS, the consideration for this Declaration of Covenenants and Restrictions is the issuance of the document referenced in Exhibit A by the United States Army Corps of Engineers, the receipt and sufficiency whereof are hereby acknowledged; and,

WHEREAS, said permit expressly requires mitigation for the dredge and/or discharge of fill of existing jurisdictional waters of the United States including wetlands pursuant to the Clean Water Act, Section 404, and/or the Rivers and Harbors Act, Section 10; and,

WHEREAS, in connection with the referenced permit, and, as mitigation for the fill and/or dredge of existing wetlands/waters of the United States, Covenantor agrees to place restrictions on 1,700 feet of floodplain identified herein by placing it in a perpetual restrictive covenant; and,

WHEREAS, a certified platted survey, identified by bearings and distances and coordinate values shown and delineated as Exhibit B, showing the 2.531 acre tract of land containing the boundaries of the floodplain preservation area ("Protected Property") and a legal description of the tract of land is attached as Exhibit C; and,

WHEREAS, a certified platted survey, identified by bearings and distances and coordinate values shown and delineated as Exhibit D, showing the 1.998 acre tract of land containing the boundaries of the floodplain preservation area ("Protected Property") and a legal description of the tract of land is attached as Exhibit E; and,

WHEREAS, the Protected Property is being preserved, restored, enhanced or created as a wetlands, buffer to wetlands, or buffer to waters of the United States pursuant to the permit referenced above;

NOW, THEREFORE, as consideration for the issuance of the referenced permit, and as required mitigation for dredge and/or discharge of fill in waters of the United States including wetlands, Owner/Covenantor has promised to place certain restrictions on the Property exclusively for conservation purposes, in order that it shall remain substantially in its open, natural and scenic condition in perpetuity.

1.

The terms and conditions of this Declaration of Covenants and Restrictions shall be both implicitly and explicitly included in any subsequent transfer, conveyance, or encumbrance affecting all or any part of the restricted property. It shall set forth the terms and conditions of this document either by reference to this document and its recorded location or set forth in full text. It shall not be amended or extinguished except by written approval of the Corps of Engineers.

2.

Except as necessary to carry out wetland restoration, enhance the natural habitat, or carry out other mitigation or maintenance approved by the Corps of Engineers, the actions encompassed as prohibited by this Covenant shall include but shall not be limited to the following:

- A. Clearing, cutting or mowing;
- B. Earthmoving, grading, cultivation, burning, or filling or changes in the topography of the land in any manner;
- C. Placement of refuse, wastes, sewage, dredged spoil, solid waste, incinerator residue, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, industrial, municipal, or agricultural waste on the property.
- D. Draining, ditching, diking, dredging, channelizing, pumping, impounding, excavating;
- Diverting or affecting the natural flow of surface or underground waters within, or out of the property;
- F. Mining, drilling;
- G. Burning, systematically removing or cutting or otherwise destroying any vegetation, except for pruning, or removal of diseased or unsafe trees conducted in accordance with current scientifically bases practices recommended by the U.S. Forest Service, the Georgia Forestry Commission, or other responsible agency.

.7

- H. Spraying with biocides;
- Introducing exotic species into the wetlands or otherwise altering the natural state
  of the wetlands;

- J. Grazing of domesticated animals;
- K. Raising of any structure in the wetlands, streamside buffers or wetland buffers, whether temporary or permanent, except that minimal structures for the observation of wildlife and wetlands ecology may be constructed with the prior approval of the Savannah District Engineer.
- L. Display of billboards, signs, or advertisements on or over the Property, except for the posting of no trespassing signs, signes indicating the property is for sale, signs identifying the conservation values of the Property or their protection, and/or identifying the owner of the Property.

The following exception to these restrictions are:

- A. Maintenance or servicing of the sewer line within the existing sewer easement that exists within the preservation easement.
- B. Topping or removing a tree within the covenanted area that penetrates above the elevation of the safety surface, as mandated by the Federal Aviation Administration for safety reasons.

3.

Existing utility lines, road crossings and structures, if any, are shown of the survey, Exhibit B.

4.

Covenantor represents and warrants that, after reasonable investigation and to the best of its knowledge:

- A. No substance defined, listed, or otherwise classified pursuant to any federal, state, or local law, or regulation, as hazardous, toxic, polluting, or otherwise contaminating to the water or soil, has been released, generated, treated, stored, used, disposed of, deposited, abandoned, or transported in, on, from, or across the Property;
- B. There are not now any underground storage tanks located on the Property, whether presently in service or closed, abandoned, or decommissioned;
- C. Covenantor and the Property are in compliance with all federal, state and local laws and there is no pending or threatened litigation in any way affecting, involving or relating to the Property

5.

Covenantor, its personal representatives, heirs, executors, administrators, successors and assigns, shall retain all other customary rights of ownership, including but not limited to the exclusive

possession of the property, and the right to use the property in any manner which would not defeat or diminish the intent of this Declaration of Covenants and Restrictions.

6.

It is expressly understood and agreed that this Covenant does not grant or convey to members of the general public, any rights of ownership, interest in, or use of the protected property.

7.

The United States Department of the Army, Corps of Engineers, may enforce the provisions of this covenant pursuant to the Clean Water Act and/or the Rivers & Harbors Act of 1899 and implementing regulations. The Government may bring an action at law or in equity against any person/s or entity violating this covenant, and may seek injunctive relief to restrain any person from violating any covenant contained herein. However, no violation of this covenant shall result in a forfeiture or reversion of title. In an enforcement action under the Clean Water Act, the Corps of Engineers may be entitled to a complete restoration for any violation, as well as any other remedy available under law or equity.

8.

The Corps of Engineers, Savannah District shall at reasonable times and upon notice to the owner, have the right of ingress and egress to inspect the property and in order to monitor

9.

This covenant shall be binding upon the Covenantor, its heirs, successors and assigns, and upon occupiers or users of the protected property forever. This covenant shall not terminate upon some fixed amount of time, but shall run with the land both as to benefit and as to burden. This covenant is established as a conservation benefit to the general public for the purpose of preserving waters of the United States, including wetlands, wetland buffers, streamside lands, adjacent uplands, and open areas associated with aquatic and general wildlife habitat. Furthermore, this covenant carries out the statutory requirement of Section 404 of the Clean Water Act (33 U.S.C.§1344) and Section 10 of the Rivers & Harbors Act of 1899 (33 Ü.S.C.§403).

10.

Covenantor shall execute and record this instrument in timely fashion in the Office of the Clerk of Superior Court in the county in which this Property is located and provide the Corps of Engineers with a copy of the recorded restrictive covenant and exhibits.

IN WITNESS WHEREOF Covenantor has duly executed this covenant on this the que day of

OWNER/COVENANTOR	Samuel S. Olens Print name
	Sign name
	Chairman, Board of Commissioners Title or Authority
SIGNED, SEALED AND DELIVE	RED IN THE PRESENCE OF:
	Witness (Print name)  Witness Signature  APPROVED  PERMINUTES OF  CORB COUNTY  BOARD OF COMMISSIONERS  12/10/02
County in Georgia  My commission expires:	Notary Public RAP NOTARY  COBB NOTARY  EXP. 423/03

FORWARD RECORDED COPY OF DOCUMENTS TO:

"APPROVED AS TO FORM

4ssoc, COUNTY ATTORNEY"

# Exhibit A

## DEPARTMENT OF THE ARMY PERMIT

Permittee: Mr. James M. Croy

Cobb County Department of Transportation

100 Cherokee Street, Suite 150 Marietta, Georgia 30090-9612

Permit Number: 960010730

ISSUING OFFICE:

Savannah District U.S. Army Corps of Engineers Post Office Box 889 Savannah, GA 31402-0889

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U.S. Army Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

PROJECT DESCRIPTION: To extend Runway 27, and the north and south parallel taxiway, 1,600 feet to the east. A 600 foot Federal Aviation Agency (FAA) required runway safety area will be built at the end of the proposed extension. Areas of wetlands and waters of the United States to be impacted consist of filling a 1,450 foot section (1.34 acres) of the existing creek channel impacting 1.34 acres and filling an additional 3.05 acres of wetlands to extend the runway. Total impacts to wetlands and jurisdictional waters of the United States will be 4.39 acres. The stream will be relocated to a 1,065 foot long culvert constructed under the runway extension. According to the applicant, water will re-enter the existing creek channel north of the project site. Approximately 700 feet of new channel will be created south of the proposed runway extension. Best management practices, which would include, but not limited to, silt fencing, rip-rap, temporary or permanent erosion control matting, temporary seeding, and sediment control basins, will be used during the construction of the proposed project. Upon completion of the project, side slopes will be permanently seeded, to minimize turbidity in Noonday Creek.

To mitigate for unavoidable impacts the permittee will use on-site preservation, enhancement, and creation as well as off-site enhancement downstream of the Airport on Noonday Creek. The on-site preservation area is located on the floodplain of Noonday Creek. On-site enhancement will be provided by the addition of a 50 foot wide buffer area that will surround an estimated 80

percent of the perimeter of the preservation area. Another 50 foot wide buffer will be established along 1,000 feet of Noonday Creek, north of the runway extension. Also a new 700 foot long channel would be created south of the runway extension as part of the diversion of Noonday Creek. Off-site enhancement will be provided in a linear park along Noonday Creek extending from the existing Noonday Creek Park to the restoration Site 18. This area could eventually include bicycle and hiking trails, thereby improving recreational and educational value of the site while providing a buffer for a significant portion of Noonday Creek.

PROJECT LOCATION: The site is located on Noonday Creek at the Cobb County Airport near Kennesaw, Cobb County, Georgia.

#### PERMIT CONDITIONS:

#### General Conditions:

- 1. The time limit for completing the work authorized by this individual permit ends on June 30, 2002. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
- 2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
- 3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
- 4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
- 5. If a conditioned water quality certification has been issued for your project, you must comply with conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

## Special Conditions:

- 1. That no construction activity or stockpiling shall occur in wetland areas outside of the cleared project right-of-way.
- 2. That the permittee shall install and maintain siltation and erosion control measures prior to, and upon completion of the filling at the site. These would include, but not be limited to, utilization of straw mulching, hay bales, temporary seeding, permanent vegetation, diking techniques, silt screens and any other appropriate sediment trapping and control techniques.
- 3. That the permittee shall utilize, to the maximum extent practicable, best management techniques so as not to exceed the above noted erosion/sediment control measures.
- 4. That the permittee shall comply with all Federal regulations concerning encroachment on floodplain and special flood hazard areas before beginning construction.
- 5. That the work shall be accomplished in accordance with approved project plans, including the wetland mitigation plan dated April 1997, and the addendum to the mitigation plan dated June 9, 1997, drawings, and the Georgia Water Quality Certification dated June 6, 1997.
- 6. That as compensatory wetland mitigation, the permittee shall preserve approximately 12 acres of wetlands on the floodplain of Noonday Creek, northeast of the existing airport facilities, on airport property. The permittee shall establish on site enhancement by establishing a 50 foot wide buffer for 1,000 feet along each side of Noonday Creek, north of the runway extension. The permittee shall create a new 700 foot channel with 50 foot wide buffers on each side located south of the runway extension, as part of the diversion of Noonday Creek. The permittee shall restore 4 acres of wetlands along the floodplain of Noonday Creek identified as Site 18 in the mitigation plan dated April 1997 and the addendum to the plan dated June 6, 1997.
- 7. That should the permittee be unable to acquire the site identified in the approved mitigation plan, the permittee shall provide an alternate equivalent site on which to implement a similar mitigation plan. Should the permittee submit a request for the use of an alternate mitigation site, with it's associated mitigation plan, this site and plan will require joint review and final acceptance by the resource agencies, prior to implementation. Upon agency review of any proposed alternate mitigation site, the exact acreage of required compensatory mitigation may vary due to differences in functions and values

between the approved mitigation site and any proposed alternate site.

- 8. That the permittee shall monitor the enhancement and restoration mitigation sites for 5 years to measure and document project success and to determine necessary remedial measures. Monitoring parameters will include as a minimum, photographic documentation of the mitigation site from permanent marked, stations, plant species composition and percent cover at the mitigation site by transect sampling and groundwater levels as determined by properly positioned and replicated shallow groundwater monitoring wells.
- 9. The permittee shall include the following information in annual inspection reports:
- (a) A map showing the location of the sample plots and photographs of each sample plot at the time of inspection.
- (b) Mortality rates of planted trees and growth of survivors.
- (c) Numbers of naturally regenerated living trees by species for each plot.
- (d) Visual estimated of the percent ground cover on each plot by species of shrubs and herbaceous plants.
- (e) Ground water monitor well readings with a map showing the location of each well.
- 10. The permittee shall take immediate remedial action to correct deficiencies where mitigation areas fail to meet the objectives as outlined in the attached mitigation plan.
- 11. The permittee shall perform maintenance on each mitigation area for 5 consecutive years upon completion of the restoration or enhancement work. Should a major deficiency be identified, remedial action shall be completed and the 5 year maintenance and monitoring period shall start over.
- 12. Upon completion of the stated objectives of the mitigation plan and compliance with applicable permit special conditions, the permittee shall provide sufficient information to this office for jurisdictional determinations to be made on each wetland restoration, enhancement and preservation area. The determinations of this office will be made under the criteria of the 1987 "Corps of Engineers Wetland Delineation Manual," with the understanding that this office used this manual to verify the wetland impacts authorized by this permit.
- 13. Should a jurisdictional determination of this office verify that a wetland restoration, enhancement or preservation area is deficient in meeting replacement acreage, as described in the

attached mitigation plan, the permittee shall provide supplemental mitigation necessary to offset this deficiency. However, should an area exceed its stated replacement acreage, this excess may be applied to compensate for deficiencies of other areas.

- 14. Prior to construction under this Permit, the permittee shall execute and record in the county of record, the attached "Restrictive Covenant" on the mitigation area as surveyed by the permittee and attached to the Restrictive Covenant as Exhibit A.
- 15. The permittee shall provided a copy of the recorded deed restriction to this office prior to commencement of construction.
- 16. That the fill material shall be obtained from a borrow area that is free of contaminates and pollutants.
- 17. That the fill material shall not be taken from an area that contains cultural resources.
- 18. That each phase of the work shall be completed quickly to minimize the period of environmental disturbance.
- 19. That the disturbance and destruction of vegetation be minimized.
- 20. That pre-project hydrology in both flowing and standing water be maintained during and after construction.
- 21. That all erosion control devices be maintained in a functioning capacity and checked weekly and after each rain event.
- 22. That after construction, natural vegetative cover be restored to disturbed areas.
- 23. That all non-biodegradable erosion control material and construction debris be disposed of in compliance with applicable law.
- 24. That reduced or natural water flow patterns in nearby wetlands be restored during and after construction.

## FURTHER INFORMATION:

- 1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
- () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
  - (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

- 2. Limits of this authorization.
- a. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed federal projects.
- 3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
- 4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
- 5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the U.S. Army Corps of Engineers will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.



This permit becomes effective when the federal official, designated to act for the Secretary of the Army, has signed below.

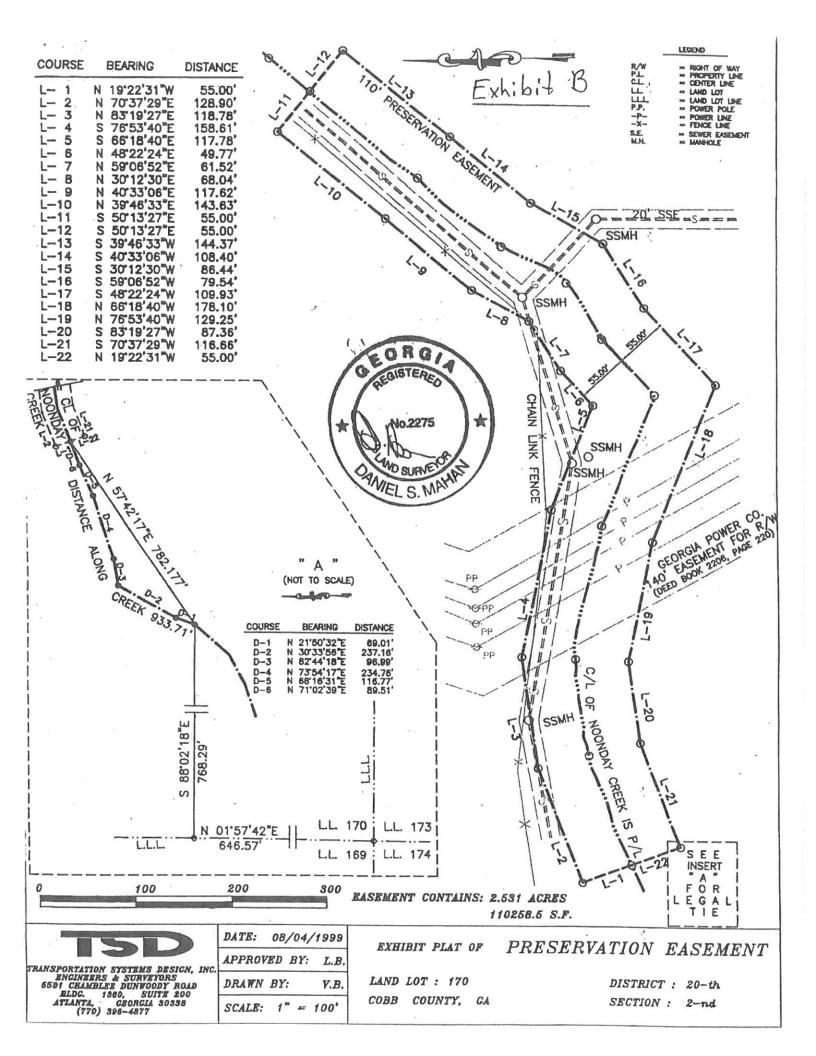
Issued for and in behalf of:

Grant M. Smith Colonel, U.S. Army District Engineer

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities with compliance with its

, (TRANSFEREE)	(DATE)

terms and conditions, have the transferee sign and date below.



## PRESERVATION EASEMENT

All that 110 foot strip of land lying 55 feet each side of and parallel to the centerline of Noonday Creek. Said tract or parcel is located in Land Lot 170 of the 20th Land District, 2nd Section, Cobb County, Georgia and being more particularly described as follows:

To find the True Point Of Beginning, commence at the land lot corner common to Land Lots 169, 170, 173, and 174;

thence, along a land lot line common to land lots 169 and 170 North 01 degrees 57 minutes 42 seconds East for a distance of 646.57 feet to a point on said land lot line;

thence, South 88 degrees 02 minutes 18 seconds East for a distance of 768.29 feet to a point in the centerline of Noonday Creek;

thence, the following six courses along the center line of Noonday Creek:

North 21 degrees 50 minutes 32 seconds East for a distance of 69.01 feet to a point; North 30 degrees 33 minutes 56 seconds East for a distance of 237.16 feet to a point; North 82 degrees 44 minutes 18 seconds East for a distance of 96.99 feet to a point; North 73 degrees 54 minutes 17 seconds East for a distance of 234.76 feet to a point; North 68 degrees 16 minutes 31 seconds East for a distance of 116.77 feet to a point; North 71 degrees 02 minutes 39 seconds East for a distance of 89.51 feet to a point; said point being the TRUE POINT OF BEGINNING.

thence, leaving said creek centerline North 19 degrees 22 minutes 31 seconds West for a distance of 55.00 feet to a point;

thence, North 70 degrees 37 minutes 29 seconds East for a distance of 128.90 feet to a point; thence, North 83 degrees 19 minutes 27 seconds East for a distance of 118.78 feet to a point; thence, South 76 degrees 53 minutes 40 seconds East for a distance of 158.61 feet to a point; thence, South 66 degrees 18 minutes 40 seconds East for a distance of 117.78 feet to a point; thence, North 48 degrees 22 minutes 24 seconds East for a distance of 49.77 feet to a point; thence, North 59 degrees 06 minutes 52 seconds East for a distance of 61.52 feet to a point; thence, North 30 degrees 12 minutes 30 seconds East for a distance of 68.04 feet to a point; thence, North 40 degrees 33 minutes 06 seconds East for a distance of 117.62 feet to a point; thence, North 39 degrees 46 minutes 33 seconds East for a distance of 143.63 feet to a point; thence, South 50 degrees 13 minutes 27 seconds East for a distance of 55.00 feet to a point; thence, South 50 degrees 13 minutes 27 seconds East for a distance of 55.00 feet to a point;

thence, leaving the centerline of said creek South 50 degrees 13 minutes 27 seconds East for a distance of 55.00 feet to a point;

thence, South 39 degrees 46 minutes 33 seconds West for a distance of 144.37 feet to a point; thence, South 40 degrees 33 minutes 06 seconds West for a distance of 108.40 feet to a point; thence, South 30 degrees 12 minutes 30 seconds West for a distance of 86.44 feet to a point; thence, South 59 degrees 06 minutes 52 seconds West for a distance of 79.54 feet to a point; thence, South 48 degrees 22 minutes 24 seconds West for a distance of 109.93 feet to a point; thence, North 66 degrees 18 minutes 40 seconds West for a distance of 178.10 feet to a point; thence, North 76 degrees 53 minutes 40 seconds West for a distance of 129.25 feet to a point; thence, South 83 degrees 19 minutes 27 seconds West for a distance of 87.36 feet to a point; thence, South 70 degrees 37 minutes 29 seconds West for a distance of 116.66 feet to a point; thence, North 19 degrees 22 minutes 31 seconds West for a distance of 55.00 feet to a point; said point being the TRUE POINT OF BEGINNING.

Said tract contains 2.531 acres or 110,258.5 square feet.

Exhibit C

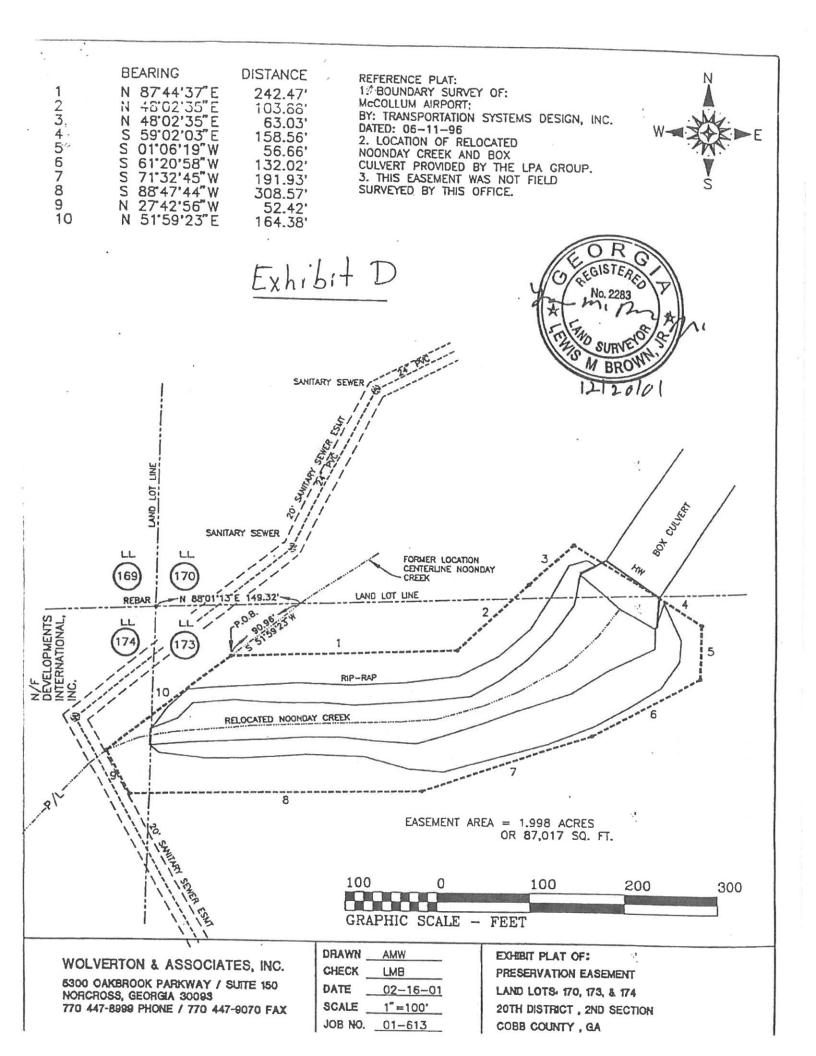


Exhibit E

## SOUTH PRESERVATION EASEMENT

All that tract or parcel of land lying and being in Land Lots 170, 173 and 174 of the 20th Land District, 2nd Section, Cobb County Georgia and being more particularly described as follows:

To find the TRUE POINT OF BEGINNING, commence at the land lot corner common to Land Lots 169, 170, 173, and 174 said section, district and county;

thence, North 88 degrees 01 minutes 13 seconds East for a distance of 149.32 feet leaving said land lot corner and along the land lot line common to Land Lots 170 and 173 to a point at the intersection of the centerline of the former location of Noonday Creek;

thence, South 51 degrees 59 minutes 23 seconds West for a distance of 90.96 feet leaving said land lot line and along the centerline of the former location of Noonday Creek to the TRUE POINT OF BEGINNING, said former centerline of Noonday Creek is a property line common to Cobb County and now or formerly Industrial Developments International, Inc.;

thence, North 87 degrees 44 minutes 37 seconds East for a distance of 242.47 feet leaving said property line to a point;

thence, North 48 degrees 02 minutes 35 seconds East for a distance of 103.88 feet to a point;

thence, North 48 degrees 02 minutes 35 seconds East for a distance of 63.03 feet to a point;

thence, South 59 degrees 02 minutes 03 seconds East for a distance of 158.56 feet to a point;

thence, South 01 degrees 06 minutes 19 seconds West for a distance of 56.66 feet to a point;

thence, South 61 degrees 20 minutes 58 seconds West for a distance of 132.02 feet to a point;

thence, South 71 degrees 32 minutes 45 seconds West for a distance of 191.93 feet to a point;

thence, South 88 degrees 47 minutes 44 seconds West for a distance of 308.57 feet to a point;

thence; North 27 degrees 42 minutes 56 seconds West for a distance of 52.42 feet to a point in the centerline of Noonday Creek;

thence, North 51 degrees 59 minutes 23 seconds East for a distance of 164.38 feet along said centerline of Noonday Creek to the TRUE POINT OF BEGINNING.

Together with and subject to covenants, easements, and restrictions of record.

Said property contains 1.998 acres or 87,017 square feet.



## United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Georgia Ecological Services Field Office 355 East Hancock Avenue Room 320 Athens, GA 30601

Phone: (706) 613-9493 Fax: (706) 613-6059



In Reply Refer To: March 22, 2019

Consultation Code: 04EG1000-2019-SLI-1091

Event Code: 04EG1000-2019-E-02018

Project Name: RYY Master Plan Update EA

Subject: List of threatened and endangered species that may occur in your proposed project

location, and/or may be affected by your proposed project

#### To Whom It May Concern:

This list identifies threatened, endangered, proposed and candidate species, as well as critical habitat, that may be affected by your proposed project. This list may change before your project is completed. Under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation.

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*). Projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle\_guidance.html).

Wind energy projects should follow the wind energy guidelines http://www.fws.gov/windenergy/for minimizing impacts to migratory birds and bats.

Guidance for minimizing impactsof communcation towers on migratory birds can be found under the "Bird Hazards" tab at: <a href="https://www.fws.gov/migratorybirds">www.fws.gov/migratorybirds</a>.

### Attachment(s):

Official Species List

# **Official Species List**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Georgia Ecological Services Field Office 355 East Hancock Avenue Room 320 Athens, GA 30601 (706) 613-9493

## **Project Summary**

Consultation Code: 04EG1000-2019-SLI-1091

Event Code: 04EG1000-2019-E-02018

Project Name: RYY Master Plan Update EA

Project Type: TRANSPORTATION

Project Description: There are four elements associated with the 0- to 10-year planning period

of the Master Plan Update being evaluated in this Environmental

Assessment: Taxiway 'A' Relocation, South Side Basing Area, Runway 9

RSA Expansion, and Taxiway 'B' Relocation.

## Project Location:

Approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/place/33.91255044929805N84.58504329828065W">https://www.google.com/maps/place/33.91255044929805N84.58504329828065W</a>



Counties: Cobb, GA

## **Endangered Species Act Species**

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## **Mammals**

NAME

Northern Long-eared Bat Myotis septentrionalis

Threatened

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>

#### **Fishes**

NAME STATUS

Cherokee Darter *Etheostoma scotti* 

Threatened

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2553

## **Flowering Plants**

NAME STATUS

Little Amphianthus Amphianthus pusillus

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6445">https://ecos.fws.gov/ecp/species/6445</a>

Michaux's Sumac Rhus michauxii

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5217">https://ecos.fws.gov/ecp/species/5217</a>

White Fringeless Orchid Platanthera integrilabia

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1889">https://ecos.fws.gov/ecp/species/1889</a>

Threatened

Threatened

Endangered

## **Critical habitats**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

## Known Occurrences of Protected Species in Cobb County (export date 3/18/19)

County	Group	Scientific name	Common name	Federal	State	Habitat
Cobb	Birds	Ammodramus henslowii	Henslow's Sparrow		R	Grassy areas, especially wet grasslands, pitcher plant bogs, pine flatwoods, power line corridors in CP. Requires open veg at ground level
Cobb	Invertebrates	Cambarus howardi	Chattahoochee Crayfish		Т	riffle areas of streams; in rocks with swift-flowing water
Cobb	Invertebrates	Cyclonaias infucata	Sculptured Pigtoe			Large rivers to small creeks
Cobb	Fishes	Cyprinella callitaenia	Bluestripe Shiner		R	Flowing areas in large creeks and medium-sized rivers over rocky substrates
Cobb	Invertebrates	Elliptio arctata	Delicate Spike		Е	Creeks and rivers with moderate current; mainly in crevices and under large rocks in silt deposits
Cobb	Fishes	Etheostoma scotti	Cherokee Darter	LT	Т	Small to medium-sized creeks with moderate current and rocky substrates
Cobb	Amphibians	Hemidactylium scutatum	Four-toed Salamander			Swamps; boggy streams and ponds; hardwood forests
Cobb	Fishes	Hybopsis sp. 9	Etowah Chub			Generally in creeks and small to medium rivers over sand-silt bottom, usually in pools adjacent to riffle areas.
Cobb	Invertebrates	Medionidus penicillatus	Gulf Moccasinshell	LE	E	Large rivers to small creeks; found in a variety of substrates
Cobb	Fishes	Micropterus cataractae	Shoal Bass			Large river, shoal and fluvial specialist
Cobb	Fishes	Notropis hypsilepis	Highscale Shiner		R	Flowing areas of small to large streams over sand or bedrock substrates
Cobb	Birds	Nyctanassa violacea	Yellow-crowned Night-heron			River swamps; marshes; cypress/gum ponds
Cobb	Mammals	Perimyotis subflavus	Tri-colored Bat			Open forests with large trees and woodland edges; roost in tree foliage; hibernate in caves or mines with high humidity
Cobb	Reptiles	Pituophis melanoleucus melanoleucus	Northern Pine Snake			Dry pine or pine-hardwood forests
Cobb	Vascular Plants	Aesculus glabra	Ohio Buckeye			Mesic forests in mafic soil
Cobb	Vascular Plants	Amphianthus pusillus	Pool Sprite, Snorkelwort	LT	Т	Vernal pools on granite outcrops
Cobb	Vascular Plants	Asplenium bradleyi	Bradley's Spleenwort			Sandstone, quartzite, rarely granite crevices
Cobb	Vascular Plants	Boechera missouriensis	Missouri Rockcress			Granite and amphibolite outcrops
Cobb	Vascular Plants	Calystegia catesbeiana ssp. sericata	Silky Bindweed			Sandy montane openings
Cobb	Vascular Plants	Cypripedium acaule	Pink Ladyslipper		U	Upland oak-hickory-pine forests; piney woods
Cobb	Vascular Plants	Draba aprica	Sun-loving Draba		E	Granite and amphibolite outcrops, usually in redcedar litter
Cobb	Vascular Plants	Nestronia umbellula	Indian Olive		R	Mixed with dwarf shrubby heaths in oak-hickory-pine woods; often in transition areas between flatwoods and uplands
Cobb	Vascular Plants	Penstemon pallidus	Eastern White Beardtongue			Limestone and shale barrens
Cobb	Vascular Plants	Platanthera integrilabia	Monkeyface Orchid	LT	Т	Red maple-gum swamps; peaty seeps and streambanks with Parnassia asarifolia and Oxypolis rigidior
Cobb	Vascular Plants	Pycnanthemum curvipes	Stone Mountain Mint			Rocky, upland oak-hickory forests
Cobb	Vascular Plants	Rhus michauxii	Dwarf Sumac	LE	Е	Open forests over ultramafic rock
Cobb	Vascular Plants	Schisandra glabra	Bay Star-vine		Т	Rich woods on stream terraces and lower slopes
Cobb	Vascular Plants	Symphyotrichum georgianum	Georgia Aster		Т	Upland oak-hickory-pine forests and openings; sometimes with Echinacea laevigata or over amphibolite
Cobb	Vascular Plants	Trillium lancifolium	Lanceleaf Trillium			Floodplain forests; also lower rocky slopes over basic soils
Cobb	Vascular Plants	Veratrum hybridum	Broadleaf Bunchflower			Mesic deciduous hardwood forests
Cobb	Vascular Plants	Zanthoxylum americanum	Northern Prickly-ash			Rocky, openly wooded slopes; river banks and terraces

### **IPaC** Information for Planning and Consultation

U.S. Fish & Wildlife Service

## **IPaC** resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## **Project information**

NAME

RYY Master Plan Update EA

LOCATION

Cobb County, Georgia



DESCRIPTION

There are four elements associated with the 0- to 10-year planning period of the Master Plan Update being evaluated in this Environmental Assessment: Taxiway 'A' Relocation, South Side Basing Area, Runway 9 RSA Expansion, and Taxiway 'B' Relocation.

## Local office

Georgia Ecological Services Field Office

**(**706) 613-9493

**(706)** 613-6059

355 East Hancock Avenue Room 320 Athens, GA 30601

# Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Log in to IPaC.
- 2. Go to your My Projects list.
- 3. Click PROJECT HOME for this project.
- 4. Click REQUEST SPECIES LIST.

Listed species and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

- 1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
- 2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

#### Mammals

NIANAE

NAME		STATUS
Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	15	Threatened
Fishes		
NAME	~ 1 1 1	STATUS
Cherokee Darter Etheostoma scotti  No critical habitat has been designated for this species.  https://ecos.fws.gov/ecp/species/2553		Threatened
Flowering Plants	2	
NAME		STATUS
Little Amphianthus Amphianthus pusillus  No critical habitat has been designated for this species.  https://ecos.fws.gov/ecp/species/6445		Threatened
Michaux's Sumac Rhus michauxii		Endangered

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/5217

White Fringeless Orchid Platanthera integrilabia No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1889 Threatened

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <a href="http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php">http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php</a>
- Measures for avoiding and minimizing impacts to birds <a href="http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php">http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php</a>
- Nationwide conservation measures for birds <a href="http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf">http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf</a>

The birds listed below are birds of particular concern either because they occur on the <u>USFWS Birds of Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found <u>below</u>.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>

Breeds Sep 1 to Jul 31

Blue-winged Warbler Vermivora pinus

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds May 1 to Jun 30

Cerulean Warbler Dendroica cerulea

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/2974

Eastern Whip-poor-will Antrostomus vociferus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden Eagle Aquila chrysaetos

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas

from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1680

Henslow's Sparrow Ammodramus henslowii

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/3941

Kentucky Warbler Oporornis formosus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

King Rail Rallus elegans

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

https://ecos.fws.gov/ecp/species/8936

Prairie Warbler Dendroica discolor

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prothonotary Warbler Protonotaria citrea

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker Melanerpes erythrocephalus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rusty Blackbird Euphagus carolinus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability

Breeds Apr 28 to Jul 20

Breeds May 1 to Aug 20

Breeds elsewhere

Breeds May 1 to Aug 31

Breeds Apr 20 to Aug 20

Breeds May 1 to Sep 5

Breeds May 1 to Jul 31

Breeds Apr 1 to Jul 31

Breeds May 10 to Sep 10

Breeds elsewhere

Breeds May 10 to Aug 31

of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

#### Breeding Season (=)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

#### Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

#### No Data (-)

A week is marked as having no data if there were no survey events for that week.

#### **Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

									■ probability of	presence breed	ding season   su	ırvey effort – no data
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Bald Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities	<b>####</b>	1111	1111	####	++++	####	###	++++	+		HII	HH
Blue-winged Warbler BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)	++++	++++	++++	++++	####	####	++++	++++	HIII	####	++++	++++
Cerulean Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	† <b>##</b>	####	++++	<mark>   </mark>	hiji	1111	++++	++++	++++
Eastern Whip-poor-will BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	+++	1111	IIII	<del>    </del> +	++++	++++	++++	++++
Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities	<u>++++</u>	++++	++++	++++	++++	FFEE	ш	++++	++++	+++Ⅲ	++++	++++
Henslow's Sparrow BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	1111	++++	++++	++++	++++	++##	<b>##</b> ##	++++
Kentucky Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	## <mark>##</mark>	Titi	++++	++++	###+	#+++	++++	++++	++++
King Rail BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	+++#	+111	++++	++++	++++	++++	++++	++++	++++
Prairie Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	<del>[</del> ]  +  +	++++	***	++++	####	++++	++++	****	<b>##</b> ††	++++	++++
Prothonotary Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	1111	++++	++++	++++	<b>##</b> † <b>#</b>	++++	++++	++++

#### Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

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Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

#### What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

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The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey, banding, and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

#### What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

#### How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Birds Birds Birds Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

#### What are the levels of concern for migratory birds?

Wood Thrush

BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

#### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

#### What if I have eagles on my list?

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If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

#### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort so ro no data bar means a lack of data and, therefore, a lack of certainty between the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## **Facilities**

## National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

#### Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

## Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers District</u>.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

The area of this project is too large for IPaC to load all NWI wetlands in the area. The list below may be incomplete. Please contact the local U.S. Fish and Wildlife Service office or visit the NWI map for a full list.

FRESHWATER EMERGENT WETLAND

PEM1F

PEM1A

PEM1Ad

PEM1C

PEM1Fh

PEM1Ah

PEM1Ch

PEM1Cd

PEM1Cx

FRESHWATER FORESTED/SHRUB WETLAND

PFO<sub>1</sub>A PFO1C PSS1A PFO5/EM1F PFO1/EM1F PSS1C PFO1Ah PSS1Ah PSS1F PFO1Cx PSS1Ch PFO1/4A PFO1B PFO1F PFO1/SS1C PFO1Cd PSS1Fh PFO1Ad PFO1Ch PSS1/4A PFO1Ax PSS1Fx PFO5Hh

FRESHWATER POND

<u>PUBHh</u>

**PUBHx** 

PUBH PUBGx

PUBFx

TODIA

<u>PUBFh</u>

LAKE

<u>L1UBHh</u>

RIVERINE

R2UBH

**R5UBH** 

R2UBHx

R4SBC

R4SBCx

**R3UBH** 

**R2USA** 

A full description for each wetland code can be found at the National Wetlands Inventory website

#### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

# APPENDIX C Air Quality Assessment Report

# COBB COUNTY INTERNATIONAL AIRPORT AIR QUALITY ASSESSMENT REPORT AND APPENDIX

Prepared by:

KB Environmental Sciences, Inc.

**Prepared for:** 

Michael Baker International



#### 1. INTRODUCTION

This report discusses and presents the findings of the air quality assessment conducted in support of the Environmental Assessment (EA) for Cobb County International Airport-McCollum Field (RYY), located in Atlanta, Georgia. The EA is being prepared to evaluate the potential operational and construction-related impacts associated with proposed Master Plan improvement projects at the airport. The improvement projects consist of (but are not limited to) the relocation of Taxiways A and B, demolition/removal of existing structures and construction of new pavements within the southwest basing area and Runway 9 safety area.

#### 2. EXISTING CONDITIONS

This section describes the regulatory agencies involved in the management of air quality conditions within the study area of the proposed improvement projects; and current air quality regulatory requirements, standards, and criteria. The potential impacts to air quality that could result from the improvement projects are discussed in Section 3 of this Air Quality Assessment Report.

#### 2.1 Regulatory Agencies

An airport air quality assessment requires consideration under both the federal Clean Air Act (CAA), and the National Environmental Policy Act (NEPA). The CAA sets the overall policy for managing air quality across the nation. The NEPA process discloses the air quality impacts on the human environment that result from major federal projects. The management of air quality conditions in Georgia, including the area around RYY airport, is the responsibility of federal, state, regional, and local governmental air quality regulatory agencies. Under the federal CAA, the U.S. Environmental Protection Agency (EPA) establishes the guiding principles and policies for protecting air quality conditions throughout the nation. This includes promulgating the National Ambient Air Quality Standards (NAAQS), for which ambient air pollutant concentrations must be below to safeguard public health, welfare and the environment, as well as approving State Implementation Plans (SIPs).

The Federal Aviation Administration (FAA) is the primary agency involved in, and responsible for, ensuring that air quality impacts associated with proposed airport projects adhere to the reporting and disclosure requirements of the NEPA as well as the General Conformity rule of the CAA. At the state level, the Environmental Protection Division (EPD) of the Georgia Department of Natural Resources (DNR) is responsible for enforcing the CAA including compliance with the NAAQS, the issuance of air emission source permits, monitoring of air quality conditions, and assisting in the preparation of the SIP. Furthermore, the Atlanta Regional Commission (ARC) is the designated Metropolitan Planning Organization (MPO) for the greater Atlanta area and is responsible for developing a long-range Regional Transportation Plan (RTP) and short-range Transportation Improvement Plan (TIP) that must conform to the air quality goals established in the SIP. **Table 1** provides a summary listing of the roles and responsibilities of each of these agencies.

	Table 1. Regulatory Agencies Involved in Air Quality					
	Agency	Roles and Responsibilities				
Federal Agency	U.S. Environmental Protection Agency (EPA)	Sets national clean air policies under the federal Clean Air Act (CAA); promulgates the National Ambient Air Quality Standards (NAAQS); reviews and approves State Implementation Plans (SIPs).				
Federal Aviation Administration (FAA)		Responsible for reviewing and approving the Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) and ensuring compliance with the General Conformity Rule of the CAA.				
State Agency	Georgia Department of Natural Resources (DNR)	Responsible for the management and conservation of Georgia's natural and cultural resources.				
	Environmental Protection Division (EPD) of the Georgia DNR	Charged with protecting Georgia's air, land, and water resources through the authority of state and federal environmental statutes. Responsible for				

Agency	Roles and Responsibilities				
	the development of the Georgia SIP and for the management of air quality within Georgia.				
Georgia Regional Transportation Authority (GRTA) <sup>1</sup>	Directed to address transportation mobility and air quality in metropolitan Atlanta. In 2017, GRTA combined with the State Road and Tollway Authority (SRTA) to jointly provide the services of both state authorities. As such, all functions for both authorities are combined under the staff and leadership of SRTA.				
The Georgia Department of Transportation (GDOT)	Addresses mobility, air quality and land use and how they relate to the transportation needs of metro Atlanta, including both roads and public transit.				
Atlanta Regional Commission (ARC) <sup>2</sup>	Is the federally designated Metropolitan Planning Organization (MPO) and is responsible for developing a long-range Regional Transportation Plan (RTP) and short-range Transportation Improvement Plan (TIP) that conform to the air quality goals established in the SIP, according to the guidelines outlined in the Metropolitan Planning Regulations and Transportation Conformity Rule.				
	Transportation Authority (GRTA) <sup>1</sup> The Georgia Department of Transportation (GDOT)  Atlanta Regional				

#### Notes

#### 2.2 National Ambient Air Quality Standards

The NAAQS are set to safeguard public health and environmental welfare against the detrimental effects of ambient air pollution and are defined as primary and secondary standards. Primary NAAQS are health-based standards geared toward protecting sensitive or at-risk portions of the population such as asthmatics, children, and the elderly. Secondary NAAQS are welfare-oriented and are designed to prevent decreased visibility and damage to animals, vegetation, and physical structures. NAAQS have been established for six common air pollutants, referred to as "criteria" air pollutants—carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM) which includes particulate matter with a diameter of 10 microns or less (PM<sub>10</sub>) and a diameter of 2.5 microns or less (PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). The NAAQS are listed in **Table 2**.

Table 2. National Ambient Air Quality Standards						
Pollut	ant	Primary/ Secondary Averaging Time		Level		
C   M :  (CO)		Deiman	8 hours	9 ppm		
Carbon Mono	xide (CO)	Primary	1 hour	35 ppm		
Lead (Pb)		Primary and secondary	Rolling 3-month average	$0.15  \mu g/m^3$		
Nitrogen Dioxide (NO <sub>2</sub> )		Primary	1 hour	100 ppb		
		Primary and secondary	1 year	53 ppb		
Ozone (O <sub>3</sub> )		Primary and secondary	8 hours	0.07 ppm		
		Primary	1 year	12 μg/m <sup>3</sup>		
Particulate	PM <sub>2.5</sub>	Secondary	1 year	15 μg/m <sup>3</sup>		
Matter (PM)		Primary and secondary	24 hours	35 μg/m <sup>3</sup>		
	PM <sub>10</sub>	Primary and secondary	24 hours	150 μg/m <sup>3</sup>		
Cultur Diavida	(50.)	Primary	1 hour	75 ppb		
Sulfur Dioxide (SO <sub>2</sub> )		Secondary	3 hours	0.5 ppm		

Source: EPA, National Ambient Air Quality Standards, <a href="https://www.epa.gov/criteria-air-pollutants/naaqs-table">https://www.epa.gov/criteria-air-pollutants/naaqs-table</a>, 2019.

<sup>&</sup>lt;sup>1</sup> GRTA's jurisdiction encompasses 13 counties: Cherokee, Clayton, Coweta, Cobb, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale.

<sup>&</sup>lt;sup>2</sup> The ARC metropolitan planning area comprises City of Atlanta and the counties of Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale, as well as portions of the counties of Barrow, Bartow, Newton, Spalding and Walton.

#### 2.3 Air Quality Designations

The EPA designates areas as either in attainment or nonattainment. An area with measured criteria pollutant concentrations that are lower than the NAAQS is designated as attainment and an area with concentrations that exceed the NAAQS is designated as nonattainment. Once a nonattainment area meets the NAAQS and the additional re-designation requirements in the CAA, the EPA will designate the area as maintenance. Nonattainment areas are further classified as extreme, severe, moderate, or marginal. Notably, an area is designated as unclassifiable when there is lack of sufficient data to form the basis of an attainment status determination.

The CAA requires states to develop a general plan to attain and/or maintain the primary and secondary NAAQS in all areas of the country and to develop a specific plan to attain the standards for each area designated nonattainment for a NAAQS. These plans, known as SIPs, are developed by state and local air quality management agencies and submitted to the EPA for approval. The airport is located in Cobb County, which is currently designated as a "marginal" nonattainment area for the 2008 8-hour O<sub>3</sub> standard; and as of June 2, 2017, a maintenance area for the 2015 8-hour O<sub>3</sub> standard. **Table 3** presents the air quality designations of Cobb County.

Table 3. Air Quality Designations								
County	County Pollutant Area Name Classification							
Cobb	8-hour Ozone (O₃) (2008)	Atlanta GA	Re-designation to Maintenance on 6/2/2017	Whole				
	8-hour O₃ (2015)	Atlanta, GA	Marginal Nonattainment	whole				
Notes: The column "Whole or/Part County" indicates whether only a part of the county or the whole county is designated								

Notes: The column "Whole or/Part County" indicates whether only a part of the county or the whole county is designated nonattainment/maintenance.

Source: EPA, Green Book, https://www3.epa.gov/airquality/greenbook/anayo\_ga.html, 2019.

#### 2.4 General/Transportation Conformity

The General Conformity Rule of the CAA prohibits federal agencies (including the FAA) from permitting or funding projects occurring in EPA-designated NAAQS nonattainment or maintenance areas that do not conform to an EPA-approved SIP. Because the proposed new airport will be located an area that is currently an area designated as nonattainment/maintenance, the General Conformity requirements outlined under the federal CAA apply and accordingly a General Conformity Applicability Analysis is required.

Under the General Conformity Rule, project-related emissions of the applicable nonattainment/maintenance pollutants are compared to *de minimis* threshold levels. If the emissions exceed the thresholds, a formal Conformity Determination is required to demonstrate that the project conforms to the applicable SIP. Conversely, if the project-related emissions are below *de minimis* thresholds the project is assumed to conform to the SIP. The General Conformity *de minimis* threshold levels of the applicable pollutants in Cobb County are presented in **Table 4**.

Table 4. General Conformity de minimis Threshold Levels									
Pollutant Precursors Tons/year									
0(0)	Volatile Organic Compounds (VOC)	100							
Ozone (O <sub>3</sub> )	Nitrogen oxides (NO <sub>x</sub> )	100							
Note: NO <sub>x</sub> and VOCs are precursors to ozone formation.  Source: EPA, General Conformity <i>De Minimis</i> Tables, <a href="https://www.epa.gov/general-conformity/de-minimis-tables">https://www.epa.gov/general-conformity/de-minimis-tables</a> , 2019.									

The CAA also contains a Transportation Conformity Rule that functions similarly to the General Conformity Rule. The Transportation Conformity Rule restricts federal funding from highway or transportation projects

that do not conform to an EPA-approved SIP. Notably, the proposed improvements at RYY do not include highway (i.e., roadway) projects and therefore the Transportation Conformity Rule is not applicable.

#### 3. AIR QUALITY ANALYSIS

For the air quality analysis, operational and construction emission inventories were prepared. The following sections of this Air Quality Assessment Report present the results of the analysis. The analysis was conducted in accordance with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* and the accompanying 1050.1F Desk Reference, and the FAA's *Aviation Emissions and Air Quality Handbook*. Additional information and data developed in support of the air quality analysis are included in **Appendix A** of this report.

#### 3.1 Operational Emissions Inventory

An emissions inventory for aircraft operations at RYY was prepared for future year 2025 with (Build) and without (No Build) the proposed improvements. The future year for which the analysis was performed was based on the 2025 mid-term year of operations projected in the 2017 Master Plan Update for the airport's 20-year planning horizon. For the purpose of the analysis, the aircraft fleet mix and operations were assumed to remain the same between the No Build and Build alternatives, however, for the Build alternative, aircraft taxi times were adjusted to reflect the relocation of the Taxiways A and B. Airport operational emissions sources other than aircraft (i.e., auxiliary power units, ground service equipment and motor vehicles) were not considered in the analysis as these source emissions would not change as a result of the proposed improvements.

The aircraft-related emissions associated with the improvements were computed using the latest version of FAA's Aviation Environmental Design Tool (AEDT).<sup>2</sup> The FAA requires that the AEDT be used for the air quality assessment of proposed improvements at airports.

For disclosure purposes under NEPA, **Table 5** presents the project-related results of the 2025 operational emissions inventory for CO,  $NO_x$ ,  $SO_2$ , VOC,  $PM_{10}$  and  $PM_{2.5}$ . As shown, operational emissions associated with the proposed improvements are also well below the *de minimis* of 100 tons per year (tons/yr) for  $NO_x$  and VOC, the applicable maintenance pollutants/precursors. Therefore, a Conformity Determination is not required and the proposed project is presumed to comply with the SIP.

Table 5. Operational Emissions Inventories (tons/year)									
Year	Source	СО	NO <sub>x</sub>	SO <sub>2</sub>	voc	PM <sub>10</sub>	PM <sub>2.5</sub>		
2025	No Build	329.43	7.21	1.38	14.58	0.54	0.54		
	Build	328.96	7.20	1.38	14.50	0.54	0.54		
	Difference (Project-related)	-0.47	-0.01	<0.01	-0.08	<0.01	<0.01		
		100		100					
Exceeds de minimis? (Yes/No)			No		No				

Notes: Results may reflect rounding. CO = carbon monoxide, NOx = nitrogen oxide, SO<sub>2</sub> = sulfur dioxide, VOC = volatile organic compounds,  $PM_{10}$  = particulate matter with a diameter of 10 microns or smaller, and  $PM_{2.5}$  = particulate matter with a diameter of 2.5 microns or smaller. Source: FAA's AEDT, 2019.

<sup>&</sup>lt;sup>1</sup> Technical Report, 2017 Airport Master Plan Update, Cobb County International Airport prepared for Cobb County Department of Transportation by Michael Baker International.

<sup>&</sup>lt;sup>2</sup> AEDT 2d is the current release version of AEDT. Additional information on AEDT is available at: https://aedt.faa.gov/.

### 3.2 Construction Emissions Inventory

Construction projects and associated activities are temporary and variable depending on the type, duration and level of activity. These emissions occur predominantly in the engine exhaust of construction equipment and vehicles (e.g., scrapers, dozers, delivery trucks, etc.), but are also attributable to fugitive dust produced from construction materials staging, soil handling, un-stabilized land and wind erosion; as well as evaporative emissions from asphalt paving activities. The construction projects and schedules for the proposed improvements at RYY are summarized in **Table 6**.

Table 6. Construction Projec	ts and Schedules
Project	Schedule
Taxiway A Relocation	July 2020 - December 2022
Taxiway B Relocation	May 2023 - September 2025
Runway 9 Safety Area	May 2024 - July 2024
Southwest Basing Area	April 2021-November 2021
Source: Michael Baker International and KB Environmenta	al Sciences, Inc., 2019.

The Airport Construction Emissions Inventory Tool (ACEIT)<sup>3</sup>—a companion tool to the Transportation Research Board's (TRB's) Airport Cooperative Research Program (ACRP) Report 102 was used to obtain construction activities and equipment/vehicles activity data (e.g., equipment mixes/times). EPA's MOtor Vehicle Emissions Simulator (MOVES)<sup>4</sup> model was used to derive emission factors for both off-road construction equipment and on-road vehicles.

**Table 7** provides the results of the construction-related emissions for CO,  $NO_x$ ,  $SO_2$ , VOC,  $PM_{10}$  and  $PM_{2.5}$ . As shown, the total emissions associated with construction activities are also well below the *de minimis* threshold of 100 tons/yr for  $NO_x$  and VOC. Thus, a Conformity Determination is not required for the proposed project as the project can be presumed to conform with the SIP.

Table 7. Construction E	missic	ns Inv	entori	es (ton	s/year	
Year	СО	NOx	SO <sub>2</sub>	VOC	PM <sub>10</sub>	PM <sub>2.5</sub>
2020	3.70	1.41	0.01	0.95	1.37	0.20
2021	20.3	14.1	0.05	9.90	5.46	1.16
2022	3.26	1.14	0.01	0.88	1.35	0.18
2023	3.06	1.04	0.01	0.85	1.35	0.18
2024	3.97	1.90	0.01	1.01	2.89	0.37
2025	2.72	0.88	0.01	0.80	1.34	0.17
De Minimis Thresholds		100		100		
Exceeds de minimis? (Yes/No)		No		No		

Notes: Years or values are not additive. CO = carbon monoxide,  $NO_x = nitrogen oxide$ ,  $SO_2 = sulfur dioxide$ , VOC = volatile organic compounds,  $PM_{10} = particulate matter with a diameter of 10 microns or smaller, and <math>PM_{2.5} = particulate$  matter with a diameter of 2.5 microns or smaller. Source: TRB, ACRP - ACEIT, 2019.

Exhaust emissions due to construction activities can be reduced many ways, including the expansion of construction schedule duration (thereby reducing the frequency of equipment operation), reduction of equipment idling times, storing recyclable construction materials on-site to reduce the amount of haul truck trips, and using low- or zero-emissions equipment. Employees could also be encouraged to carpool in order

<sup>&</sup>lt;sup>3</sup> Transportation Research Board, ACRP Report 102, *Guidance for Estimating Airport Construction Emissions*, http://onlinepubs.trb.org/onlinepubs/acrp/acrp\_rpt\_102.pdf.

<sup>&</sup>lt;sup>4</sup> EPA, MOVES (Version MOVES2014b), <a href="https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves">https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves</a>.

to reduce the vehicle miles travelled associated with their trips to and from the site. Ensuring the contractor has knowledge of appropriate fugitive dust and equipment exhaust controls is also a measure to reduce emissions.

Generally, activities that emit substantial  $NO_x$  and VOC should be limited during times when the atmospheric conditions are conducive to ozone formation, namely when air circulation is limited and temperatures are high. Hot mix asphalt with reduced VOC content should be applied whenever possible during paving operations. Fugitive dust PM emissions can be mitigated by regularly watering or applying dust suppressants to unpaved areas, installing pads to deter track-out as vehicles enter and leave the site, reducing vehicle speeds on unpaved roads, covering materials stockpiles, covering haul trucks during materials transportation, and limiting construction activity during high wind events.

### APPENDIX A

This appendix provides a detailed discussion of the data, methodologies and assumptions used to prepare the operational and construction emission inventories associated with the proposed improvements at RYY.

### **Operational Emissions Inventory**

An emissions inventory of aircraft operations was prepared for year 2025. Aircraft operations by category (see **Table A-1**) were derived from the airport's 2017 Master Plan Update and modeled in the FAA's AEDT.

Table A-1. 2025 Aircraft Operations by Aircraft Category												
Single Piston	Single Turbo	Multi Piston	Multi Turbo	Jet	Helicopter	Other	Total					
48,556	3,174	5,132	4,260	7,507	2,633	758	72,020					
Source: Cobb Co	ounty Internat	ional Airpor	t 2017 Mast	er Plan Up	date, September	2017.						

The FAA's Traffic Flow Management System Count (TFMSC) for calendar year 2018 was used to develop the 2025 AEDT aircraft fleet mix for RYY along with data in Table A-1. TFMSC data provides information on traffic counts by airport and includes the specific aircraft types operating at that airport. The TFMSC data for RYY was reviewed and each aircraft type was assigned an AEDT aircraft type (or substitute) and engine. Engine assignments were based on the most conservative (i.e., the engines with the greatest emissions) in AEDT. Table A-2 summarizes the aircraft fleet mix by aircraft category, airframe, engine, and operations for 2025. Notably, the aircraft operations for the aircraft category "Other" were distributed among the remaining categories.

T	able A-2. 2025 Aircraft Fleet N	lix and Operations	
Category	Airframe	Engine	Operations
	Raytheon Beech Bonanza 36	TIO-540-J2B2	4,908
	Cessna 172 Skyhawk	O-320	5,890
	Cessna 182	IO-360-B	6,872
Single Diston	Cessna 210 Centurion	TIO-540-J2B2	3,436
Single Piston	Mooney M20-K	TSIO-360C	3,436
	Piper PA-28 Cherokee Series	O-320	2,946
	Piper PA-32 Cherokee Six	TIO-540-J2B2	4,908
	Cirrus SR22	TIO-540-J2B2	16,688
	Su	btotal (Single Piston)	49,084
	Cessna 208 Caravan	TPE331-12B	418
	Piper PA46-TP Meridian	PT6A-66	898
Single Turbo	Pilatus PC-12	PT6A-67B	1,026
	SOCATA TBM 850	PT6A-66	384
	Pilatus Turbo Trainer PC-9	PT6A-62	482
	Su	ibtotal (Single Turbo)	3,208
	Raytheon Beech Baron 55	TIO-540-J2B2	726
	Raytheon Beech Baron 58	TIO-540-J2B2	1,816
Multi Piston	Cessna 414	TIO-540-J2B2	518
IVIUILI PISCON	Cessna 421 Golden Eagle	TIO-540-J2B2	570
	Piper PA-31 Navajo	TIO-540-J2B2	830
	Piper PA-34 Seneca	IO-360-B	726

<sup>&</sup>lt;sup>5</sup> TFMSC source data are created when pilots file flight plans.

	Table A-2. 2025 Aircraft Fleet N	· · · · · · · · · · · · · · · · · · ·	
Category	Airframe	Engine	Operatio
	S	ubtotal (Multi Piston)	5,186
	Rockwell Commander 690	TPE331-1	388
Multi Turbo	Raytheon Super King Air 300	PT6A-60AG	602
Water Farbo	Raytheon Super King Air 200	PT6A-67B	2,796
	Raytheon King Air 90	PT6A-60	516
	S	ubtotal (Multi Turbo)	4,302
	Gulfstream G100	TFE731-3	152
	Raytheon Beechjet 400	JT15D-5, -5A, -5B	454
	Cessna 525A CitationJet	BIZLIGHTJET_F	152
	Cessna 525B CitationJet	JT15D-4series	304
	CESSNA CITATION 510	BIZLIGHTJET_F	152
	Cessna 525 CitationJet	JT15D-1 series	454
	Cessna 560 Citation XLS	JT15D-5, -5A, -5B	1,511
	Cessna 650 Citation III	TFE731-2-2B	152
	Cessna 680 Citation Sovereign	PW308C	152
	Cessna 750 Citation X	PW308A	152
	Bombardier Challenger 300	AS907-1-1A	530
	Bombardier Challenger 600	CF34-3A	228
Jet	Embraer ERJ145	AE3007A1/1	152
	Embraer 505	PW530	454
	Eclipse 500 / PW610F	PW610F	304
	Dassault Falcon 900	TFE731-3	228
	Dassault Falcon 50	TFE731-3	454
	Gulfstream G150	TFE731-3	152
	Gulfstream G400	TAY Mk611-8	152
	Gulfstream G500	SPEY Mk511	378
	Hawker HS-125 Series 700	TFE731-3	304
	Bombardier Learjet 45	TFE731-2-2B	228
	Bombardier Learjet 60	TFE731-3	228
	Raytheon Premier I	JT15D-1 series	152
		Subtotal (Jet)	7,579
	Bell 206L-4T Long Ranger	250B17B	558
Helicopter	Eurocopter EC-130	TPE331-3	452
•	Sikorsky SH-60 Sea Hawk	T700-GE-401 -401C	1,651
	· · · · · · · · · · · · · · · · · · ·	Subtotal (Helicopter)	2,661
		Grand Total	72,020

Management System Count; and KB Environmental Sciences, Inc., 2019.

Aircraft taxi out and taxi in times were derived using the maximum measured distances from the terminal location to the runway ends, using the existing and the proposed new taxiwaypath, for the No Build and Build alternatives, respectively. An average aircraft speed of 20 miles-per-hour was assumed. Average aircraft delay times were also included and were derived using nomographs that relate the airport's annual service volume to the demand volume. This methodology is detailed in FAA's Airport Capacity and Delay Advisory Circular (AC 150/5060-5). The total aircraft taxi out and in times are summarized in Table A-3.

Ta	able A-3. Deriv	ed Total Aircraf	t Taxi Times (m	ninutes)	
Scenario	Average Delay Time	Travel Time taxiing-in	Travel Time taxiing-out	Total Taxi-in Time	Total Taxi-out Time
No Build	0.30	2.14	3.33	2.44	3.63
Build	0.30	2.10	3.29	2.40	3.59
Source: USDOT FAA	A, Airport Capacity an	d Delay, Advisory Cir	cular (AC) report No.	150/5060-5, 9	September 9,

Source: USDOT FAA, Airport Capacity and Delay, Advisory Circular (AC) report No. 150/5060-5, September 9, 1983.

### **Construction Emissions Inventory**

Construction-related emissions were based on the types of projects and associated activities, counts and types of equipment/vehicles used, activity levels, and the construction schedule. **Table A-4** presents the types of construction projects that would occur at the airport and their dutration.

Table A-4. Construction Proje	cts and Schedules
Project	Schedule
Taxiway A Relocation	July 2020 - December 2022
Taxiway B Relocation	May 2023 - September 2025
Runway 9 Safety Area	May 2024 - July 2024
Southwest Basing Area	April 2021-November 2021
Source: Michael Baker International and KB Environmenta	al Sciences, Inc., 2019.

The hours of operation of each piece of equipment were derived using the square footage of the project's components and activity data from the ACEIT. **Table A-5** presents the off-road construction equipment data. For the purpose of preparing the construction emission estimates, it was assumed that all off-road construction equiment run on diesel fuel.

		Table A-5. Off-road Construction	on Equipmen	t Data								
			Average	Load	Activity (Hours/year)							
Project	Activities	Off-road Equipment	НР	Factor	2020	2021	2022	2023	2024	2025		
Taxiway A	Asphalt Demolition/Placement	Agricultural Equipment	600	0.59	17	17	17					
Relocation	Clearing and Grubbing	Air Compressors	100	0.43	51	51	51					
	Concrete Placement	Chippers/Stump Grinders	100	0.43	47	47	47					
	Drainage	Concrete/Industrial Saws	11	0.70	47	47	47					
	Dust Control	Concrete/industrial Saws	40	0.59	51	51	51					
	Excavation (Borrow/Cut to	Crawler Tractor/Dozers	175	0.59	480	480	480					
	Fill/Topsoil Stripping) Fencing	Combined Short-Haul Trucks (e.g., flatbed trucks)	600	0.59	316	316	316					
	Grading	Excavators	175	0.59	265	265	265					
	Hydroseeding	Graders	300	0.59	19	19	19					
	Lighting	General Industrial Equipment	175	0.43	773	773	773					
	Markings	Off-highway Trucks	600	0.59	261	261	261					
	Soil Erosion/Sediment Control Subbase/Topsoil Placement	Pavers	175	0.59	70	70	70					
	Subbase/Topson Placement	Pickup Trucks	600	0.59	1,343	1,343	1,343					
		Pumps	11	0.43	16	16	16					
		Rollers	100	0.59	249	249	249					
		Rubber Tire Loaders	175	0.59	51	51	51					
		Scrapers	600	0.59	64	64	64					
		Skid Steer Loaders	75	0.21	180	180	180					
		Surfacing Equipment	25	0.59	76	76	76					
		Single Unit Short-haul Trucks (i.e., dump trucks and water trucks)	600	0.59	3,774	3,774	3,774					
		Tractors/Loaders/Backhoe	100	0.21	226	226	226					
		Air Compressors	175	0.59	177	177	177					
Taxiway B	Asphalt Demolition/Placement	Agricultural Equipment	600	0.59				17	17	17		
Relocation	Clearing and Grubbing	Air Compressors	100	0.43				51	51	51		
	Concrete Placement	Chippers/Stump Grinders	100	0.43				47	47	47		
	Drainage	Concrete/Industrial Saws	11	0.70				47	47	47		
	Dust Control	<u> </u>	40	0.59				51	51	51		
	Excavation (Borrow/Cut to	Crawler Tractor/Dozers	175	0.59				480	480	480		
	Fill/Topsoil Stripping) Fencing	Combined Short-Haul Trucks (e.g., flatbed trucks)	600	0.59				316	316	316		

		Table A-5. Off-road Constructi	on Equipmen	t Data								
Project	Activities	Off-road Equipment	Average	Load	Activity (Hours/year)							
,			HP	Factor	2020	2021	2022	2023	2024	2025		
	Grading	Excavators	175	0.59				265	265	265		
	Hydroseeding	Graders	300	0.59				19	19	19		
	Lighting	General Industrial Equipment	175	0.43				773	773	773		
	Markings	Off-highway Trucks	600	0.59				261	261	261		
	Soil Erosion/Sediment Control	Pavers	175	0.59				70	70	70		
	Subbase/Topsoil Placement	Pickup Trucks	600	0.59				1,343	1,343	1,343		
		Pumps	11	0.43				16	16	16		
		Rollers	100	0.59				249	249	249		
		Rubber Tire Loaders	175	0.59				51	51	51		
		Scrapers	600	0.59				64	64	64		
		Skid Steer Loaders	75	0.21				180	180	180		
		Surfacing Equipment	25	0.59				76	76	76		
		Single Unit Short-haul Trucks (i.e., dump trucks and water trucks)	600	0.59				3,774	3,774	3,774		
		·	100	0.21				226	226	226		
		Tractors/Loaders/Backhoe	175	0.59				177	177	177		
Runway 9	Building Demolition	Agricultural Equipment	600	0.59					88			
Safety	Clearing and Grubbing	Concrete/Industrial Saws	11	0.70					245			
Area	Drainage	Crawler Tractor/Dozers	175	0.59					1,479			
	Dust Control	Excavators	175	0.59					760			
	Excavation (Borrow/Cut to	Generator Sets	40	0.43					252			
	Fill/Topsoil Stripping)	General Industrial Equipment	175	0.43					408			
	Fencing	Off-highway Trucks	600	0.59					122			
	Hydroseeding	Pickup Trucks	600	0.59					2,168			
	Soil Erosion/Sediment Control	Pumps	11	0.43					82			
	Topsoil Placement	Rollers	100	0.59					750			
		Scrapers	600	0.59					394			
		Skid Steer Loaders	75	0.21					133			
		Single Unit Short-haul Trucks (i.e., dump trucks and water trucks)	600	0.59					3,344			
		·	75	0.21					504			
		Tractors/Loaders/Backhoes	100	0.21					215			

			Average	Load Factor	Activity (Hours/year)							
Project	Activities	Off-road Equipment	HP		2020	2021	2022	2023	2024	202		
			175	0.59					193			
		Agricultural Equipment	600	0.59	-	182		-		-		
		Air Compressors	100	0.43	-	650		-		-		
		Chippers/Stump Grinders (com)	100	0.43		504				-		
		Concrete /Industrial Cours	11	0.7		504				-		
		Concrete/Industrial Saws	40	0.59		650				-		
	Asphalt Demolition/Placement	Crawler Tractor/Dozers	175	0.59		3,853				-		
	Building Demolition Clearing and Grubbing	Combined Short-Haul Trucks (e.g., flatbed trucks)	600	0.59		31				-		
	Concrete Placement	Excavators	175	0.59	-	8,289		-		-		
	Curbing	General Industrial Equipment	175	0.43		3,092						
	Drainage	Generator Sets	40	0.43	-	6,599		-				
	Underdrain	Graders	300	0.59	1	203		1	-			
Southwest	Excavation (Borrow/Cut to	Off-highway Trucks	600	0.59		3,358						
Basing	Fill/Topsoil Stripping)	Pavers	175	0.59		1,025						
Area	Fencing	Plate Compactors	6	0.43		264						
	Grading	Pickup Truck	600	0.59		16,101						
	Hydroseeding	Pumps	11	0.43		168						
	Markings	Rollers	100	0.59		2,207						
	Sidewalks	Rubber Tire Loaders	175	0.59		650						
	Soil Erosion/Sediment Control	Scrapers	600	0.59		812						
	Street Lighting	Skid Steer Loaders	75	0.21		654						
	Subbase Placement	Surfacing Equipment	25	0.59		961						
		Single Unit Short-haul Trucks (i.e., dump trucks and water trucks)	600	0.59		21,448						
			75	0.21		13,198						
		Tractors/Loaders/Backhoes	100	0.21		1,195						
			175	0.59		681						

**Table A-6** presents the total vehicle miles travelled (VMT) by the construction vehicles that are estimated to occur for the purpose of delivering/hauling materials and by the vehicles of construction workers commuting to and from the work site, during the construction period. VMT data for each construction vehicle were derived from round trip distances, number of vehicles and employees developed from ACEIT. For the analysis, the following was assumed:

- On-road material delivery and hauling vehicles are diesel-fueled and construction worker vehicles are gasoline-fueled.
- The average employee vehicle travels 30 miles round-trip from home to construction site each day.
- The average on-road material delivery round-trip distance per truck is 40 miles per day.
- Two trips per day were assumed for each on-road material handling trucks.

	Table A-6. On-	road Cons	struction Ve	hicle Data	à		
Project	On wood Vohiolo			VMT/	year		
Activity	On-road Vehicle	2020	2021	2022	2023	2024	2025
Taxiway A	Asphalt 18-Wheeler	20,640	20,640	20,640			
Relocation	Cement Mixer	41,280	41,280	41,280			
	Dump Truck	30,960	30,960	30,960			
	Dump Truck - Asphalt	20,640	20,640	20,640			
	Dump Truck Subbase Material	30,960	30,960	30,960			
	Passenger Car	576,630	576,630	576,630			
	Asphalt 18-Wheeler	20,640	20,640	20,640	-		
Taxiway B	Cement Mixer				41,280	41,280	41,280
Relocation	Dump Truck				30,960	30,960	30,960
	Dump Truck - Asphalt				20,640	20,640	20,640
	Dump Truck Subbase Material				30,960	30,960	30,960
	Passenger Car				576,630	576,630	576,630
	Asphalt 18-Wheeler				20,640	20,640	20,640
Runway 9	Concrete Mixer for Fencing					52,000	
Safety Area	Dump Truck					41,600	
	Passenger Car					81,900	-
Southwest	Asphalt 18-Wheeler		27,520				
Basing Area	Cement Mixer		412,800				
	Dump Truck		1,224,640				
	Dump Truck - Asphalt		41,280				
	Dump Truck Subbase Material		220,160				
	Passenger Car		1,315,800				
Notes: VMT – ve Source: ACRP, A	hicle miles travelled. CEIT, 2019.						

Off-road construction equipment emission factors for 2020-2025 were derived from EPA's MOVES and are presented in **Tables A-7 and A-8**. Emission factors (in grams/hp-hour) for each off-road equipment type were applied to the equipment's size (in hp) and the anticipated activity levels (in hours per year) of expected equipment use. The emission estimates were computed using the following formula:

Off-road Construction Equipment Emissions (tons/year) = emission factor (grams/hp-hour) x size (hp) x hours per year x (1 pound/453.6 grams) x (1 ton/2,000 pounds)

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Air Quality Appendix

			Tab	le A-7.	Off-road	d Const	ruction	Equipm	ent Fac	tors (g/	hp-hr)							
Off read Favinment			20	20					20	21			2022					
Off-road Equipment	СО	NOx	SO <sub>2</sub>	VOC	PM <sub>10</sub>	PM <sub>2.5</sub>	СО	NOx	SO <sub>2</sub>	VOC	PM <sub>10</sub>	PM <sub>2.5</sub>	СО	NOx	SO <sub>2</sub>	VOC	PM <sub>10</sub>	PM <sub>2.5</sub>
Air Compressors	0.751	2.302	0.004	0.136	0.122	0.118	0.633	2.098	0.004	0.113	0.103	0.100	0.559	1.966	0.004	0.098	0.091	0.088
Chippers/Stump Grinders (com)	1.327	3.959	0.005	0.313	0.246	0.239	1.208	3.657	0.005	0.282	0.223	0.217	1.103	3.366	0.004	0.256	0.203	0.197
Concrete/Industrial Saws	1.020	2.578	0.004	0.163	0.140	0.135	0.808	2.385	0.004	0.136	0.108	0.105	0.704	2.286	0.004	0.122	0.092	0.089
Crawler Tractor/Dozers	0.378	1.190	0.004	0.056	0.062	0.060	0.313	1.041	0.004	0.048	0.053	0.051	0.264	0.912	0.004	0.041	0.045	0.044
Excavators	0.257	0.872	0.004	0.040	0.049	0.048	0.206	0.708	0.004	0.034	0.040	0.039	0.166	0.589	0.004	0.028	0.033	0.032
Generator Sets	1.450	3.619	0.005	0.355	0.255	0.248	1.323	3.406	0.005	0.323	0.230	0.223	1.201	3.203	0.005	0.293	0.206	0.199
Graders	0.254	0.773	0.004	0.042	0.050	0.048	0.205	0.624	0.004	0.034	0.042	0.040	0.163	0.486	0.004	0.028	0.034	0.033
Off-highway Trucks	0.276	1.714	0.004	0.055	0.045	0.044	0.211	1.604	0.004	0.046	0.037	0.036	0.165	1.534	0.004	0.040	0.031	0.030
Other Agricultural Equipment	1.389	3.113	0.004	0.264	0.267	0.259	1.225	2.761	0.004	0.229	0.232	0.225	1.087	2.472	0.004	0.201	0.203	0.197
Other General Industrial Equipment	0.437	1.533	0.004	0.091	0.083	0.081	0.377	1.361	0.004	0.077	0.072	0.070	0.330	1.220	0.004	0.066	0.063	0.061
Pavers	0.427	1.294	0.004	0.067	0.072	0.070	0.366	1.162	0.004	0.057	0.062	0.060	0.304	1.034	0.004	0.048	0.052	0.051
Plate Compactors	2.364	4.200	0.005	0.684	0.261	0.253	2.315	4.156	0.005	0.680	0.251	0.243	2.284	4.126	0.005	0.677	0.244	0.237
Pumps	1.480	3.608	0.005	0.356	0.265	0.257	1.354	3.394	0.005	0.325	0.240	0.233	1.238	3.193	0.004	0.298	0.216	0.210
Rollers	0.554	1.541	0.004	0.086	0.089	0.086	0.488	1.412	0.004	0.075	0.079	0.077	0.429	1.305	0.004	0.067	0.070	0.068
Rubber Tire Loaders	0.551	1.571	0.004	0.088	0.089	0.086	0.460	1.348	0.004	0.073	0.076	0.074	0.379	1.174	0.004	0.061	0.064	0.062
Scrapers	0.424	0.958	0.004	0.053	0.059	0.057	0.345	0.795	0.004	0.044	0.049	0.047	0.295	0.678	0.004	0.039	0.043	0.041
Skid Steer Loaders	4.649	4.698	0.006	0.976	0.705	0.684	4.259	4.460	0.006	0.885	0.641	0.622	3.917	4.250	0.006	0.805	0.584	0.566
Surfacing Equipment	1.239	2.913	0.004	0.185	0.171	0.165	1.081	2.663	0.004	0.164	0.149	0.144	0.960	2.459	0.004	0.147	0.132	0.128
Tractors/Loaders/Backhoes	2.982	3.526	0.005	0.642	0.470	0.456	2.659	3.180	0.005	0.565	0.413	0.400	2.429	2.940	0.005	0.511	0.374	0.363

Notes: CO = carbon monoxide,  $NO_x = nitrogen$  oxide,  $PM_{2.5} = particulate$  matter with a diameter of 2.5 micrometers or smaller,  $PM_{10} = particulate$  matter with a diameter of 10 micrometers or smaller,  $SO_2 = sulfur$  dioxide, and VOC = volatile organic compounds.

Source: EPA MOVES 2014b, 2019.

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Table A-8. Off-road Construction Equipment Factors (g/hp-hr)																		
Off mond Familiam and			20	23			2024			2025								
Off-road Equipment	СО	NOx	SO <sub>2</sub>	VOC	PM <sub>10</sub>	PM <sub>2.5</sub>	СО	NOx	SO <sub>2</sub>	VOC	PM <sub>10</sub>	PM <sub>2.5</sub>	СО	NOx	SO <sub>2</sub>	VOC	PM <sub>10</sub>	PM <sub>2.5</sub>
Air Compressors	0.497	1.855	0.004	0.087	0.080	0.078	0.420	1.732	0.004	0.074	0.067	0.065	0.364	1.628	0.004	0.065	0.058	0.056
Chippers/Stump Grinders	1.001	3.079	0.004	0.231	0.183	0.178	0.903	2.802	0.004	0.207	0.164	0.159	0.810	2.537	0.004	0.185	0.146	0.142
Concrete/Industrial Saws	0.631	2.213	0.004	0.111	0.081	0.078	0.570	2.153	0.004	0.103	0.072	0.070	0.523	2.105	0.004	0.096	0.065	0.063
Crawler Tractor/Dozers	0.221	0.804	0.004	0.035	0.038	0.037	0.184	0.728	0.004	0.031	0.032	0.031	0.156	0.668	0.004	0.027	0.028	0.027
Excavators	0.131	0.509	0.004	0.024	0.026	0.025	0.104	0.445	0.004	0.021	0.021	0.020	0.086	0.402	0.004	0.018	0.018	0.017
Generator Sets	1.101	3.026	0.004	0.269	0.185	0.179	1.015	2.871	0.004	0.248	0.168	0.163	0.937	2.729	0.004	0.229	0.152	0.147
Graders	0.125	0.377	0.004	0.023	0.027	0.026	0.098	0.313	0.004	0.019	0.021	0.021	0.077	0.264	0.004	0.016	0.017	0.017
Off-highway Trucks	0.133	1.485	0.004	0.035	0.027	0.027	0.105	1.445	0.004	0.032	0.024	0.023	0.083	1.413	0.004	0.029	0.021	0.020
Other Agricultural Equipment	0.969	2.237	0.004	0.177	0.180	0.174	0.863	2.027	0.004	0.157	0.159	0.154	0.767	1.835	0.004	0.139	0.141	0.137
Other General Industrial Equipment	0.270	1.066	0.004	0.054	0.051	0.050	0.231	0.941	0.004	0.046	0.044	0.043	0.194	0.831	0.004	0.039	0.037	0.036
Pavers	0.244	0.904	0.004	0.040	0.043	0.042	0.197	0.800	0.004	0.033	0.035	0.034	0.156	0.730	0.004	0.028	0.028	0.027
Plate Compactors	2.259	4.103	0.005	0.676	0.240	0.233	2.241	4.087	0.005	0.675	0.237	0.230	2.223	4.074	0.005	0.675	0.234	0.227
Pumps	1.141	3.017	0.004	0.274	0.197	0.191	1.057	2.859	0.004	0.254	0.180	0.175	0.979	2.714	0.004	0.235	0.164	0.159
Rollers	0.358	1.176	0.004	0.057	0.058	0.056	0.300	1.060	0.004	0.050	0.049	0.047	0.256	0.967	0.004	0.044	0.042	0.041
Rubber Tire Loaders	0.304	1.011	0.004	0.050	0.052	0.050	0.255	0.891	0.004	0.043	0.045	0.043	0.216	0.799	0.004	0.037	0.038	0.037
Scrapers	0.251	0.581	0.004	0.034	0.037	0.036	0.216	0.503	0.004	0.030	0.032	0.031	0.187	0.440	0.004	0.027	0.029	0.028
Skid Steer Loaders	3.613	4.057	0.006	0.734	0.534	0.518	3.343	3.881	0.005	0.673	0.490	0.475	3.115	3.730	0.005	0.622	0.452	0.439
Surfacing Equipment	0.860	2.267	0.004	0.133	0.118	0.115	0.783	2.126	0.004	0.123	0.108	0.105	0.713	1.991	0.004	0.113	0.099	0.096
Tractors/Loaders/Backhoes	2.175	2.685	0.005	0.452	0.333	0.323	1.921	2.440	0.005	0.396	0.295	0.286	1.604	2.142	0.005	0.328	0.249	0.242

Notes: CO = carbon monoxide,  $NO_x = nitrogen$  oxide,  $PM_{2.5} = particulate$  matter with a diameter of 2.5 micrometers or smaller,  $PM_{10} = particulate$  matter with a diameter of 10 micrometers or smaller,  $SO_2 = sulfur$  dioxide, and VOC = volatile organic compounds.

Source: EPA MOVES 2014b, 2019.

Emission factors (in grams/mile) for each on-road vehicle type were applied to the anticipated VMT of expected vehicle use. **Table A-9** lists the on-road vehicles included in the analysis along with the corresponding category description used within MOVES.

Table A-9. On-road Construction Vehicle and Corresponding MOVES Description Data				
MOVES Description	On-road Vehicle			
Passenger Car (PC)	Passenger Car			
Passenger Truck (PT)	Pickup Truck			
Single Unit Short-haul Truck (SUSHT)	Cement Mixer			
	Concrete Mixer for Fencing			
	Dump Truck			
	Water Truck			
	Dump Truck - Asphalt			
	Dump Truck Subbase Material			
Commercial Short-haul Truck (CSHT)	Asphalt 18-Wheeler			
Source: EPA MOVES2014b, 2019.				

**Table A-10** presents the MOVES on-road vehicles emission factors for construction material delivery/haul trucks, and commuter vehicles during the construction period. MOVES model input data were developed based on specific information (e.g., vehicle/fuel mix, fuel specifications, inspection maintenance program, meteorology data, etc.) related Cobb County. The emission estimates for on-road construction vehicles were computed using the following formula:

On-road Construction Vehicle Emissions (tons/year) = emission factor (grams/mile) x vehicle-miles-travelled (VMT/year) x (1 pound/453.6 grams) x (1 ton/2,000 pounds)

Table A-10. On-road Construction Vehicles Emission Factors (g/mile)							
Vehicles	со	NOx	SO <sub>2</sub>	voc	PM <sub>10</sub>	PM <sub>25</sub>	
2020							
PC	4.2	0.24	<0.01	0.40	0.05	0.02	
PT	3.0	1.29	0.01	0.36	0.08	0.04	
SUSHT	3.4	2.68	0.01	0.82	0.27	0.13	
CSHT	1.4	4.15	0.02	0.33	0.36	0.17	
		202	1				
PC	4.0	0.21	<0.01	0.36	0.05	0.02	
PT	2.7	1.18	0.01	0.33	0.08	0.04	
SUSHT	3.3	2.40	0.01	0.77	0.25	0.11	
CSHT	1.3	3.61	0.02	0.29	0.33	0.15	
		202	2				
PC	3.7	0.18	<0.01	0.33	0.05	0.02	

Table A-10. On-road Construction Vehicles Emission							
			g/mile)				
Vehicles	СО	NOx	SO <sub>2</sub>	VOC	PM <sub>10</sub>	PM <sub>25</sub>	
		202	0				
PT	2.5	1.06	0.01	0.30	0.07	0.03	
SUSHT	3.2	2.18	0.01	0.72	0.23	0.10	
CSHT	1.2	3.18	0.02	0.27	0.32	0.13	
		202	3				
PC	3.5	0.17	<0.01	0.31	0.05	0.01	
PT	2.3	0.96	0.01	0.28	0.07	0.03	
SUSHT	3.1	1.99	0.01	0.69	0.22	0.09	
CSHT	1.1	2.84	0.02	0.25	0.30	0.11	
		202	4				
PC	3.3	0.15	<0.01	0.29	0.05	0.01	
PT	2.2	0.88	0.01	0.26	0.07	0.03	
SUSHT	3.1	1.83	0.01	0.66	0.21	0.08	
CSHT	1.0	2.56	0.02	0.23	0.29	0.10	
		202	5				
PC	3.1	0.14	<0.01	0.27	0.05	0.01	
PT	2.0	0.80	0.01	0.25	0.06	0.02	
SUSHT	3.0	1.70	0.01	0.63	0.20	0.07	
CSHT	1.0	2.33	0.02	0.22	0.28	0.09	

Notes: CO = carbon monoxide,  $NO_x$  = nitrogen oxide,  $PM_{2.5}$  = particulate matter with a diameter of 2.5 micrometers or smaller,  $PM_{10}$  = particulate matter with a diameter of 10 micrometers or smaller,  $SO_2$  = sulfur dioxide, and VOC = volatile organic compounds. PC = passenger car, PT = passenger truck, SUSHT = single unit short-haul truck, and CSHT= commercial short-haul truck. Source: EPA MOVES 2014b, 2019.

Fugitive dust emissions (i.e., PM) from site preparation, land clearing, material handling, and equipment movement on unpaved areas, along with evaporative emissions (i.e., VOC) from ashalt paving activities, were calculated using emission factors within the EPA's Compilation of Air Pollutant Emission Factors (AP-42) and included in the total construction emissions. A fugitive dust PM<sub>10</sub> emission factor of 1.2 tons per acre disturbed per month during construction activity was used, assuming that 25 percent of the project area would be disturbed in any given month. Based on EPA's AP-42, PM<sub>2.5</sub> emissions were assumed to be 10 percent of PM<sub>10</sub> emissions. Erosion control measures and water programs are typically taken into account to minimize fugitive dust and particulate emissions at construction sites. For this analysis, a dust control efficiency of 75 percent due to daily watering and other measures (e.g., limiting vehicle speed, stockpile control, etc.) was assumed. Evaporative emisions from asphalt paving activities were based on the variables presented in **Table A-11** and the following formula.

Table A-11. Asphalt Paving Data						
Variat	ple	Factor	Unit			
A =	Area of land affected = Length (L) x Width (W) x 0.0929	1	Sq. meter			
AR =	Application rate of liquefied asphalt over area	1.811	Liters/Sq. meter			
VD =	Volume fraction of dilutant in liquefied asphalt	0.35	Fraction			
EF =	Mass fraction of dilutant which evaporates and becomes VOC	0.7	Fraction			
D =	Density of solvent utilized	1.8	Pounds/liter			

VOC Emissions from Asphalt Paving Activities (tons) =  $A \times AR \times VD \times EF \times D \times (1 \text{ ton/2,000 pounds})$ 

# APPENDIX D Hazardous Materials Report

# **Cobb County International Airport**

1723 Mccollum Parkway NW Kennesaw, GA 30144

Inquiry Number: 5598253.2s

March 22, 2019

# The EDR Radius Map™ Report



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

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GEOCHECK ADDENDUM	

**GeoCheck - Not Requested** 

**Thank you for your business.**Please contact EDR at 1-800-352-0050 with any questions or comments.

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A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

### **ADDRESS**

1723 MCCOLLUM PARKWAY NW KENNESAW, GA 30144

### **COORDINATES**

Latitude (North): 34.0163260 - 34° 0' 58.77" Longitude (West): 84.6027250 - 84° 36' 9.81"

Universal Tranverse Mercator: Zone 16 UTM X (Meters): 721370.1 UTM Y (Meters): 3766363.2

Elevation: 1021 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 6045743 KENNESAW, GA

Version Date: 2014

# AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20150802 Source: USDA

### MAPPED SITES SUMMARY

Target Property Address: 1723 MCCOLLUM PARKWAY NW KENNESAW, GA 30144

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	BIG SHANTY AVIATION	1723 MCCOLLUM PKWY	RGA LUST		TP
A2	COBB COUNTY AIRPORT	1723 MCCOLLUM PARKWA	TIER 2		TP
A3	ARFF FIRE STATION 31	1723 MCCOLLUM PARKWA	FINDS, ECHO		TP
A4	GEM CITY AVIATION, I	1723 MCCOLLUM PKWY	RGA LUST		TP
A5	GEM CITY AVIATION IN	1723 MCCOLLUM PKWY	RGA LUST		TP
A6	NORTH APRON REHABILI	1723 MCCOLLUM PKWY N	FINDS, ECHO		TP
A7	COBB COUNTY AIRPORT	1723 1723 MCCOLLUM P	FINDS, ECHO		TP
A8	BIG SHANTY AVIATION	1723 MCCOLLUM PKWY	LUST, UST, Financial Assurance, NPDES, TIER 2		TP
A9		1723 MCCULLUM PKWY	ERNS		TP
10	CONSOLIDATED ENGINEE	1971 MCCOLLUM PKWY N	RCRA-CESQG, US AIRS, FINDS, ECHO	Higher	658, 0.125, North
11	AERO ENGINES	2439 MCCOLLUM PKWY.	GA NON-HSI	Lower	675, 0.128, NE
B12	KENNESAW READINESS C	1901 MCCOLLUM PKWY	RCRA-CESQG	Higher	1102, 0.209, WSW
B13	GA AIR NATL GUARD -	1901 MCCOLLUM PKWY	CORRACTS, RCRA NonGen / NLR, FINDS, ECHO	Higher	1102, 0.209, WSW
B14	GA ARNG/129TH/118TH	1901 MCCOLLUM PKWY	LUST, UST, Financial Assurance	Higher	1102, 0.209, WSW
15	GUARDIAN INDUSTRIAL	2691D MCCOLLUM PKWY	RCRA NonGen / NLR	Lower	1270, 0.241, ENE
16	THOMAS M ANDERSON TR	1539 MCCOLLUM PKWY	LUST, UST, Financial Assurance	Higher	1527, 0.289, WSW
17	HUGH L SMITH	2495 SOUTH MAIN ST	LUST, UST, Financial Assurance	Higher	2065, 0.391, WSW
18	FEDEX GROUND - 305 -	1675 AIRPORT ROAD NW	LUST, SPILLS, NPDES, TIER 2	Higher	2116, 0.401, South
19	TIDWELL JIM FORD INC	2390 COBB PKWY	LUST, UST, RCRA NonGen / NLR, Financial Assurance,	. Higher	2623, 0.497, SSW
20	SARDIS ROAD CREOSOTE	CORNER OF SOUTH MAIN	DEL SHWS	Higher	2839, 0.538, NW
21	PLAZA CLEANERS	2500 COBB PARKWAY	GA NON-HSI, DRYCLEANERS	Higher	3053, 0.578, West
22	PAVILION CLEANERS (F	2165 NORTH COBB PKWY	GA NON-HSI, DRYCLEANERS	Lower	3817, 0.723, South

### TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
BIG SHANTY AVIATION 1723 MCCOLLUM PKWY KENNESAW, GA	RGA LUST Facility ID: 0-330598 Facility ID: 330598	N/A
COBB COUNTY AIRPORT 1723 MCCOLLUM PARKWA KENNESAW, GA 30144	TIER 2 Facility Id: 5001358 Facility Id: 6072193 Facility Id: 5384450	N/A
ARFF FIRE STATION 31 1723 MCCOLLUM PARKWA KENNESAW, GA 30144	FINDS Registry ID:: 110070263251 ECHO	N/A
GEM CITY AVIATION, I 1723 MCCOLLUM PKWY KENNESAW, GA	RGA LUST Facility ID: 0-330073	N/A
GEM CITY AVIATION IN 1723 MCCOLLUM PKWY KENNESAW, GA	RGA LUST Facility ID: 0-330073 Facility ID: 330073 Facility ID: 330073.0	N/A
NORTH APRON REHABILI 1723 MCCOLLUM PKWY N KENNESAW, GA 30144	FINDS Registry ID:: 110070016818 ECHO Registry ID: 110070016818	N/A
COBB COUNTY AIRPORT 1723 1723 MCCOLLUM P KENNESAW, GA 30144	FINDS Registry ID:: 110070019621 ECHO Registry ID: 110070019621	N/A
BIG SHANTY AVIATION 1723 MCCOLLUM PKWY KENNESAW, GA 30144	LUST Cleanup Status: NFA - No Further Action Cleanup Status: NFA - Clean Closure Facility Id: 00330073	N/A

Facility Id: 00330598

UST

Status: Removed from Ground Status: Closed in Ground Facility Status: Inactive Facility Id: 330073 Facility Id: 330598

Financial Assurance

Database: Financial Assurance 1, Date of Government Version: 01/14/2019

Facility Id: 330073 Facility Id: 330598

NPDES TIER 2

Facility Id: 5809086 Facility Id: 2921693

1723 MCCULLUM PKWY 1723 MCCULLUM PKWY KENNESAW, GA 30144 **ERNS** 

NRC Report #: 229591

### **DATABASES WITH NO MAPPED SITES**

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

### STANDARD ENVIRONMENTAL RECORDS

### Federal NPL site list

NPL..... National Priority List

Proposed NPL..... Proposed National Priority List Sites

NPL LIENS..... Federal Superfund Liens

### Federal Delisted NPL site list

Delisted NPL...... National Priority List Deletions

### Federal CERCLIS list

FEDERAL FACILITY\_\_\_\_\_ Federal Facility Site Information listing SEMS\_\_\_\_\_ Superfund Enterprise Management System

### Federal CERCLIS NFRAP site list

SEMS-ARCHIVE...... Superfund Enterprise Management System Archive

N/A

Federal RCRA non-CORRA	CTS TSD facilities list
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
Federal RCRA generators li	ist
	RCRA - Large Quantity Generators RCRA - Small Quantity Generators
Federal institutional contro	ls / engineering controls registries
US ENG CONTROLS	Land Use Control Information System Engineering Controls Sites List Sites with Institutional Controls
State- and tribal - equivalen	et CERCLIS
SHWS	. Hazardous Site Inventory
State and tribal landfill and	or solid waste disposal site lists
SWF/LF	Solid Waste Disposal Facilities
State and tribal leaking stor	rage tank lists
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land
State and tribal registered s	storage tank lists
AST	<ul> <li>Underground Storage Tank Listing</li> <li>Above Ground Storage Tanks</li> <li>Underground Storage Tanks on Indian Land</li> </ul>
State and tribal institutiona	I control / engineering control registries
INST CONTROL	Public Record List - Uniform Environmental Covenants
State and tribal voluntary c	leanup sites
	. Voluntary Cleanup Program site Voluntary Cleanup Priority Listing
State and tribal Brownfields	s sites
BROWNFIELDS	_ Brownfields Public Record List
ADDITIONAL ENVIRONMENTA	L RECORDS
Local Brownfield lists	
US BROWNFIELDS	A Listing of Brownfields Sites
Local Lists of Landfill / Soli	d Waste Disposal Sites
LUCTIF	Listorical Landfilla

SWRCY...... Recycling Center Listing

INDIAN ODI...... Report on the Status of Open Dumps on Indian Lands DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

ODI...... Open Dump Inventory IHS OPEN DUMPS..... Open Dumps on Indian Land

### Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register

CDL..... Clandestine Drug Labs

US CDL...... National Clandestine Laboratory Register

### Local Land Records

LIENS 2..... CERCLA Lien Information

### Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

SPILLS......Spills Information

SPILLS 90 data from FirstSearch

### Other Ascertainable Records

FUDS..... Formerly Used Defense Sites

DOD....... Department of Defense Sites
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing

US FIN ASSUR..... Financial Assurance Information

EPA WATCH LIST..... EPA WATCH LIST

2020 COR ACTION.......... 2020 Corrective Action Program List

TSCA..... Toxic Substances Control Act

TRIS...... Toxic Chemical Release Inventory System

SSTS..... Section 7 Tracking Systems ROD...... Records Of Decision RMP..... Risk Management Plans

PRP..... Potentially Responsible Parties 

ICIS...... Integrated Compliance Information System

FTTS......FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide

Act)/TSCA (Toxic Substances Control Act) ..... Material Licensing Tracking System

COAL ASH DOE..... Steam-Electric Plant Operation Data

COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List

PCB TRANSFORMER...... PCB Transformer Registration Database

RADINFO...... Radiation Information Database

HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing

DOT OPS...... Incident and Accident Data

CONSENT..... Superfund (CERCLA) Consent Decrees

INDIAN RESERV..... Indian Reservations

FUSRAP..... Formerly Utilized Sites Remedial Action Program

UMTRA..... Uranium Mill Tailings Sites

LEAD SMELTERS..... Lead Smelter Sites

US AIRS...... Aerometric Information Retrieval System Facility Subsystem

US MINES..... Mines Master Index File

ABANDONED MINES..... Abandoned Mines

UXO...... Unexploded Ordnance Sites

DOCKET HWC Hazardous Waste Compliance Docket Listing

FUELS PROGRAM..... EPA Fuels Program Registered Listing AIRS..... Permitted Facility and Emissions Listing

COAL ASH..... Coal Ash Disposal Site Listing

DRYCLEANERS..... Drycleaner Database

UIC...... Underground Injection Control

### **EDR HIGH RISK HISTORICAL RECORDS**

### **EDR Exclusive Records**

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner	EDR Exclusive Historical Cleaners

### **EDR RECOVERED GOVERNMENT ARCHIVES**

### Exclusive Recovered Govt. Archives

RGA HWS	Recovered Government Archive State Hazardous Waste Facilities	List
RGA LF	Recovered Government Archive Solid Waste Facilities List	

### **SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### STANDARD ENVIRONMENTAL RECORDS

### Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 03/01/2018 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GA AIR NATL GUARD -	1901 MCCOLLUM PKWY	WSW 1/8 - 1/4 (0.209 mi.)	B13	52

EPA ID:: GAR000010769

### Federal RCRA generators list

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/01/2018 has revealed that there are 2 RCRA-CESQG sites within approximately 0.25 miles of the target property.

<b>Equal/Higher Elevation</b>	Address	<b>Direction / Distance</b>	Map ID	Page
CONSOLIDATED ENGINEE EPA ID:: GAR000030155	1971 MCCOLLUM PKWY N	N 0 - 1/8 (0.125 mi.)	10	29
KENNESAW READINESS C EPA ID:: GAR000018978	1901 MCCOLLUM PKWY	WSW 1/8 - 1/4 (0.209 mi.)	B12	38

### State- and tribal - equivalent CERCLIS

GA NON-HSI: Georgia Non Hazardous Site Inventory Sites.

A review of the GA NON-HSI list, as provided by EDR, and dated 12/31/2018 has revealed that there are 3 GA NON-HSI sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	<b>Direction / Distance</b>	Map ID	Page
PLAZA CLEANERS	2500 COBB PARKWAY	W 1/2 - 1 (0.578 mi.)	21	100
Lower Elevation	Address	Direction / Distance	Map ID	Page
AERO ENGINES  PAVILION CLEANERS (F	2439 MCCOLLUM PKWY. <b>2165 NORTH COBB PKWY</b>	NE 1/8 - 1/4 (0.128 mi.) S 1/2 - 1 (0.723 mi.)	11 <b>22</b>	37 <b>101</b>

# State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Natural Resources' Confirmed Release List.

A review of the LUST list, as provided by EDR, and dated 03/30/2018 has revealed that there are 5 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GA ARNG/129TH/118TH	1901 MCCOLLUM PKWY	WSW 1/8 - 1/4 (0.209 mi.,	) B14	55

Cleanup Status: NFA - No Further Action Facility Id: 09033338				
<b>THOMAS M ANDERSON TR</b> Cleanup Status: NFA - No Further Action Facility Id: 00330210	1539 MCCOLLUM PKWY	WSW 1/4 - 1/2 (0.289 mi.)	16	57
HUGH L SMITH Cleanup Status: NFA - Clean Closure Facility Id: 00330298	2495 SOUTH MAIN ST	WSW 1/4 - 1/2 (0.391 mi.)	17	59
FEDEX GROUND - 305 - Cleanup Status: NFA - No Further Action Facility Id: 10001140	1675 AIRPORT ROAD NW	S 1/4 - 1/2 (0.401 mi.)	18	60
<b>TIDWELL JIM FORD INC</b> Cleanup Status: NFA - No Further Action Facility Id: 00330659	2390 COBB PKWY	SSW 1/4 - 1/2 (0.497 mi.)	19	79

### State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Natural Resources' Underground Storage Tank Database.

A review of the UST list, as provided by EDR, and dated 01/14/2019 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GA ARNG/129TH/118TH	1901 MCCOLLUM PKWY	WSW 1/8 - 1/4 (0.209 mi.)	B14	55
Status: Removed from Ground				
Facility Status: Inactive				
Facility Id: 9033338				

### ADDITIONAL ENVIRONMENTAL RECORDS

### Local Lists of Hazardous waste / Contaminated Sites

DEL SHWS: A listing of sites delisted from the Hazardous Site Inventory.

A review of the DEL SHWS list, as provided by EDR, and dated 07/01/2018 has revealed that there is 1 DEL SHWS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SARDIS ROAD CREOSOTE	CORNER OF SOUTH MAIN	NW 1/2 - 1 (0.538 mi.)	20	99

### Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/01/2018 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GA AIR NATL GUARD - EPA ID:: GAR000010769	1901 MCCOLLUM PKWY	WSW 1/8 - 1/4 (0.209 mi.)	B13	52
Lower Elevation	Address	Direction / Distance	Map ID	Page
GUARDIAN INDUSTRIAL	2691D MCCOLLUM PKWY	ENE 1/8 - 1/4 (0.241 mi.)	15	56

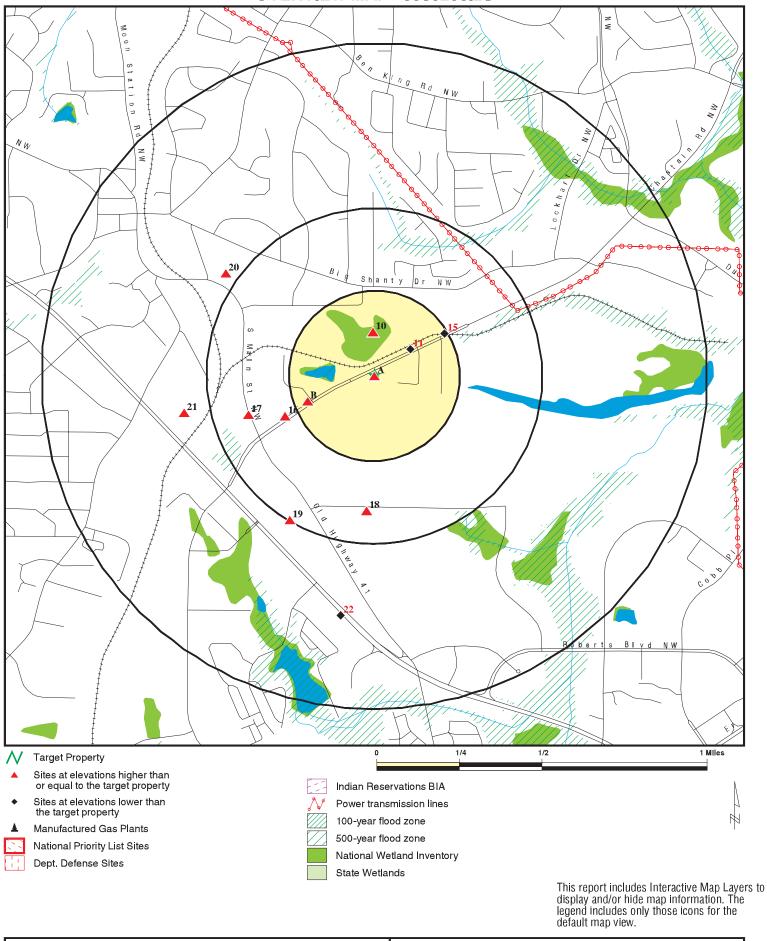
Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name

KENNESAW TEXACO BIG SHANTY SUPERETTE #8 NEW STORAGE HANGAR 2002 SITE Database(s)

LUST, UST, Financial Assurance LUST, UST, Financial Assurance LUST

# **OVERVIEW MAP - 5598253.2S**



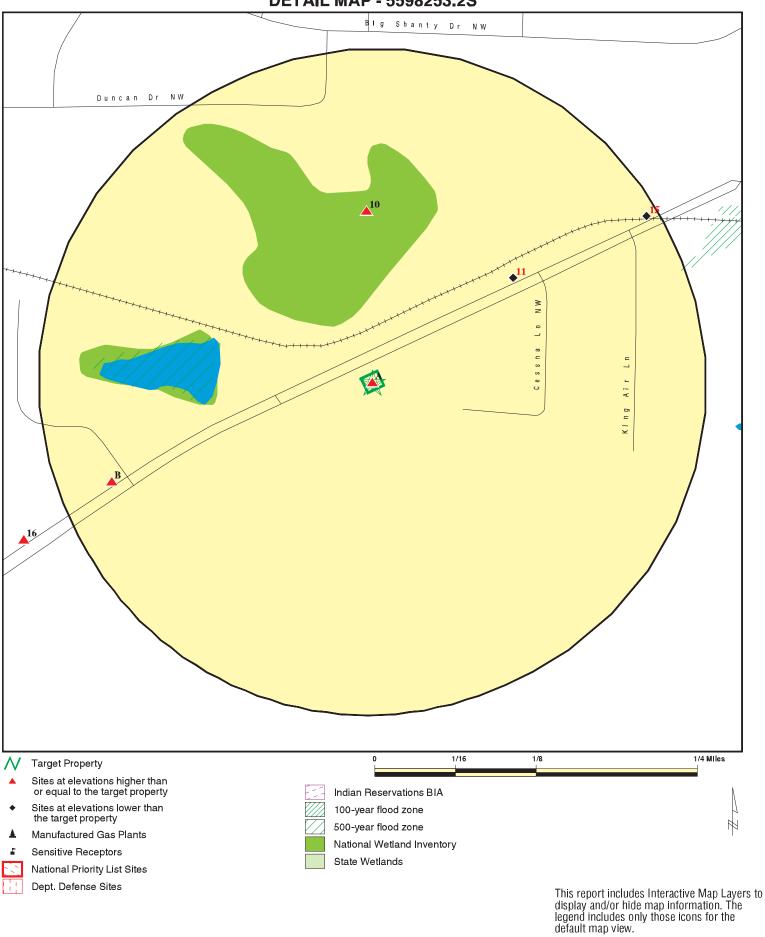
SITE NAME: Cobb County International Airport 1723 Mccollum Parkway NW Kennesaw GA 30144 ADDRESS:

LAT/LONG: 34.016326 / 84.602725 CLIENT: CONTACT: Michael Baker International

Paul F. Condit INQUIRY #: 5598253.2s

DATE: March 22, 2019 9:26 am

# **DETAIL MAP - 5598253.2S**



SITE NAME: Cobb County International Airport 1723 Mccollum Parkway NW Kennesaw GA 30144 ADDRESS:

LAT/LONG: 34.016326 / 84.602725 Michael Baker International

CLIENT: Michael Baker CONTACT: Paul F. Condit INQUIRY #: 5598253.2s

DATE: March 22, 2019 9:27 am

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# APPENDIX E Phase I Cultural Resources Survey Report

# Phase I Cultural Resources Survey Cobb County International Airport-McCollum Field Master Plan Improvement Areas

Cobb County, Georgia

**Draft Report** 

March 2019 (Revised March 2020)

Prepared for:

Baker International Peachtree Corners, Georgia

Prepared by:

W. Michael Reynolds M.H.P Principal Investigator

mike Roynald

Brockington and Associates, Inc. Atlanta • Charleston • Jackson • Nashville • Savannah

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# 1.0 Introduction

On December 17 and 18, 2018, Brockington and Associates, Inc. conducted a Phase I Cultural Resources Survey for the Cobb County International Airport-McCollum Field Master Plan Improvement Areas in Cobb County, Georgia. This project was conducted pursuant to Federal Aviation Administration (FAA) regulations and in compliance with Section 106 of the National Historic Preservation Act of 1966 (as amended through 2000) to assess the potential for cultural resources to be present in the Area of Potential Effects (APE) for the proposed undertaking. For this project, the APE consists of the airport improvement areas and the project viewshed, which in some areas extends up to 0.25 mile (0.8 kilometers [km]). McCollum Field is located southeast of the city of Kennesaw. The property is bounded by McCollum Parkway to the north, Airport Road to the south, US 41 to the west, and the Vulcan Materials rock quarry property and Barrett Lakes Boulevard to the east. Figure 1 is an exhibit showing the location of the study area.

In total, the proposed improvement areas consist of approximately 52 acres. The proposed improvements include the relocation of Taxiways A and B and the creation of a basing area on the south side of the airport property. There are no previously recorded historic architectural resources located in the vicinity of the proposed project.

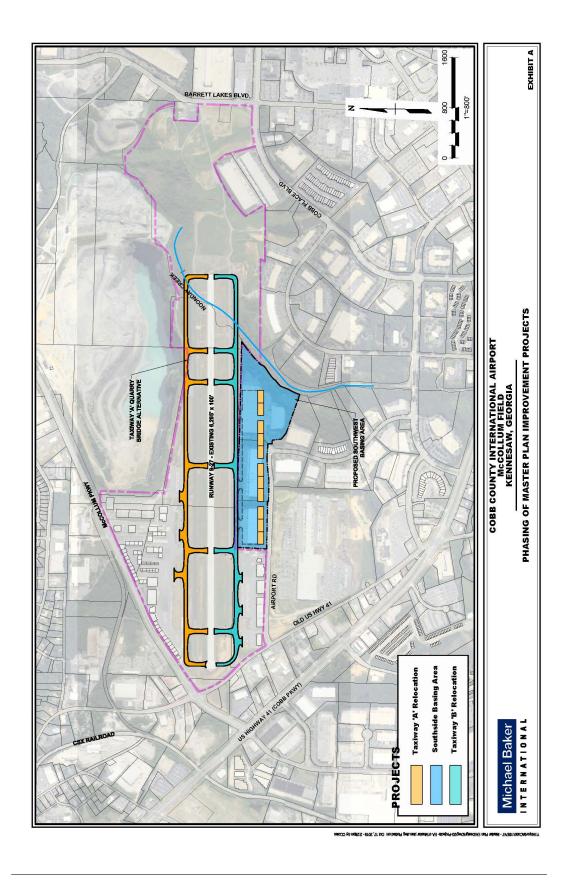


Figure 1. Cobb County International Airport-McCollum Field Master Plan Projects.

# 2.0 Methods of Investigation

# 2.1 Background Research

This investigation consisted of both background research and field reconnaissance. Background research focused on documenting previously recorded archaeological and architectural resources within the project APE. Research was conducted at the Georgia Department of Natural Resources (DNR) Historic Preservation Division (HPD) in Atlanta, the Georgia Archaeological Site Files in Athens, and the Cobb County Public Library in Kennesaw. At the HPD, National Register of Historic Places (NRHP) files and the Cobb County survey file were reviewed to determine if any NRHP-eligible, -nominated, or -listed cultural resources are within or adjacent to the improvement areas.

At the Georgia Archaeological Site Files, the Cobb County file was reviewed to determine if any previously recorded archaeological sites are located within or near the APE. Previous archaeological reports on investigations in the general vicinity of the improvement areas were also reviewed. This data set is also available online through the Georgia Natural, Archaeological, and Historic Resources Geographic Information System (GNAHRGIS). At the Cobb County Public Library, county histories were examined. In addition, Civil War maps and literary sources such as *The Official Military Atlas of the Civil War* (Davis et al. 2003), *The Campaign for Atlanta* (Scaife 1993), and *Decision in the West: the Atlanta Campaign of 1864* (Castel 1992) and published Civil War studies conducted by the National Park Service (NPS) were reviewed to determine if any military activity associated with the Civil War took place within the project APE.

# 2.2 Archaeological Field Survey

An intensive pedestrian survey was conducted within the airport improvement areas. Most areas were heavily disturbed by past airport construction, as well as the construction of nearby office parks. Systematic 30-meter (m) (98-foot [ft]) interval shovel testing was conducted in less disturbed and less developed areas. Judgmental shove testing was also conducted where possible. In addition, shovel tests were not excavated on steeply sloping terrain (greater than 20 percent slope), in standing water, in extremely wet areas, or where subsoils were present on the surface.

Shovel tests were approximately 30-by-30 centimeters (cm) (12-by-12 inches) and were excavated into sterile subsoil. Shovel test soils were screened through 1/4-inch mesh hardware cloth. Records of each shovel test were kept in field notebooks, including information on content (e.g., presence or absence of artifacts, artifact descriptions) and context (i.e., soil color and texture descriptions, depth of definable levels, observed features). All shovel tests were backfilled upon completion. In addition, judgmental metal detecting was conducted by Mr. Scott Butler in less disturbed areas and in the unpaved dry areas of previously recorded site locations.

# 2.3 Architectural Field Survey

The architectural resources field survey involved driving the project APE with pedestrian inspection of all potentially historic resources (e.g., buildings, structures, and objects over 50 years in age).

# 2.4 Curation

All field notes, records, photographs, and artifacts from this project are currently stored at the Atlanta office of Brockington and Associates, Inc. Curation of these materials will conform to standards outlined in 36 CFR Part 79 (Curation of Federally-Owned and Administered Archaeological Collections; Final Rule). Final curation of all field notes, records, and artifacts (upon completion of

the review process for the project report) will be at the Cobb County International Airport-McCollum Field. Additional copies and a master copy of the report will also be stored at this facility.			
Brockington and Associates			

# 3.0 Environmental and Cultural Context

# 3.1 Environmental Setting

Cobb County is located in the Piedmont province of Georgia. The Piedmont is bounded to the east by the Cartersville Fault and is described as a broad and open valley that contains a few scattered hills and ridges. The project corridor is situated within the Central Uplands district, which is described as series of low, linear ridges that are separated by broad, open valleys. The elevation within the Central Uplands range from 1,100 to 1,500 feet above mean sea level (amsl) (Hodler and Schretter 1986:17).

### **3.1.1** Climate

Cobb County, along with most of the counties in Georgia, is located within the Warm Temperate Subtropical climate zone (Hodler and Schretter 1986:44). The climate in Cobb County is affected by its location in the foothills of the Appalachian Mountains. The temperature is moderately cold during the winter; however, winter cold spells tend to last for only a few consecutive days. The average daily maximum and minimum temperature between December and February is approximately 54°F (12°C) and 32°F (0°C), respectively. The summers can be described as hot and humid during the days, with generally cooler evenings. The average daily maximum and minimum temperature between June and August is approximately 89°F (32°C) and 65°F (18°C), respectively. The average annual precipitation is approximately 127 cm (50 in) in Cobb County, which is evenly distributed throughout the year (Thomas 1973:67-68).

# 3.1.2 Topography

Cobb County ranges in elevation from approximately 274 to 549 m (900 to 1,800 ft) amsl (Thomas 1973:68). The county topography can be described as gentle to strong slopes with more steep slopes near major streams and small mountains. The county contains "broad, convex ridgetops dissected by many drainageways" (Thomas 1973:67). The major waterways that drain the county include the Chattahoochee River, Sweetwater Creek, Allatoona Creek, Noonday Creek, and Rubes Creek. The project area ranges in elevation from approximately 295.6 to 322.1 m (970 to 1,057 ft) amsl. The area is drained by Noonday Creek.

### **3.1.3** Soils

Due to disturbances caused by airport construction, most of the project area would now be considered urban land. However, soils near the drainages in the proposed basing area and the proposed Runway 9 extension area consists of Chewacla soils wet variant; Cartecay silt loam, 2 to 6 percent slopes; and Toccoa sandy loam, 0 to 2 percent slopes (Thomas 1973).

# 3.1.4 Vegetation

The vegetation within the project area primarily consists of planted grass. However, in the low drainage area near Noonday Creek, vegetation consists of a broad mix of invasive deciduous trees, pines, and various small shrubs.

# 3.2 Cultural Background

# 3.2.1 Prehistoric Occupation

The prehistoric occupation of the southeastern United States can be described best in terms of changes in fundamental social systemics. During much of the past, prehistoric cultures maintained a lifestyle that focused on the acquisition of locally available wild resources (hunting and gathering). The hunting-gathering lifestyle selected for a social structure that emphasized small, mobile groups that intensively exploited a given area for their preferred resources. During times of economic stress, secondary resources could be relied upon, along with increased mobilization and trade with neighboring groups, to supplement the diet.

The cultural historical periods most associated with this particular lifestyle are the Paleoindian (10,000 - 8000 BC) and the Archaic (8000 - 1000 BC). These periods are further subdivided into categories based on particular resource procurement strategies, inter-group relations, and the projectile point typologies which have been developed through the years.

# Paleoindian Period (10,000 - 8000 BC)

The earliest evidence of humans in Georgia dates from the Paleoindian period, which has generally been interpreted as a time when roaming hunter-gatherers pursued megafauna of the late Pleistocene. The climate was colder and drier than at present, and the vegetation of the region was probably dominated by a spruce-pine forest (Davis 1976; Watts 1980; Wright 1971).

The material culture of this period is characterized by isolated finds of fluted projectile points and associated hearths and other ephemeral features. The Paleoindian knappers preferred high-quality cryptocrystalline material (Gardner 1974), and their quarries have been posited as the foci of their movements (Goodyear 1979).

Very little substantial data concerning Paleoindian lifeways are known from the region. What is postulated tends to be adopted from the interpretations of more substantial remains from the Plains and western North America, since it is assumed that nomadic Pleistocene hunter-gatherers maintained a similar pattern of behavior regardless of region. Populations were likely sparse and highly mobile across most of Georgia. There are, however, some areas with concentrations of Late Paleoindian sites that indicate either a denser population or repeated re-use of local habitats (perhaps seasonally). This may be especially true for the Oconee River region (Williams 1994:54). The dataset is minimal, though, and may heavily reflect survey biases.

In Georgia, the majority of Paleoindian sites are surface finds of diagnostic projectile points (Anderson et al. 1990). Exceptions include the Theriault site, a quarry in the Coastal Plain (Brockington 1971); the Taylor Hill site, a stratified deposit near Augusta (Elliott and Doyon 1981); and Rucker's Bottom (9EB91) in the Richard B. Russell Multiple Resource Area (Anderson and Schuldenrein 1983). A total of three sites with Paleoindian components have been recorded in Cobb County.

### Early Archaic Period (8000 - 6000 BC)

The Early Archaic subperiod represents a time of adaptation to the early Holocene environment. The climate was moister and warmer, and the northern forest retreated as an oak-hickory forest was established (Watts 1971; Whitehead 1973). Adaptation during the Early Archaic subperiod was marked by a decreasing emphasis on large game, and an increased focus on seasonally available floral and faunal resources (Griffin 1952).

The material manifestations of this period include corner- and side-notched projectile points and hafted endscrapers. Cherts remained a popular raw material in this period, but locally outcropping materials were also utilized. Diagnostic projectile points include Palmer, Kirk (Corner Notched, Bifurcate, and Stemmed), Bolen, and Big Sandy (Coe 1964; Lewis and Kneberg 1959). Hardaway and Dalton projectile points are also found in Early Archaic contexts. Other diagnostic lithic artifacts include Edgefield scrapers (Michie 1968) and Waller knives (Waller 1971).

Research in the middle drainage of the Oconee River offers detailed interpretations of Early Archaic settlement patterns within the Georgia Piedmont. O'Steen (1983) examined the distribution of Early Archaic diagnostics in the Wallace Reservoir (Lake Oconee) area and concluded that the occupants established seasonally stable base camps and smaller extractive loci. She further argues that the Lake Oconee basin supported a minimum Early Archaic band size of 80 to 200 people within a maximum band size of 475 or more people, encompassing the entire Oconee River drainage (O'Steen 1983).

# Middle Archaic Period (6000 - 3500 BC)

The Middle Archaic subperiod in Georgia witnessed an increase in population and a dramatic increase in the use of local quartz as a raw material (Ledbetter et al. 1981). Johnson (1981:71) reports:

The use of locally available raw materials peaked in the Middle Archaic Period. Almost all of the Middle Archaic points were made of local materials. In contrast, approximately one-half of all Early Archaic points were made of exotic materials, and approximately one-quarter of all Late Archaic points were made of exotic materials.

This pattern in raw material use has been correlated with a pattern of "settling in," involving locally adapted groups of decreased mobility. Blanton (1983) argues that local materials were utilized to create generalized tools such as the Morrow Mountain and Guilford (Coe 1964) projectile points of this period. These generalized tools were used in the wide variety of micro-environments that became stable in the Middle Archaic. The presence of groundstone tools (e.g., manos, metates) suggests that an increased emphasis was placed on plant resources during the Middle Archaic. The typical Middle Archaic site in Georgia is a plowzone scatter of quartz artifacts. These sites do not appear to have been heavily utilized through time, and only quarry sites have a high density of cultural material (Blanton 1983).

# Late Archaic Period (3500 - 1000 BC)

The Late Archaic subperiod is characterized by a continuing trend toward localized adaptation and sedentism, and the development of interregional trade. Wauchope (1966) notes evidence for the development of long-term habitation sites, possible precursors of later village sites. Late Archaic sites are relatively common throughout Georgia; however, research devoted to recovering settlement and subsistence data has been limited to investigations conducted along the Georgia coast (DePratter 1975). Late Archaic diagnostic artifacts include Savannah River and Otarre Stemmed projectile points, steatite vessels, and steatite heating disks. Fiber-tempered pottery was developed late in this subperiod. The transition from the Late Archaic to the following Early Woodland is poorly understood in Georgia. It is likely that at least some remnants of Late Archaic cultural expressions persisted after 1000 BC, but further research is needed.

# Early Woodland Period (1000 - 100 BC)

During the early stages of the Woodland period (ca. 1000 BC), recognizable cultural additions and changes occurred which appear to have influenced patterns of life in populations of the Southeast. The transition from Late Archaic to Early Woodland lifeways is marked by a gradual increase in population and sedentism, and by the acquisition of a number of distinctive material and cultural traits. It is during this time period that technological advances in pottery manufacture became widespread, resulting in increased efficiency and productivity in food processing and storage (Dragoo 1975:17; Griffin 1967:180; Stoltman 1978:715). During the Early Woodland subperiod in Georgia, there is a notable absence of agriculture and a heavy dependence on gathered resources such as nuts. Villages with permanent structures are common and are normally located in the flood plains of rivers and creeks. However, burial mounds appear to be non-existent in the Early Woodland (Wauchope 1966).

A distinctive break in artifact types between Late Archaic and Early Woodland sites is not always evident. Early Woodland artifact assemblages often contain small, contracting stemmed projectile points in addition to medium to large triangular (e.g., Badin, Yadkin) projectile points (Coe 1964; Keel 1976). Other diagnostic artifacts are polished slate or copper spearheads, tubular stone pipes, and trade goods such as red ocher, mica, and shell. In addition to lithic artifacts, increasing quantities of pottery are present on Early Woodland sites (Ford and Willey 1941:337; Griffin 1967:183; Stoltman 1978:718).

In North Georgia, the Early Woodland subperiod is divided into the Kellogg focus (1000 - 300 BC) and the Late Kellogg focus (300 - 100 BC) (Garrow 1975:21; Wood and Bowen 1995:9). Kellogg focus sites are defined by the presence of Dunlap Fabric Impressed ceramics, and Late Kellogg focus sites include both Dunlap Fabric Impressed and Cartersville Check Stamped pottery (Garrow 1975). Dunlap Fabric Impressed sherds are tempered with sand or crushed quartz, and the vessel exteriors are usually decorated with impressions of fabric or basketry. The most common vessel form is a large, concoidal based jar.

Garrow (1989:5) suggests that both Kellogg and Late Kellogg peoples exhibited a heavy dependence on gathering (primarily nuts) and a noticeable lack of agricultural pursuits. According to Wood and Bowen (1995:11), "to date, there is no irrefutable evidence for the use of cultigens or domesticates in the Kellogg diet." Village sites of this period are generally located on river and creek flood plains. No evidence for burial mounds has been observed.

Near the end of the Early Woodland subperiod, Cartersville Check Stamped ceramics appear; as noted above, their co-occurrence with Dunlap Fabric Impressed wares defines the Late Kellogg focus. Cartersville Checked Stamped designs are usually found on large jars and smaller bowls. These vessels often had small podal supports (Caldwell 1957:287, 1958:38).

# Middle Woodland Period (100 BC - AD 500)

The Middle Woodland subperiod represents a time of population growth and increased cultural complexity. Characteristics of the Middle Woodland subperiod include increased site size and density, the appearance of large earthen mounds containing elaborately furnished graves, the emergence of agriculture, and the development of ceremonialism and a complex interregional trade network (Griffin 1967:183; Dragoo 1975:18-19; Stoltman 1978:717). Although previous surveys throughout Georgia suggest variability in selection of topographic locations, many Middle Woodland sites in north Georgia are commonly found along the flood plains of rivers and creeks (Garrow 1975).

The artifact assemblages of the Middle Woodland subperiod remain virtually unchanged from the previous cultural period. Medium to large stemmed projectile points are still present but are gradually replaced by triangular points identified as Yadkin, Garden Creek, and Connestee (Anderson and Joseph 1988; Coe 1964; Keel 1976). Stone artifacts also include groundstone celts and rough

slate or shale hoes (Caldwell 1958:46; Ford and Willey 1941:337). Specialized tools, utilized in trade or as grave goods, include copper implements, deer bone awls, beaver and bear teeth, and exotic lithic material (Griffin 1967:183-186; Stoltman 1978:717-718).

Dunlap Fabric Impressed and Cartersville Check Stamped ceramic vessels continued to be produced during the early Middle Woodland subperiod. In addition to these ceramics, Cartersville Simple Stamped and a limited occurrence of Swift Creek Complicated Stamped pottery were added to the assemblage. Furthermore, the appearance of simple-stamped ceramics and the virtual disappearance of Dunlap wares marked the beginning of the late Middle Woodland Cartersville phase (Caldwell 1957).

The impact of Hopewellian developments in the upper Piedmont of Georgia remains unclear. Hopewell-influenced artifacts, such as copper panpipes, earspools, cut mica, and platform pipes, have been found in Middle Woodland components in northwestern Georgia (Jefferies 1976). It is thought that these sites may represent local trading entities in a regional ceremonial and exchange network originating within the Midwestern Hopewellian heartland (Anderson and Joseph 1988).

# **Late Woodland Period (AD 500 - 900)**

The Late Woodland subperiod can be described as transitional and represents a continuing expansion of agricultural subsistence patterns with a decline in Hopewellian influences (Dragoo 1975:19-20). As evidenced by the sparse number of sites recorded in the region for this time period (Caldwell 1958; Garrow 1975; Wauchope 1966), Late Woodland habitation sites are relatively rare.

Late Woodland artifact assemblages are identifiable by occurrence of specific lithic and ceramic types. Medium stemmed projectile points, similar to those associated with the Swift Creek site near Macon, Georgia, are associated with this period (Wood et al. 1986). Groundstone tools are more common than chipped tools, supporting the importance of plant food processing.

Ceramics of the Late Woodland include Late Swift Creek, B-Complex, and Napier wares. Late Swift Creek (AD 500 - 750) ceramics are characterized by increases in plain pottery and folded rims. B-Complex, a Swift Creek variant identified during work in Lake Lanier (upper Chattahoochee River), appears to be a transitional type between Swift Creek and Napier; B-Complex ceramics are most often found in the northern and eastern Georgia Piedmont (Anderson and Joseph 1988:232). Common design motifs for these types include "ovals or teardrops, chevrons, concentric circles, squares and rectangles, and sets of parallel lines" (Wood et al. 1986). Napier (AD 700 - 800), like Swift Creek, can be identified by the presence of relatively large amounts of grit and sand tempering. Napier wares can be distinguished by narrow, well-defined, rectilinear complicated stamped designs.

A more diverse settlement system during the Late Woodland subperiod is suggested by locational data from survey and testing in other areas of the Piedmont. McMichael and Kellar's work (1960) in the Oliver Basin documents the occurrence of a small number of Swift Creek campsites on sandy first terraces and adjacent to shoals and creek mouths.

# Mississippian Period (AD 900 - 1600)

In general, the Mississippian period is seen as a time of permanent settlements, increased religious and social complexity, and greater dependency on agricultural practices. The most dramatic characteristics of this period are observed in the construction of large fortified villages and flat-topped earthen mounds utilized in political and religious functions. An elaborate and complex iconography became widespread throughout the Midwest and Southeast during this time (Dragoo 1975:20-21; Griffin 1967:189-190; Smith 1978; Stoltman 1978:727).

Overall, artifact assemblages during this time become more complex. Pottery is more diversified than during previous cultural periods; there are clear functional differences of form and quality. Plain cooking bowls and storage containers are the most common forms, but polished and decorated vessels are also present. Trade goods often include Coastal Plain shell, used in the manufacture of beads, drinking vessels, and elaborately decorated gorgets; flint; copper; wood; and salt (Griffin 1967:189-191; Stoltman 1978:725-728).

In a chronological summary of Mississippian development in the Georgia Piedmont, Hally and Rudolph (1986:26) divide the period into three subperiods represented by four culture phases. The Early Mississippian subperiod (AD 900 - 1200) is represented by the Woodstock culture and the Etowah culture. Woodstock is seen as transitional between the Late Woodland and Early Mississippian periods, and lacks typical Mississippian characteristics such as mound construction and intensification of maize agriculture, large villages, and various Mississippian pottery features (Hally and Langford 1988:32).

Woodstock phase settlement was primarily in small unguarded villages and larger fortified towns. Woodstock sites at the Allatoona Reservoir (on the Etowah River) were primarily on alluvial terraces but were also located in the flood plain and on levees, knolls, and ridges (Ledbetter and Wynn 1987). Woodstock components identified at Tugalo (9ST1) and Estatoe (9ST3) on the Tugaloo River generally pre-date mound construction (Kelly and DeBaillou 1960). However, truncated mounds have been found in association with Woodstock phase sites in the upper Georgia Piedmont (Caldwell 1953; Dickens 1975).

Woodstock ceramics are characterized by thin walls and fine to medium sand and grit tempered paste, often exhibiting a complicated stamped surface decoration. Stamped concentric diamonds and ovals with horizontal parallel lines inside are the predominant decorative motif (Hally and Langford 1988:24; Wauchope 1966:60). Additional materials associated with Woodstock sites include small triangular projectile points and pottery discs.

The Etowah culture has been suggested for the late Early Mississippian period following the Woodstock culture in the Ridge and Valley province. The Etowah culture can be divided into early and late subphases. The transition from the early to late Etowah subphases is understood in decorative and stylistic changes to complicated stamped pottery. Early Etowah ceramics are represented by complicated stamped motifs including ladder-based diamonds and line block. In the late Etowah subperiod, the frequency of ladder-based diamonds decreases and the use of the filfot cross design first appears. Shell and limestone, frequently used as tempering agents in early Etowah pottery, also decreases during the late Etowah subphase (Hally and Langford 1988:46-55).

The Middle Mississippian subperiod (AD 1200 - 1350) is represented in the area by the Savannah/Wilbanks phase (Hally and Langford 1988). Savannah/Wilbanks phase sites, located in the Etowah River valley, contain several Middle Mississippian mounds (e.g., Plant Hammond [9FL3], Etowah [9BR1], Two Run Creek [9BR3], Free Bridge [9BR6], Raccoon Creek [9BR26], and Conyers Farm [9BR40]). The ceramic transition from the preceding Etowah culture to the Savannah culture is relatively gradual, as most Savannah Complicated Stamped motifs are derived from Etowah Complicated Stamped designs (Hally and Langford 1988:56-57). The Wilbanks phase is defined by the presence of Southeastern Ceremonial Complex artifacts. It is assumed that the Wilbanks phase at Etowah included a stratified society with inherited social position (Hally and Rudolph 1986; Larson 1971). King (1996) speculates that Mississippian political organization in northwest Georgia was similar to a paramount chiefdom dominated by Etowah. King (1996) includes a number of mound sites in the Etowah sphere of influence, including the Plant Hammond site in Bartow County and the Horseshoe Bend site in Cherokee County.

Surveys in the Wallace Reservoir during the middle to late 1970s (DePratter 1976) encountered little evidence of early Middle Mississippian occupation. Hally and Rudolph (1986:61) suggest that

mixing from earlier (Etowah) and later (Middle Mississippian) occupations may have made smaller Savannah sites difficult to recognize.

By the late Middle Mississippian period, the "Southern Cult" influence was in decline, virtually disappearing by AD 1450 (DePratter 1991:45). It is during this cultural transition that the Lamar phase emerged. Lamar was initially defined by Ford and Willey (Kelly 1938) at the type site near Macon. The designation was based on a specific site arrangement (a palisaded village with two mounds) and a ceramic assemblage consisting of a predominate type (grit-tempered Lamar Complicated Stamped pottery) and a strong minority type (Lamar Bold Incised pottery). After 1938, the term "Lamar" was applied to a wider variety of Mississippian cultural manifestations.

Based on previous research, Lamar settlement, architecture, and subsistence are considered to typify "classic Mississippian" (Wynn 1989). Large villages were primarily located on major river flood plains and included platform mounds, plazas, and fortifications. Public structures were built atop the mounds, as were some presumably high-status residences. During this period, houses in the mound villages were 4 to 5 meters square, with single-post wattle and daub walls, subsurface floors, and wall trench entries. Houses in upland hamlets or farmsteads were similar, but larger (6 to 9 meters square), with burials beneath the floors (Hally and Rudolph 1986; Wynn 1989). Subsistence was based on production of maize, corn, and beans, but also included gathering of wild plants (e.g., hickory nuts, chestnuts, grapes) and shellfish, and hunting (e.g., deer and turkey).

Lamar culture is primarily defined by its ceramic assemblage, house form, and burial patterns. Three pottery types predominate: Lamar Complicated Stamped, Lamar Incised, and Lamar Plain. Stamped patterns include the filfot cross, figure eight, and nested concentric circles and rectangles. Incising varies from bold and broad (Early Lamar) to fine and widely spaced (Late Lamar). Certain vessels (e.g., jars) are also recognizable by thickened (folded and pinched) rims. Based upon differences in traits of ceramic production, Hally and Langford (1988:14) have identified three phases of Lamar culture: Little Egypt, Barnett, and Brewster.

### 3.2.2 Historic Occupation

# Historic Indian Period (AD 1540 - 1838)

The focus of this period is Native American populations after their initial contact with European explorers, traders, missionaries, and settlers (Crook 1986). The period extends until the termination of the Native American's political control over their former territory. This period is often referred to as the Protohistoric period to differentiate it from the preceding Prehistoric and subsequent Historic periods, while also maintaining continuity of the Historic Indian period.

Several major themes generally characterize the Historic Indian period in the Southeast, each involving significant changes in the Native Americans of the region. First, European contact brought a dramatic alteration of Native American technology. Metal tools and firearms greatly affected economic patterns within Native American cultures, and also made these cultures dependent upon trade with Europeans. The use of European technology altered subsistence patterns for aboriginal populations, and European American pressure for land resources and trade encouraged increasing aboriginal dependence throughout the period.

A second major theme for the period involves the dramatic demographic changes in aboriginal populations. Shifts in subsistence and trade, as well as displacement from war (with European Americans and other Native American groups), forced movements of populations and the concentration of formerly widely-spaced groups. Disease introduced by contact with Europeans dramatically decreased population size and altered its structure. Worth describes this phenomena as the "falling apart" of the indigenous societies, noting that members of the indigenous groups were either drawn into the developing mission system or relocated among other groups on the frontier (Worth 1993:25).

The third major theme is the culmination of the first two: the loss of political independence of Native American groups. The early reduction of population size combined with economic dependence and defeat in war, and finally displacement from their lands, marked the loss of political self-control that characterized the period. The area near the project corridor was near the southern boundary of Cherokee Indian territory until the Georgia Gold Lottery of 1832. Anti-Indian sentiment was heightened by the Dahlonega gold rush in 1828, culminating in the removal of the Cherokees from the state. In 1830, the Georgia Legislature enacted legislation to survey the lands occupied by the Cherokee Indians. With support from President Andrew Jackson, the state of Georgia stripped the Cherokee citizens of their rights and distributed their lands to white Georgians (Hudson 1976). A Cherokee delegation that represented a minority faction of the Cherokee Nation signed the Treaty of New Echota in 1835, and for a payment of \$15 million agreed to relocate to Oklahoma. In 1838, the United States Army and Georgia militia gathered most of the Cherokees into stockades. The Cherokee Nation, numbering approximately 17,000, was then marched westward to present-day Oklahoma. Several thousand men, women, and children died during the "Trail of Tears" (Thornton 1991).

# Historic Euro-American Period (AD 1540 - Present)

Historians and archaeologists agree that Spanish explorers probably passed near the project region during the early to mid-sixteenth century (DePratter et al. 1983; Hudson et al. 1984; Smith 1976). In 1540, Hernando de Soto's expedition across the Southeast passed through the Conasauga River valley, through the chiefdom of Coosa. While exploratory expeditions led by De Soto and Juan Pardo constituted the initial incursion of Europeans into the interior Southeast, Spanish influence over what would become northern Georgia was short-lived and limited to occasional trade with aboriginal populations.

English journeys into Native American lands of interior Georgia may have begun as early as the late 1600s. Representatives of the British colonial government ventured westward soon after the founding of Charles Town (now Charleston, South Carolina) in 1670, anxious to establish relationships with interior settlements for the purpose of expanding their commercial and political boundaries. To this end, visits to the interior region by Dr. Henry Woodward in 1674 (Milling 1969) and James Moore in 1690 (Mooney 1982) were oriented primarily toward the establishment of trade and political alliance.

While permanent white settlement in Georgia officially began with Oglethorpe's landing at Yamacraw Bluff (now Savannah) in 1733, movement into more remote portions of the state did not occur until the late eighteenth century. Sandtown, a Creek Indian town located on the Chattahoochee River in south Cobb County, was vital in the frontier trade between whites and Indians. Old Sandtown Road, an important Indian trading path located in Cobb County, connected Sandtown with Cherokee towns located on the Etowah River. During the early eighteenth century, white traders traveling into interior Georgia followed the Etowah Trail, later known as the Hightower Trail. This trail allowed comparatively easy travel from Augusta to Etowah in northwest Georgia. An important Indian trading path was the Old Peachtree Trail, connecting Standing Peachtree on the Chattahoochee River with Kennesaw Town and other northern destinations.

Treaties signed in Augusta in the late eighteenth century opened large portions of northeast Georgia to European American settlement. Native American groups were forced to cede land to state and federal governments, and immigration of European Americans into the interior Southeast intensified. Initial settlement in the vicinity of the project corridor did not occur until after the War of 1812, when threats of Indian attack had abated (Dorsey 1991). Legal settlement of the project vicinity did not begin until after the Cherokee lands were confiscated in 1832 (Davis 1981). Cobb County was established from a portion of Cherokee County in 1832. Two years later, Marietta was designated as the county seat.

Early settlement and economy in north Georgia followed established frontier patterns. Initial settlement was primarily along river and stream valleys where rich alluvial soils were available. The first homes were small one- or two-room log cabins. Many of the first settlers in the area were subsistence farmers. Farms in the region were initially small and scattered, owing to contemporary agricultural technology. Pioneer farming focused on clearing trees on the best soils to establish a garden, some fruit trees, a cash crop, and a food crop. Principal crops were corn, sweet potatoes, Irish potatoes, and beans. Corn was the principal food crop, and corn and tobacco were the first cash crops. Pigs, sheep, and cattle were allowed to roam the open range and woodlands and were driven overland to Augusta for river transport to markets in Savannah (McIntosh 1940). As settlement developed and stabilized, lands were consolidated, and a plantation economy based on cotton developed (Tabor 1974). The primary markets for the project vicinity's farm products were Atlanta, Athens, and Augusta.

By the mid-nineteenth century, transportation systems statewide had begun to be developed; however, these improvements were slow in reaching north Georgia. Public roads, following early Indian trails, were unimproved and often unmarked. Railroad construction in Georgia began in the 1830s, but the railroad did not reach near the project area until the mid-1840s, when the Georgia Railroad, linking Terminus (Atlanta) and Augusta, was constructed. The Western & Atlantic Railroad, which parallels the project area, was completed through Cobb County in 1846.

The Civil War (1860-1864) dealt much of Georgia a major blow in the form of social and economic upheaval. Intermittent raids, guerilla activities, and finally the Atlanta campaign caused disruption of former lifeways; food, seed, and livestock were taken or destroyed, and slaves were set free. North Georgia was utilized by both Union and Confederate armies during the summer of 1864. The entire landscape of Cobb County was modified by both Union and Confederate armies (totaling over 180,000 men); miles of excavated entrenchments and fortifications were constructed throughout the area.

While in Chattanooga, Tennessee, in the spring of 1864, Union General William T. Sherman received orders to advance as far as possible into Georgia with his army of 100,000 troops. Two primary goals of the campaign were to sever the Western & Atlantic Railroad, which was the supply line of the Confederate army, and to capture Atlanta. Between Chattanooga and Atlanta, when the Union army encountered firmly entrenched Confederate forces, Sherman repeated the same basic tactics. The Union army held the opposition in place using strong force, while the remainder of the Union troops flanked the Confederate position toward the Western & Atlantic Railroad.

The Confederate army's defensive strategy during the Atlanta campaign relied heavily on previously excavated earthworks. Taking advantage of the mountainous topography of the region, the Confederates executed well planned retreats to fortified positions, usually earthworks excavated on or near ridge tops. In this way, the Confederates hoped to engage the Union troops on their own terms, lure them into deeper hostile territory, separate them from their supply lines, and keep Confederate losses at a minimum (Fryman and Holland 1996:15).

Cobb County and the surrounding vicinity saw extensive military action during Sherman's Atlanta Campaign in 1864 (Scaife 1993). In June 1864, battles from this campaign between Sherman and Confederate General Joseph Johnston occurred in and surrounding the project area. On June 9, Sherman extended his Union line beyond that of Johnston's troops that were entrenched in the Marietta area. These Confederate entrenchments include the Lost Mountain, Pine Mountain, and Brushy Mountain lines. Confederate Lieutenant General John B. Hood's Corps held the right side of the line at "Hoods Fort," located east of the railroad (Scaife 1993:64). Major General Joseph Wheeler's cavalry guarded Hood's Corps' right (eastern) flank of the Brushy Mountain line from entrenchments located within the project area. Hood's Corps left their position, shifting from the extreme right of the line to the extreme left of the Confederate line on June 21. This move southeast from Marietta was executed to block an unexpected lateral Federal movement along Powder Springs Road and resulted

in a bloody engagement with Union forces at Kolb's farm (Scaife 1993:64-65). Sherman continued to extend his position and eventually forced Johnston's Confederate troops to withdraw from the Marietta area between July 2 and 3 (NPS 1993a, 1993b, 1993c; Scaife 1993:61-72).

After the war, the loss of the slave labor force throughout the South, combined with severe financial setbacks suffered by the southern states as the war's defeated party, necessitated changes in the overall economic system. Prunty (1955) attributes the development and growth of the tenant farm/sharecropper system after the Civil War to extensive changes in sources of labor and capital availability. The reorganization that occurred was primarily based on changes in the relationship between management and labor, and resulted in the broad dispersion of smaller, individual farmsteads (sharecroppers and tenant farmers) within the former boundaries of the plantation. Former slaves and non-landholding whites ultimately became a part of this new system wherein farmland was rented for cash or a share of the seasonal yield.

Shifts in settlement related to plantation reorganization apparently occurred throughout the state. Prunty (1955) describes spatial differences between antebellum and postbellum plantation settlement patterns resulting from a movement away from the pre-war nucleated plantation village toward a more dispersed pattern of tenant farms having varying degrees of independence from the planter/landowner. According to Prunty (1955:470), the critical factor determining extent of settlement distribution was the control and ownership of working livestock, agricultural implements, and housing. The nucleated form of settlement found on antebellum plantations continued to predominate until freedmen acquired freedom from direct control and continuous supervision; their own homes in proximity to cropland at least functionally, if not nominally, under their control; and use and control of mules. As these aspects of freedom were slowly realized, freed blacks were able to move away from the plantation village complex and occupy outlying tracts within the planter's holdings, forming what Prunty (1955:466) terms the "Postbellum Fragmented Occupance Form."

As the industrial revolution continued, European demand for American cotton grew. The South responded to this demand, producing about 10,000,000 more bales of cotton in the four years preceding 1881 than it had during the 15 years immediately preceding the Civil War (Aycock 1981). Apparently, the tenant farm system was more efficient at producing cotton than was the slave labor system. A persistent problem with tenancy was its creation of impoverished white and black farmers, forced to mortgage future crops for present needs. In years when crops failed, these farmers went deeper into debt (Wynes 1977).

Cotton and corn remained the most important crops produced in the Upper Piedmont to the east of the project area through the late nineteenth century. By the late 1880s, a number of farmers were attempting to diversify their agricultural output. The less labor-intensive breeding of livestock, particularly cattle, sheep, and hogs, while matching pre-war production only after 1900, represented the major attempt at diversification.

Cotton was a dominant crop into the early twentieth century. Georgia's most productive year for cotton was 1913, and the market for cotton remained strong. The boll weevil first appeared in south Georgia later that year, and within six years the weevil had spread throughout Georgia, ruining the cotton crops. Large-scale production of cotton in the study area ended about 1920.

Despite a rapid decline in cotton production, farming remained the chief occupation in Cobb County until the mid-twentieth century. More than 66 percent of the land in the study area was farms; these were generally small, composed of 250 acres or less (Hodler and Schretter 1986:126-127).

Hodler and Schretter (1986) reported that by the mid-1980s, much of Cobb County no longer contained fertile farmland. Suburbanization followed rail lines that established easy transportation for commuters to Atlanta in the early twentieth century (Roth 1988). Manufacturing and service industries employ most of the residents in the area. At the present time, Cobb County is part of metropolitan Atlanta, and many of the residents commute daily into Atlanta.

# 4.0 Results

# 4.1 Background Research Results

Background research revealed that there are 35 archaeological sites located within 1.0 km (0.6 mile) of the APE. Four of these sites are located on airport property: three within the APE (9CO311, 9CO312, 9CO313) and one near the APE (9CO307). Figure 2 provides the locations of previously recorded cultural resources within one kilometer (0.6 mile) of the APE (the eastern and western ends of the study area were later removed from the proposed project). Table 1 lists previously recorded cultural resources and their NRHP eligibility. Background research indicated that there were previous airport studies associated with past improvement projects that have covered the majority of the airport property. A 1973 survey of airport property (Meier 1973) included a pedestrian reconnaissance with judgmental shovel testing, which included 0.6-by-0.6-meter (2-by-2-ft) units placed in high probability areas. Between 1981 and 1985, Meier and the Archaeological Survey of Cobb County conducted similar judgmental shovel testing and the excavation of larger units in high probability areas on tracts of land located east and south of the airport property, including areas along Noonday Creek. Other archaeological investigations were conducted between 1987 and 2005 for an FAA-approved development plan for the airport.

Table 1. Cultural resources located within 1.0 km of the improvement areas.

Resource	Resource Type	Cultural Period	NRHP Eligibility
9CO97	Prehistoric Lithic Scatter	Late Archaic	Unknown
9C0265	Prehistoric lithic scatter historic glass scatter	Unknown prehistoric, historic late nineteenth-to- twentieth century	Unknown
9C0266	Civil War gun emplacement and Minnie ball	Civil War 1864	Eligible
9C0267	Quartz Quarry	Possible Archaic	Unknown
9C0268	Civil War Minie ball and shell fragments	Civil War, ca. 1864	Unknown
9C0293	Prehistoric Lithic Scatter	Archaic	Ineligible / Destroyed
9CO306	Prisoner Rock Quarry	Historic mid-20th century	Ineligible / Destroyed
9CO307	Possible Civil War Trench and gun emplacement	Historic Civil War 1864	Originally Eligible, Now Destroyed
9CO308	Prehistoric ceramic scatter, Lamar house mound	Mississippian/Lamar	Eligible
9CO309	Rock mound and prehistoric lithic scatter	Unknown	Unknown
9C0310	Prehistoric lithic scatter and historic artifact scatter	Early-to-Middle Archaic and 19th to 20th century artifact scatter	Ineligible / Destroyed
9CO311*	Lithic and ceramic scatter, several Minie balls (Union)	Woodland-Mississippian, Civil War	Ineligible / Destroyed
9CO312*	Lithic surface scatter	Middle to Late Archaic	Ineligible / Destroyed

9CO313*	Lithic scatter with two ca. 1864 artifacts	Possible Archaic, Civil War	Ineligible / Destroyed
9CO314	Lithic scatter	Possible Archaic with 19th and 20th century artifacts	Unknown, Appears Destroyed
9CO315	Artillery emplacement and riffle trench (Union)	Civil War	Eligible
9CO316	Prehistoric village and possible mound	Middle Woodland- Cartersville	Potentially Eligible
9CO317	Prehistoric ceramics and historic bullet	Woodland, Historic ca. 1864	Unknown
9CO318	Prehistoric lithic scatter	Early Archaic	Unknown
9CO320	Gun emplacement remnant (Union)	Civil War	Unknown
9CO356	House site/artifact scatter	Historic 20th century	Ineligible
9CO357	Prehistoric lithic and ceramic scatter	Late Archaic-Woodland	Unknown
9CO498	Lithic and ceramic scatter	Unknown prehistoric and historic artifact scatter	Unknown
9CO550	Prehistoric lithic scatter	Unknown	Ineligible
9CO551	Prehistoric lithic scatter	Early Archaic	Ineligible / Destroyed
9CO552	Historic artifact scatter/house site	Historic Late 19th to 20th century	Ineligible
9CO554	Historic house site	Historic Late 19th to Early 20th century	Ineligible
9CO555	Historic farm complex remnant	Historic 20th century	Ineligible
9C0556	Prehistoric lithic scatter	Middle Archaic	Ineligible
9C0607	Prehistoric Lithic surface scatter	Middle to Late Archaic	Ineligible
9C0608	Prehistoric lithic scatter	Unknown	Ineligible
9C0609	Prehistoric lithic and ceramic scatter	Woodland-Mississippian	Ineligible
9C0611	Prehistoric lithic scatter	Unknown	Ineligible
9CO612	Fishing camp remnant	Historic 20th century	Ineligible
9C0613	Historic military artifact scatter (Union)	Civil War 1864	Ineligible
Western & Atlantic Railroad	Active Railroad Corridor	ca. 1845	Eligible
* In APE		1	1

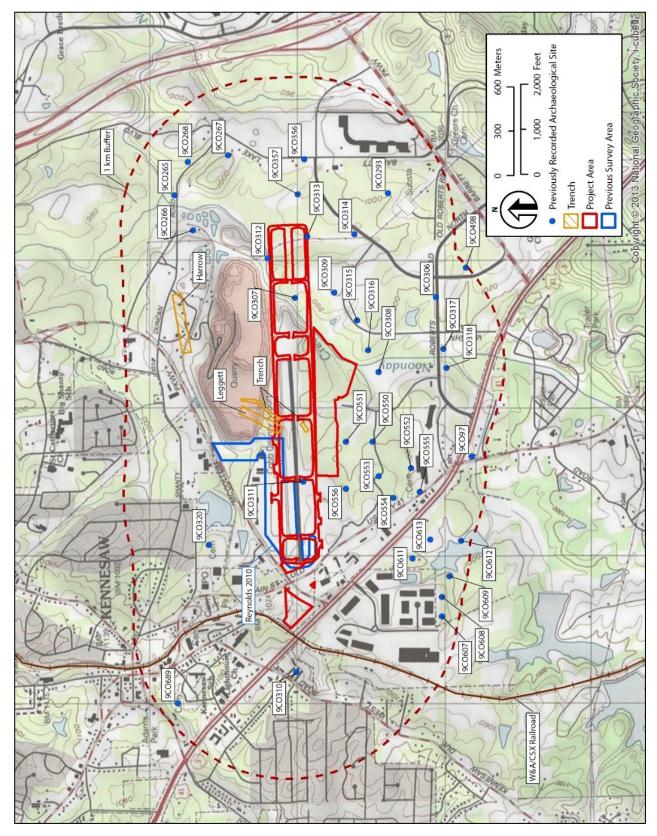


Figure 2. Locations of previously recorded cultural resources located within one mile of the Airport (1956 *Kennesaw Georgia* 7.5 minute USGS topographic quadrangle photorevised 1985).

In 1987, Marilyn Pennington conducted an archaeological survey on property east of Noonday Creek in preparation for a runway extension (Pennington 1987). In 1993, an intensive Phase I archaeological survey was conducted on tracts of land located north, south, and east of the runway and taxiways in preparation for runway and taxiway improvements (Wallsmith et al. 1994). In 2010, a cultural resources survey was conducted in proposed airport improvement areas located north of the existing Taxiway A, north of the existing control tower, and immediately west of Runway 9 (Reynolds 2010). However, no archaeological sites were identified.

Previous DNR architectural surveys were conducted in the vicinity of the airport property in 1978 and 2000 but were unrelated to airport studies and the recorded resources are outside the current APE. In addition, the circa 1845 Western & Atlantic Railroad corridor (now the active CSX railroad corridor [Storey n.d.]) is located on a wooded berm outside the APE northwest of the proposed Runway 9 Safety Area (see Figure 2). However, there are no previously recorded architectural resources in the APE.

In addition, background research revealed that there were once Civil War troop movements and trenches associated with Union forces on the airport property. Based on previous research conducted by the NPS, the airport property is within the NPS study area associated with Marietta Operations. This includes operations associated within the Lost Mountain-Brushy Mountain line and operations around Noonday Creek (NPS 1999). However, activities on airport property included troop staging areas that were located outside the core battle study area for the Lost Mountain-Brushy Mountain line. The core study area is located approximately 2.5 miles (4 km) east of the airport property.

Due to national concern over the increasing loss of Civil War sites, the Civil War Sites Advisory Commission was established by public law in November of 1990. The 15-member Commission, appointed by Congress and the Secretary of the Interior, was tasked with identifying the nation's historically significant Civil War sites. They were also asked to determine the relative importance of each site and their condition, assess threats to their integrity, and recommend alternatives for preserving and interpreting them. The report, which is in three volumes, presents the Commission's findings and was published in 1993 and reprinted in 1999 (NPS 1999). In addition to the three volumes, battlefield maps were produced on USGS topographic maps. A brief description of Marietta Operations follows:

# Marietta Operations

**Location**: Cobb County

**Campaign**: Atlanta Campaign (1864)

**Date**: June 9-July 3, 1864

Principle Commanders: Major General William T. Sherman (US); General Joseph E. Johnston (CS)

Forces Engaged: Military Divisions of the Mississippi (US); Army of Tennessee (CS)

**Estimated Casualties**: Unknown

**Results**: Union Victory

**Battles Associated with the Operations**: Brushy Mountain, Gilgal Church, Lost Mountain, McAfee's Cross Roads, Mud Creek, Neal Dow Station, Noonday Creek, Pine Hill, Pine Mountain, Rottenwood Creek, and Ruff's Mill.

# **Marietta Operations Description:**

During the Atlanta Campaign, Sherman maneuvered Johnston's Confederate army out of several successive defensive positions in Cobb County. This strategy spared the Union army from making costly frontal attacks on the well-situated Confederates.

Sherman first found Johnston's army entrenched in the Marietta area on June 9. The Confederates had established defensive lines along Brushy, Pine, and Lost Mountains. Sherman extended his forces beyond the Confederate lines, causing a partial Rebel withdrawal to another line of positions. After further pressure and skirmishing from Union forces, Johnston withdrew to an arc-shaped position centered on Kennesaw Mountain on June 18 and 19. Sherman made some unsuccessful attacks on this position but eventually extended the line on his right and forced Johnston to withdraw from the Marietta area on July 2-3 (NPS 1999).

The Civil War Sites Advisory Commission identified Marietta Operations (GA013) as a "Class B" operation. This Class is defined as operations/battles "having direct and decisive influence on their campaign" (NPS 1999). However, the operations have been given a Preservation Priority IV.1 designation, meaning it is fragmented and has poor integrity. In addition, the airport property was only in the general NPS study area and not in the core battle study area.

The particular area of Marietta Operations that was on airport property was a portion of a staging area for General Mortimer Leggett's Division of Blair's XVII Corps, which was located approximately 63 to 100 m (206 to 328 ft) east of Tracts U and G of the airport improvement areas. Two trenches were also located southeast of the staging area (see Figure 3). Archaeological Site 9CO307, recorded as a possible Civil War trench and gun emplacement (Pennington 1987), and site 9CO311, which included a Civil War component (mini balls) as well as Woodland Period to Mississippian Period lithic and ceramic scatter component (Pennington 1987) might have been associated with one of these trenches. Both sites were located in the APE. In addition, a staging area for Harrow's Division of the XV Corps was located northeast of the airport property. However, these staging areas and trenches, including sites 9CO307 and 9CO311, have been destroyed either by past airport development or the creation of a large rock quarry north of the airport.

In addition, Sites 9CO312 and 9CO313 were located in the APE near what are now the proposed Taxiway A and Taxiway B extension areas. Site 9CO312 was recorded as a Middle to Late Archaic lithic surface scatter (Pennington 1987) that is listed as destroyed on the 1995 updated site form. Site 9CO313 was recorded as a possible Archaic lithic scatter and two Civil War period artifacts. This area has been destroyed by the construction and realignment of a rock quarry power line and the construction of a light industrial building in the 1990s. The other 31 sites are within 1.0 km (0.6 mile) of the airport improvements area but are outside the APE. They consist of a mix of prehistoric and historic sites, including two Civil War artifact scatters and three gun emplacements (see Figure 3 and Table 1).

# 4.2 Field Survey

Due to past soil disturbance from previous airport construction projects, most of the APE did not require shovel testing. However, judgmental shovel testing was conducted in the proposed Basing Area on a low terrace above Noonday Creek. Judgmental shovel testing was also conducted at the previous locations of archaeological Sites 9CO312 and 9CO913. Figure 3 provides a shovel test map of the project study area. [Note: The eastern and western ends of the study area (Runway 9 Safety Area and Runway 27 extension, respectively) were later removed from the proposed project.]

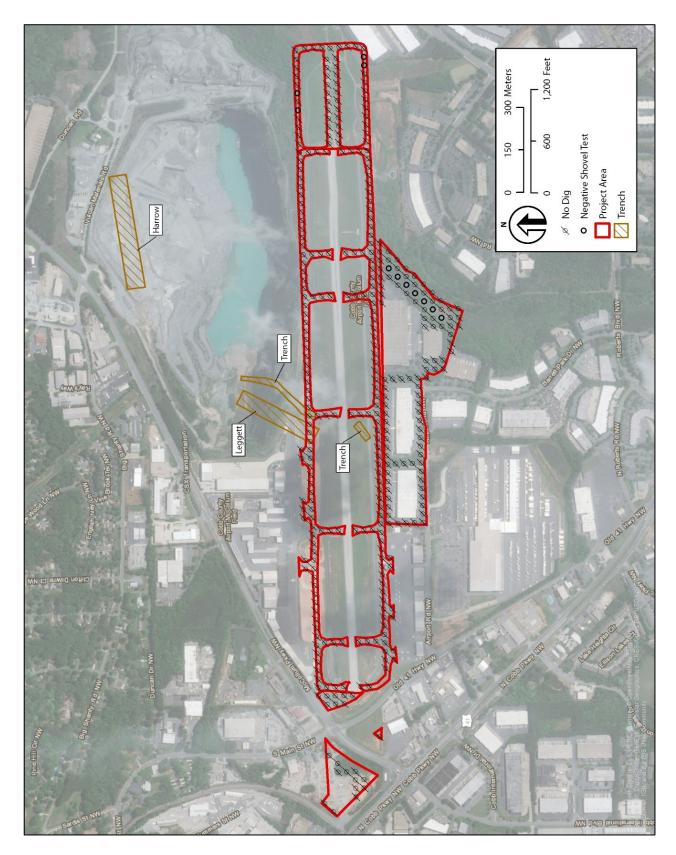


Figure 3. Shovel test map of the project study area (ESRI 2019).

# 4.2.1 Proposed Runway 27 Extension Area

The archaeological field survey revealed that a previously proposed Runway 27 extension area (later removed from the proposed project) consists of dense fill associated with earlier airport construction projects, as well as buried utility lines for runway lighting (Figure 4). Further to the east is a steep graded slope covered with grass that extends into a wet drainage. In some areas erosional gullies are present, exposing red clay subsoil.



Figure 4. Previously proposed Runway 27 extension area (later removed from proposed project), looking north.

### 4.2.1 Proposed Taxiway A and B New Locations

The proposed Taxiway A and B new location areas, paralleling the previously proposed (later removed from the proposed project) Runway 27 extension area, consist of dense fill associated with earlier airport construction projects, drainage ditches, and buried utility lines for taxiway lighting (Figures 5 and 6). Farther to the east are steep graded slopes covered with grass that extend into wet drainages (Figures 7 and 8). In some areas erosional gullies are present, exposing red clay subsoil.



Figure 5. Taxiway A relocation area, looking west.



Figure 6. Taxiway B relocation area, looking west.



Figure 7. Taxiway A relocation area, north of the previously proposed Runway 27 extension area, looking east.



Figure 8. Taxiway B relocation, north of the previously proposed Runway 27 extension area, looking east.

# 4.2.2 Proposed Basing Area

The proposed basing area primarily consists of four large office buildings constructed in the early to mid-1990s, large asphalt parking lots, and access roads. Southeast of the buildings is a steep slope leading to a narrow terrace above Noonday Creek (Figures 9 through 11). Much of this area had been previously disturbed by the installation of a large sewer line. Seven shovel tests were excavated northwest of the sewer line. Soils consisted of brown silty loam from 0-12 cm below surface (cmbs), overlying brownish-red silty loam from 12-65 cmbs, followed by red silty wet clay subsoil from 65-75 cmbs. All shovel tests yielded negative results.



Figure 9. Proposed Basing Area, office building, looking northwest.



Figure 10. Proposed Basing Area, narrow terrace above Noonday Creek, looking northeast.



Figure 11. Proposed Basing Area, sewage line culvert, looking northeast.

### 4.2.3 Site 9CO307

UTM: Zone 16, E 722740, N 3766000 Type: Possible Civil War Trench

Time Period: ca. 1864

Setting: graded grassy slope and runway

Elevation: 1003.9 ft (306 m) amsl Nearest Water Source: Noonday Creek

Dimensions: 187 m (613.5 ft) NW/SE by 65 m (213.2 ft) NE/SW

NRHP Eligibility Recommendation: Ineligible/destroyed

Site 9CO307 was recorded as a possible Civil War trench and gun emplacement and was located just outside the APE in a previous Runway 9 extension area (see Figure 2). It was recorded by Pennington (1987) as part of the runway extension project. The site has since been destroyed by the runway extension.

### 4.2.4 Site 9CO311

UTM: Zone 16, E 721510, N 3765970

Type: Lithic and Ceramic Scatter, Civil War Minie balls Time Period: Woodland-Mississippian, Civil War (ca. 1864)

Setting: graded/paved taxiway apron Elevation: 323 m (1059.7 ft) amsl Nearest Water Source: Noonday Creek

Dimensions: 62.5 m (205 ft) N/S by 31 m (101.7 ft) E/W NRHP Eligibility Recommendation: Ineligible/destroyed

Site 9CO311 was recorded as a Woodland-Mississippian lithic and ceramic scatter. Several ca. 1864 Minie balls were also recovered. The site, which was located in the APE, was recorded in 1981 as part of a reconnaissance and was evaluated in Pennington's (1987) report. It was revisited by Wallsmith et al. (1994) during a later airport improvements project and was found to be destroyed by airport development. The former 9CO311 location consists of a graded and paved taxiway apron (Figure 12).



Figure 12. Former location of 9CO311, looking west.

# 4.2.5 Site 9CO312

UTM: Zone 16, E 723010, N 3766190

Type: Lithic Surface Scatter

Time Period: Middle to Late Archaic

Setting: graded grassed slope and a wet drainage area

Elevation:295 m (967.8 ft) amsl Nearest Water Source: Noonday Creek

Dimensions: 100 m (328 ft) N/S by 100 m (328 ft) E/W NRHP Eligibility Recommendation: Ineligible/destroyed

Site 9CO312 was recorded as a Middle to Late Archaic lithic surface scatter and was located in the APE (see Figure 2). It was recorded in 1981 as part of a reconnaissance and was evaluated in Pennington's (1987) report. It was revisited by Wallsmith et al. (1994) during a later airport improvements project and was found to be destroyed by airport development. The former 9CO312 location consists of graded slope and a wet drainage area west of a gravel access road (Figure 13). We excavated two judgmental shovel tests, which revealed dense reddish-brown clayey fill dirt from 0-60 cmbs, overlying very wet grayish-brown clayey silt from 60-75 cmbs. No artifacts were recovered.



Figure 13. Former location of 9CO312, looking east.

### 4.2.6 Site 9CO313

UTM: Zone 16, E 723010, N 3766190

Type: Lithic Scatter, Civil War artifact scatter Time Period: Possible Archaic, Civil War (ca. 1864) Setting: Graded slope and a wet drainage area

Elevation: 300 m (984 ft) amsl

Nearest Water Source: Noonday Creek

Dimensions: 46 m (150 ft) N/S by 46 m (150 ft) E/W NRHP Eligibility Recommendation: Ineligible/destroyed

Site 9CO313 was recorded as a lithic scatter of quartz debitage and tools, as well as one ca. 1864 artillery projectile fuse and one ca. 1864 William Cleaner rifle projectile. The site, which is located in the APE (see Figure 2) and was recorded in 1981 as part of a reconnaissance and was evaluated in the Pennington 1987 report. Wallsmith et al. (1994) attempted to revisit the site during a later airport improvement survey. However, the area had been disturbed by powerline construction and the site could not be located. The site was given an unknown NRHP eligibility.

The former 9CO313 location consists of a graded slope adjacent to a light industrial building constructed in the 1990s. Northwest of the slope is a rock quarry powerline corridor that runs through a low wet area containing machine-made drainage ditches (Figure 14). The site appears to have been destroyed by past construction activity. Judgmental shovel testing revealed dense mottle gray and reddish-brown clayey fill dirt from 0-60 cmbs, overlying wet reddish-brown silty clay from 60-75 cmbs. No artifacts were recovered. Therefore, Site 9CO313 is recommended not eligible for the NRHP.



Figure 14. Former location of 9CO313, looking northeast.

# **Architectural Field Survey**

The architectural resources field survey found no historic architectural resources in the project area. The field survey found that the project viewshed consists of non-historic commercial and industrial development. Therefore, there were no unrecorded resources over 50 years old in the APE.

McCollum Field was constructed in 1960 and consisted of a single airstrip and administrative building located north of the runway. However, the original administrative building is no longer extant, and the original runway configuration has been changed considerably as a result of past airport improvements. The earliest extant building on the property is a hangar located north of the runway, constructed ca. 1962, Several other nearby hangars were construed ca. 1968. However, these buildings are outside the current APE. The majority of the buildings on the property were constructed in the 1990s. The control tower and associated offices were constructed in 1995 (McCollum Field 2019; Scott 2003). The architectural survey found the area surrounding the airport consists of non-historic commercial and industrial development and there does not appear to be any unrecorded resources over 50 years old in the APE.

# 5.0 Summary and Recommendations

As a result of the Phase I cultural resources survey, it was found that there were three previously recorded archaeological sites in the APE. However, they have been destroyed by past construction projects. In addition, there are no previously recorded architectural resources located within the APE. No additional archaeological sites or architectural resources were identified in the APE. Due to the coverage of previous archaeological surveys on airport property and the absence of intact soils in the proposed improvement areas, no additional cultural resources investigations are necessary for this proposed improvement and safety project.

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# **APPENDIX F Public Notices (reserved)**

# APPENDIX G Agency Comments (reserved)