



Department of Transportation  
Federal Aviation Administration  
Memphis Airports District Office  
Memphis, Tennessee

## Finding of No Significant Impact and Record of Decision

Runway 5L/23R Replacement Project  
Raleigh-Durham International Airport  
Wake and Durham Counties, North Carolina

Raleigh-Durham Airport Authority

August 31, 2023

## **I. INTRODUCTION / BACKGROUND**

In compliance with the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) Regulations, 40 Code of Federal Regulations (CFR) Parts 1500-1508, and Federal Aviation Administration (FAA) Orders 1050.1F and 5050.4B, this Finding of No Significant Impact (FONSI) and Record of Decision (ROD) announces final agency determinations and approvals for those Federal actions by the Federal Aviation Administration (FAA) that are necessary to support implementation of the Runway 5L/23R Replacement Project (Proposed Action) at the Raleigh-Durham International Airport (RDU) in Wake and Durham Counties, North Carolina. The project elements of the Proposed Action are described below in Section II, Proposed Action. The Airport sponsor (Sponsor) for the project is the Raleigh Durham Airport Authority (Airport Authority). The agency decision is based on information contained in the Final Environmental Assessment (FEA) for the Runway 5L/23R Replacement Project, Raleigh-Durham International Airport, Raleigh, North Carolina, September 2023 (FEA), incorporated by reference herein and all other applicable documents available to the agency.

## **II. PROPOSED ACTION**

The Airport Authority proposed to replace the existing Runway 5L/23R with a new runway at 10,639 feet in length shifted 537 feet to the northwest with additional related construction activities and sought FAA Airport Layout Plan (ALP) approval. This request for Federal approval is referred to as “the proposed Federal action”. The Proposed Action is graphically depicted in Exhibit 1-2 in the Final EA. Additional details of the Proposed Action, connected actions, and enabling actions of each element are provided in Section 1.3 of the FEA. The Proposed Action includes:

1. Relocation of the existing Runway 5L/23R approximately 537 feet to the northwest at the location depicted on the conditionally approved ALP with a 10,639-foot-long physical runway pavement.
2. Conversion of the existing Runway 5L/23R to a full-length parallel and connecting taxiway, after the replacement runway is completed.
3. Excavation of approximately 5 million cubic yards of borrow material to fill and level the area of the relocated runway prior to construction. The proposed borrow sites are located on Airport property south and west of the airfield near Brier Creek Reservoir.
4. Clearing of approximately 480 acres of wooded area for borrow material access and for constructing the safety areas adjacent to the proposed runway.
5. Using Brier Creek Reservoir as a water source for hydro-compression of the fill material. Approximately 150 million gallons of water would be withdrawn over a period of approximately two years.
6. Construction of the FAA-required safety areas beyond the replacement runway ends including the Runway Object Free Area (ROFA), Taxiway Object Free Area (TOFA), and Runway Protection Zone (RPZs). This would also clear and/or mitigate any obstacles, including vegetation, trees, and/or buildings/towers/antennas that may cause safety issues with the relocated runway.

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7. Construction of the lighting systems associated with the relocated runway according to the most current FAA-required safety standards.
8. Construction of associated drainage improvements including erosion and sedimentation control for construction areas that are cleared of vegetation and drainage infrastructure for additional impervious pavement areas.
9. Relocation of a portion of Lumley Road from Runway 23R approach RPZ as shown on Exhibit 1-15 in the Final EA..
10. The acquisition of four properties, approximately up to eight acres, by the Airport Authority to accommodate the relocated roadway and utility rights of way. Utility relocations, including the relocation of power lines, would also need to be conducted to accommodate the Proposed Action.
11. The demolition of four buildings..
12. Construction of an airport perimeter road around the proposed relocated runway to replace the existing portion of the perimeter road removed to construct the relocated runway. The new portion of the perimeter road would be approximately 15,000 feet in length.
13. Relocation of navigational aids for the relocated runway to include either an earthen berm or a bridge to allow access to these light stations on the eastern shore of the Brier Creek Reservoir. The existing precision approach path indicator (PAPI) and glideslope antennas would also be relocated to accommodate the relocated runway.

### **III. PURPOSE AND NEED**

As discussed in Chapter 1, Sections 5 and 6 of the Final EA, the purpose and need for implementing the Proposed Action is to address runway 5L/32R's deterioration and structural failure while providing a structurally sound primary runway at RDU that maintains its current runway capabilities. The purpose is also to fulfill FAA's statutory mission to ensure that the safe operation of the airport and airway system under 49 U.S.C. § 47101 (a)(1).

### **IV. ALTERNATIVES**

Federal guidelines concerning the environmental review process require that all reasonable and practicable alternatives that might accomplish the objectives of a proposed project are identified and evaluated. Reasonable and practicable alternatives for the Proposed Action were carefully examined in Chapter 2 of the Final EA. In addition to the No Action Alternative, Runway Alternatives, Lumley Road Alternatives, and Fill Dirt Borrow Sites Alternatives were considered including the following:

#### **1. Runway Alternatives**

- (1) Alternative A – No Action Alternative
- (2) Alternative B1 – Construct New Runway at a New Airport
- (3) Alternative B2 – Use of Another Runway at an Existing Airport
- (4) Alternative B3 – Use of Alternative Modes of Transportation
- (5) Alternative B4 – Use of Technology
- (6) Alternative C1 – Reconstruct Runway 5L/23R in its Existing Alignment
- (7) Alternative C2 – Relocate Runway 5L/23R at a Total Length of 10,000 Feet

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- (8) Alternative C3 – Relocate Runway 5L/23R at a Total Length of 10,639 Feet (Proposed Action)
- (9) Alternative C4 – Relocate Runway 5L/23R at a Total Length of 11,500 Feet
- (10) Alternative C5 – Runway 5R/23L Extension
- (11) Alternative C6 – Crossfield Runway Extension
- 2. Lumley Road Alternatives
  - (1) Relocate Lumley Road Outside and Around the RPZ (Proposed Action)
  - (2) Tunnel Lumley Road Beneath the RPZ
- 3. Fill Dirt Borrow Site Alternatives
  - (1) Use On-Airport Borrow Sites
    - i. Site 1 – This location is located across Brier Creek Reservoir on both sides of Pleasant Grove Church Road (Proposed Action)
    - ii. Site 2 – This location is located along National Guard Drive.
    - iii. Site 3 – This location is located along National Guard Drive toward the end of Runway 14/32.
    - iv. Site 4 – This location is located immediately west of existing Runway 5L/23R.
  - (2) Use Off-Airport Borrow Sites
    - i. Martin Marietta – Raleigh-Durham Quarry: Potential two-mile haul route
    - ii. Hanson Aggregates – Wake Forest: Potential 18-mile haul route
    - iii. Wake Stone Corporation – Knightdale: Potential 22-mile haul route
    - iv. Martin Marietta – Carrboro: Potential 26-mile haul route

### **V. SELECTION OF ALTERNATIVES FOR DETAILED EVALUATION IN THE FINAL EA**

The EA used a two-step screening process to identify a range of reasonable alternatives addressing the purpose and need. The first step evaluates each alternative’s ability to meet the purpose and need as described in Chapter 1. The alternatives that failed the first step were eliminated. The second step determined if the remaining alternatives were feasible and practicable technically and economically. The alternatives that were feasible and practicable were retained for a detailed environmental evaluation in the Final EA.

Based on the screening analysis, two alternatives were carried forward for a detailed environmental evaluation: the No Action Alternative and the Proposed Action. The Proposed Action includes the only surviving alternative from each of the three categories (Runway, Lumley Road, and Borrow Site alternatives). The No Action Alternative was evaluated in the Final EA pursuant to CEQ Regulation 40 CFR § 1502.14(d). The No Action Alternative did not meet the Purpose and Need.

### **VI. ENVIRONMENTAL IMPACTS**

As described above and documented in the Final EA, the Proposed Action and the No Action Alternative were evaluated for potential impacts to all environmental resource categories outlined in FAA Orders 1050.1F, *Environmental Impacts: Policies and Procedures*, and 5050.4B, *NEPA Implementing Instructions for Airport Actions*. Chapter 3 of the Final EA examines the affected environment. Chapter 4 in the Final EA addresses the potential impacts of the No Action Alternative and the Proposed Action.

The following is a discussion of those resources potentially impacted under the Proposed Action:

#### **1. Air Quality (Final EA Section 4.2)**

Implementation of the Proposed Action is not expected to result in adverse impacts to local or regional air quality. From 2023 through 2030, there would be an increase in net emissions due to construction

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activities associated with the Proposed Action. There would also be an overall increase in operational emissions with the Proposed Action due to increased aircraft taxiing and motor vehicle operations from the relocated runway and relocated Lumley Road, respectively. The air quality assessment demonstrates that the Proposed Action would not cause an increase in air emissions above the applicable *de minimis* thresholds. Therefore, the Proposed Action conforms to the State Implementation Plan and the federal Clean Air Act and would not create any new violation of the National Ambient Air Quality Standards (NAAQS), delay the attainment of any NAAQS, nor increase the frequency or severity of any existing violations of the NAAQS. As such, no adverse impact on local or regional air quality is expected by construction and implementation of the Proposed Action.

### **2. Biological Resources (Final EA Section 4.3)**

A total of approximately 480 acres of forested areas would be removed. This acreage is comprised of three primary forest types: mixed/pine hardwood forest, pine-dominant forest, and hardwood forest (altered). The removal of trees due to the Proposed Action would likely impact migratory bird species if tree removal occurs during nesting season. To comply with the Migratory Bird Treaty Act, tree removal would have to occur outside the nesting season or after surveys to determine no birds are nesting in the tree removal area.

Tree removal would also exacerbate impacts of forest fragmentation and impede the borrow site as a wildlife corridor. The Airport Authority included a minimization measure of preserving a 100 foot buffer along the perimeter to act as a wildlife corridor. There would be breaks in this corridor where access for trucking and other equipment would be needed. In order for the corridor to function fully these access areas would need to be revegetated in the 100 foot buffer area.

In addition, one bald eagle nest was identified, approximately 1,900 feet north of the existing Runway 5L/23R, in a loblolly pine stand between the Brier Creek Reservoir and a large stormwater impoundment. If construction were to occur within 600 feet of the bald eagle nest a permit would be required under the Bald and Golden Eagle Protection Act (BGEPA). To comply with BGEPA, the Airport Authority would be required to maintain a 600-foot construction buffer around the nest to avoid impacting the bald eagle during nesting season. With the mitigation measures described in Section VII Sponsor Commitments, the FAA has determined and the USFWS has concurred that the Proposed Action would not result in significant impacts to biological resources.

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The FAA initiated consultation for listed threatened and endangered species with the U.S. Fish and Wildlife Services (USFWS) or impacts to listed species on October 19, 2022. The FAA determined the proposed action would have either no effect or not likely to adversely affect the following species:

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	HABITAT PRESENT	BIOLOGICAL CONCLUSION
<i>Acipenser oxyrinchus oxyrinchus</i>	Atlantic sturgeon	Endangered	No	No Effect
<i>Picoides borealis</i>	Red-cockaded woodpecker	Endangered	Yes	No Effect
<i>Necturus lewisi</i>	Neuse River waterdog	Threatened	Yes	May Affect, Not Likely to Adversely Affect
<i>Noturus furiosus</i>	Carolina madtom	Endangered	Yes	May Affect, Not Likely to Adversely Affect
<i>Fusconaia masoni</i>	Atlantic pigtoe	Threatened	Yes	May Affect, Not Likely to Adversely Affect
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	Endangered	Yes	May Affect, Not Likely to Adversely Affect
<i>Rhus michauxii</i>	Michaux's sumac	Endangered	Yes	No Effect
<i>Canis rufus</i>	Red wolf	Endangered	Yes	No Effect

On November 15, 2022, the USFWS concurred with FAA's effects determination. The consultation did not include the Tricolored Bat, which was proposed for listing on September 14, 2022. The USFWS expects to make a final decision on the listing in September of 2023. The Airport Authority requested that conferencing with the USFWS be delayed until after the FAA's decision on the EA. The FAA has determined that the proposed project would not jeopardize the species but would have an adverse impact on the species if it was listed and that consultation with USFWS would be required.

### **3. Climate (Final EA Section 4.4)**

The Proposed Action would increase GHG emissions by 8,965 CO<sub>2</sub>e metric tons over the No Action Alternative in 2028 and by 2,780 CO<sub>2</sub>e metric tons over the No Action Alternative in 2033. Adverse impacts to local, regional, or global climate are not anticipated from the implementation of the Proposed Action. In addition, the proposed project would include infrastructural changes to handle increased rainfall expected because of climate change. No significant impacts are expected for Climate Resources.

#### **4. Department of Transportation Act Section 4(f) (Final EA Section 4.5)**

As discussed in Section 3.5 and Appendix E in the Final EA, FAA determined that the buildings to be demolished for the project were not eligible for the National Register of Historic Places (NRHP). The State Historic Preservation Office (SHPO) concurred with FAA's conclusion by letter dated December 1, 2022. A portion of William B. Umstead State Park (listed in the National Register of Historic Places) and a portion of Lake Crabtree County Park were identified within the General Study Area (GSA). A review of other environmental impact categories was conducted to determine if any constructive uses would occur to Section 4(f) resources. The FAA determined that the Proposed Action would not result in a physical or constructive use of any Section 4(f) resource.

#### **5. Hazardous Materials, Solid Wastes, and Pollution Prevention (Final EA Section 4.6)**

##### *Management of Uncontaminated Sediment*

Soil excavated and graded from the specific location of the replacement runway directly on the airfield is considered uncontaminated and may be reused onsite as necessary. However, due to the proximity of the H-6 historical jet fuel spill site to the runway/taxiway as described in Chapter 3 of the Final EA, measures are included as part of the project for testing and handling contaminated soil and water if encountered. See Section VII Sponsor Commitments. The large area of disturbance has a high likelihood of entering the area's streams and lakes. In order to ensure that impacts do not go downstream to Section 4(f) resources, an erosion and sediment control plan will need to be completed and approved. In addition, disturbance around the H-6 site, which has not been closed at the time of this writing, will require testing to ensure no hazardous contamination will be redistributed on the site.

##### *Management of Oil and Petroleum Spills During Construction*

During construction activities onsite, there would be the potential for oil and petroleum spills to occur because of construction equipment operation. The use of trucking to transport fill material as opposed to the conveyor system would have a higher potential for oil and petroleum spills. However, requiring the implementation of the existing Spill Prevention, Control, and Countermeasure (SPCC) plan would ensure that any spills on the soil and surrounding environment are appropriately handled and impacts remain less than significant.

##### *Management of Contaminated Materials from Lumley Road Relocation*

The relocation of Lumley Road would result in the roadway crossing the contaminated Ward Transformer Superfund Site (a National Priorities List Site), which has undergone remediation and a Remedial Investigation/Feasibility Study overseen by the U.S. Environmental Protection Agency (USEPA). Exhibit 4-3 in the Final EA depicts where Lumley Road is planned to be relocated through this previously remediated and capped area and the residual PCB concentrations remaining onsite. The USEPA stated that it is acceptable to go below the existing geotextile barrier cap and to change the shape of the soil pile in the potential road relocation area. The soil in this area is not highly contaminated and the anticipated impacts due to the road relocation would be minor. The contamination at this site had also contaminated Brier Creek Reservoir. As a result the sediment of the reservoir contains PCBs. The bottom of the lake may be affected by the installation of navigational lights either with the installation of a bridge structure or placement of fill. As a result activities around the Ward Transformer Superfund Site would need EPA review and approval beforehand to ensure that contamination remains confined.

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The Lumley Road relocation also includes demolishing the former Estes Truck Terminal and Office building and the Truck Maintenance Shop and two other buildings. Due to the age of these buildings, some material may contain lead-based paint (LBP) or asbestos containing material (ACM). An LBP survey and an ACM survey would need to be conducted prior to demolition and contractors will need to ensure that any material disposed will be sent to a waste facility permitted for such materials under a Materials Management Plan (MMP). See Section VII Sponsor Commitments.

The Proposed Action would create a temporary increase in solid waste generated during construction activities. Solid waste would be comprised of construction debris such as concrete and asphalt. Construction and demolition waste not recycled for Airport use would be sent to an appropriate certified landfill, of which there is sufficient capacity. The Proposed Action would neither generate an unmanageable volume of solid waste nor affect the Airport's existing solid waste management program. With the mitigation measures described in Section VII Sponsor Commitments, the Proposed Action would not result in significant impacts from hazardous materials and would not adversely affect human health and the environment.

### **6. Historical, Architectural, Archeological, and Cultural Resources (Final EA Section 4.7)**

Two recorded cemeteries and one previously undocumented cemetery were identified in the potential borrow sites. The Proposed Action does not include relocation of any cemeteries or burial remains because those areas are being avoided. The FAA determined that no structures impacted by the proposed project were listed or eligible for listing in the National Register of Historic Places. The SHPO concurred with FAA's conclusion by letter dated December 1, 2022. Additional information on this coordination is included in Appendix E of the Final EA. In addition, on January 9, 2023, the SHPO responded with a letter concurring with FAA's determination that there are no historic sites eligible for listing in the NRHP. Therefore, there would be no impact to historical, architectural, archeological and cultural resources.

### **7. Land Use (Final EA Section 4.8)**

As described in Section 4.5 of the Final EA, the Proposed Action would not result in the physical or constructive use of any Section 4(f) resources and therefore would not have any land use impacts on any Section 4(f) resources. As disclosed in Section 4.10 and Appendix F of the Final EA, the Proposed Action would decrease the total number of housing units and population within the 65+ DNL noise contour. As disclosed in Section 4.11 of the Final EA, the Proposed Action would not result in significant relocation or disruption of established communities or impacts to businesses located on or off-Airport. The Proposed Action would expose 36 residences, 1 mobile home, 1 church and one fire station with living areas to the 65 DNL with at least a 1.5 dB noise increase. This would involve an estimated 97 people. Noise mitigation would be required to reduce the noise levels at these sensitive sites with the exception of the mobile home to ensure a significant impact would not occur. Required mitigation conditions can be found under the Noise Resource section. For the mobile home, the Airport Authority would have to offer to acquire it and also provide for relocation assistance to ensure a significant impact does not occur. With mitigation, the land use would be consistent with future plans and would not cause any land use incompatibilities or inconsistencies with local land use plans. No significant impacts to land use are anticipated with implementation of mitigation. See Section VII Sponsor Commitments.



## **8. Natural Resources and Energy Supply (Final EA Section 4.9)**

Implementation of the Proposed Action is not expected to result in adverse impacts or excessive demands for natural resources, including electric power, natural gas, and fuel consumption. However, construction activities would require natural resources such as steel, gravel, sand, aggregate, concrete, asphalt, water, and other construction materials. These materials are not in short supply and consumption of these materials is not expected to deplete or cause a shortage of existing supplies. Up to five million cubic yards of earthen fill would be required for the relocated runway. This fill would come from Airport property. Based on drilling analysis performed by the Airport, there is adequate fill located at the borrow sites to supply the material needed for the Proposed Action. Approximately 150 million gallons of water would also be required from Brier Creek Reservoir for hydro-compression. This water would infiltrate the ground and return back to the reservoir minimizing impacts. In addition, the USEPA stated there was no major concern with the use of water from Brier Creek Reservoir. The Proposed Action's projected demand for energy or natural resources would not exceed current or future supplies in the Research Triangle Region. Therefore, no significant impacts to natural resources or energy supply are anticipated with implementation of the Proposed Action.

## **9. Noise and Noise-Compatible Land Use (Final EA Section 4.10)**

Noise impacts from implementation of the Proposed Action were compared to the No Action Alternative for the years 2028 and 2033. Overall, the Proposed Action would result in 114 fewer housing units and 296 fewer estimated people within the 65+DNL as compared to the No Action Alternative. With the shift in the noise contour westward, the Proposed Action would result in 72 housing units experiencing an increase in noise and 186 housing units experiencing a decrease in noise in the DNL 65+ dB noise exposure contour when compared to the No Action Alternative in 2033. The 2028 and 2033 Proposed Action noise exposure contours, compared to the 2028 and 2033 No Action Alternative noise exposure contours, did result in a DNL 1.5 dB increase within the 65 DNL contour over noise-sensitive facilities. The year 2033 was used as the year for determination of significant impacts because the potential impacts would be greater in 2033 than those in 2028. There would be 37 total housing units (including one mobile home) and 97 estimated people located within the DNL 1.5 dB increase area. One church (Sorrell Grove Baptist Church) and one fire station (Raleigh Fire Station #29) would also be located within the DNL 1.5 dB increase area. To mitigate for the impacts to these noise sensitive land uses, noise insulation should be offered to those residences that are eligible for insulation and an offer to purchase the property of the mobile home with the provision of relocation assistance. With the mitigation measures described in Section VII Sponsor Commitments, the Proposed Action would not result in significant Noise and Noise-Compatible Land Use impacts.

## **10. Socioeconomics, Environmental Justice, and Children's Health and Safety Risks (Final EA Section 4.11)**

The Proposed Action was evaluated for socioeconomic impacts that included induced economic growth, disruption of established communities, relocation of residences or businesses, disruption of local traffic patterns, and loss of community tax base. The evaluation of each category indicated that the implementation of the Proposed Action would not result in permanent, significant adverse impacts. As for EJ populations (both low-income and minority), communities with EJ concerns are located southwest of the Airport within the GSA. The FAA conducted extensive outreach to ensure meaningful involvement with these communities in an effort to identify unique impacts. No unique impacts to EJ

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populations were identified from these additional outreach activities. However, the FAA has identified that the number of EJ residences experiencing a 1.5+ dB increase where the residence was now located within the 65+ DNL would increase while those for the non-EJ community would decrease. This would be considered a disproportionately high or adverse impacts on low-income and minority populations. In addition, the EA stated that there was potential to have a disproportionate impact on communities with EJ concerns with fugitive dust emission from heavy equipment operating in the proposed borrow area. Requiring measures are taken to control fugitive dust emissions in accordance with FAA AC 150/5370-10H would ensure that there would be no disproportionate impacts based on air impacts. However, with the special conditions identified in Section VII Sponsor Commitments for noise insulation the impacts would be reduced to below the threshold levels. Also, the Proposed Action would not result in the release of, or exposure to, significant levels of harmful materials in the water, air, or soil that would affect children's health or safety or result in an elevated risk related to health or safety concerns for children.

### **11. Light Emissions and Visual Effects (Final EA Section 4.12)**

The new airfield lighting required for the Proposed Action would not produce light emissions noticeably different from the existing lights, which are currently used to conduct safe airport operations. The Proposed Action would require relocation of existing runway centerline lighting and runway end lighting, runway end identifier lights (REILS), and installation of new lighting on the proposed new taxiway. Since the proposed lighting is similar in character to the existing uses at RDU and would not result in a significant change to the surrounding area's visual character, the Proposed Action would not result in significant impacts to visual resources and visual character.

### **12. Water Resources (Wetlands, Floodplains, Surface Waters, Groundwater) (Final EA Section 4.13)**

#### *Wetlands, Streams, and Surface Waters*

The Proposed Action would result in permanent impacts to approximately 1.56 acres of potentially jurisdictional wetlands, approximately 8,780 feet of potentially jurisdictional streams with an associated buffer area of 22.6 acres, and approximately 3.48 acres of potentially jurisdictional non-stream open waters with an associated buffer area of 2.17 acres. The Proposed Action would also impact approximately 2.53 acres of non-jurisdictional wetlands and approximately 1.95 acres of impacted non-jurisdictional open waters. The Proposed Action would have unavoidable impacts by removing wetlands and potentially jurisdictional surface open waters including streams. Loss of these resources are proposed to be mitigated by purchase of credits from an existing mitigation bank or an in-lieu fee program that serves the project area. The non-jurisdictional open waters are not proposed to be mitigated.

There is potential for sediment disturbance in Brier Creek Reservoir associated with the relocation of navigational aid light stations associated with the relocated runway. Brier Creek Reservoir is known to have PCB contamination within the sediment. However, the Airport Authority does not yet know how it will replace the lighting; whether to use a structural solution such as a pier or to place fill in the reservoir and build on the fill. If fill is used, then a Department of the Army 404 permit covering such discharge of fill or dredged material in Waters of the United States would be required and the Corps will require any mitigation to offset the impacts. However, a special condition will require that the

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Airport Authority obtain EPA approval for work within this contaminated site in order to ensure that there any potential further contamination of PCBs is handled correctly.

The large nature of the project and the potential contamination of various areas (the Ward Transformer Site, H-6 spill site, Brier Creek Reservoir etc...) requires that the construction site have an approved Erosion and Sediment Control (ESC) plan as well as a National Pollutant Discharge Elimination System (NPDES) permit. In addition if any groundwater is encountered and needed to be discharged it should be tested for contamination prior to discharge.

With implementation of the special conditions identified in Section VII Sponsor Commitments to compensate for the losses of wetlands and streams and water quality impacts, which would result from the construction of the Proposed Action, the FAA has determined that the environmental impact of the Proposed Action would not be significant.

### *Floodplains*

There would be approximately 5.9 acres of potential impacts to floodplains with the Proposed Action as shown on Exhibit 4-13 in the Final EA. The construction activities in the floodplains would be for excavation of fill and then grading for proper slope and planting with appropriate ground cover vegetation approved by the NCDEQ to prevent erosion. There should be no loss of floodplain storage as a result of the project since most of the impact is in the borrow area. The one exception is the potential impact to Brier Creek Reservoir associated with potential fill to support the proposed navigational aids light stations and access to them. However, these impacts would not be significant and would not result in long-term adverse effects and the USACE would have to authorize any fill associated with the lights. If the Airport Authority determines a structure like a pier is more appropriate there would be no fill. . Complete avoidance and minimization of floodplain impacts is not practicable. However, these impacts would not be significant and would not result in 1) a considerable probability of the loss of human life; 2) likely future damage associated with the encroachment that could be substantial in cost or extent, including interruption of service or loss of vital transportation facility; or 3) a notable adverse impact on natural and beneficial floodplain values. A special condition requiring the Airport Authority to obtain a USACE Department of the Army Section 404 permit will ensure that any fill in the reservoir would be addressed. See special conditions identified in Section VII Sponsor Commitments.

The Proposed Action would also increase the amount of impervious surface on airport. The runoff from these additional impervious surfaces would be collected by expanding the existing stormwater facilities as conceptually shown on Exhibit 4-14 in the Final EA. The modifications are being developed to increase the stormwater capacity to meet the additional demand. Therefore, the increase in impervious surface would not result in significant adverse impacts to recharge of groundwater.

### *Groundwater*

The project proposes to use approximately 150,000,000 gallons of water from the reservoir to supply its method of hydro-compression to settle the fill. This water could potentially affect ground water supplies but for the fact that the water would reenter the ground water via infiltration. There would be no significant impacts to groundwater from construction or operation of the Proposed Action.

### **13. Cumulative Impacts (Final EA Section 4.14)**

The purpose of analyzing cumulative impacts is to identify potential collective environmental impacts. Even though the effects of individual actions may be minimal, when combined with the impacts of past, present, and reasonably foreseeable future actions on populations or resources in and around RDU, the impacts could collectively be significant. Discussion of cumulative impacts addresses those environmental categories for which environmental impacts could potentially result from implementation of the Proposed Action.

The Final EA evaluated each environmental resource category for potential cumulative impacts. The level of cumulative impacts anticipated to occur within these environmental resource categories is not significant due to the types of past, present, and reasonably foreseeable future projects, the extent of the built environment in which they would occur, the lack of certain environmental resources in the area, and the mitigation measures identified for the Proposed Action. Therefore, implementation of the Proposed Action would not result in significant cumulative environmental impacts.

## **VII. MITIGATION REQUIREMENTS**

In addition to carrying out standard best management practices required by FAA grant assurances outlined in FAA Advisory Circular (AC) 150/5370-10, “Standards for Specifying Construction of Airports,” and minimization and mitigation measures mandated by permitting requirements and/or other special purpose laws, the Sponsor will be required to comply with the following mitigation measures:

### **Biological Resources**

- An Erosion and Sedimentation Control (ESC) Plan will be developed and approved by the NCDEQ prior to construction. Best management practices and erosion control measures will be identified to control and contain runoff that could make its way to navigable waterways to minimize the sediment impact. This ESC Plan would include access road locations to the borrow sites, monitoring and maintenance of control measures, and waste management plan.
- The Airport Authority shall leave 100 feet of the existing trees and vegetation along the perimeter of the borrow sites in place as a buffer with the exception of access for trucks. The areas within the 100-foot buffer for truck access will be replanted with trees of similar species to either side of the access, after removal of the borrow material from the borrow site. The planting plan must meet NCDEQ’s standards of 320 native trees per acre and include three years of annual monitoring and reporting demonstrating survival of species and vegetative coverage.
- To comply with the Bald and Golden Eagle Protection Act, the Airport Authority shall avoid the eagle nest during construction of the Proposed Action by maintaining a 660-foot construction-free buffer around the nest from December 1 to July 15 of any construction year.
- To avoid impacts to migratory birds, a special condition requiring the Airport Authority to only perform tree clearing when species are not nesting (October to February) or after the area has been surveyed to ensure no nesting is occurring in the area of tree removal.
- In order to comply with the Endangered Species Act, the Airport Authority shall cease all tree clearing/building demolition activities if the USFWS lists the tricolored bat as either threatened or endangered and if the FAA has not completed consultation or formal conferencing. The Airport Authority shall not commence tree clearing/building demolition until the FAA has notified the Airport Authority that all consultation requirements are completed.

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- The Airport Authority would require, when applicable, all contractors as part of the Proposed Action to provide proof of proper disposal for all generated waste to permitted facilities.
- To further minimize the potential spread of environmental contamination and worker exposure during construction, a Materials Management Plan (MMP) would be required for construction activities at the NPL Site. The MMP would include procedures for construction worker health and safety, cuts and excavation, erosion and sediment control, soil management, fill and reconstruction, site security, traffic control, contact water, dust mitigation, and equipment decontamination.<sup>[1]</sup> Per the restrictive covenants filed with the Wake County Register of Deeds, the MMP must be approved by the USEPA prior to beginning work onsite.
- An ESC Plan will be developed prior to construction, approved by the NCDEQ and implemented. BMPs and erosion control measures will be identified in the ESC Plan to control and contain runoff that could make its way to navigable waterways to minimize the sediment impact.
- The Airport Authority shall notify the FAA and NCDEQ if testing of the borings adjacent to the H-6 area shows contamination. The Airport Authority will provide a plan to handle any contaminated material associated with this site to both agencies and will wait for agency approval prior to disturbing the site. In addition, prior to commencing operations in the H-6 area, the Airport Authority and the contractor will comply with any resulting NCDEQ and or USEPA requirements for transport and disposal of contaminated materials.
- Before construction commences in each of these areas, coordination will be conducted and final plans will be reviewed and approved by USEPA's Superfund Division, and applicable permits and/or approvals received from State and Federal agencies, for the following activities:
  - Lumley Road relocation
  - Disposal of any contaminated material encountered on the Estes Trucking Site
  - Conveyor system support structures within Brier Creek Reservoir
  - Placement and/or removal of navigational aids and fill within Brier Creek Reservoir
  - Placement of fill in the 100-year floodplain
- If during Final Design of the Lumley Road relocation it is determined that existing monitoring wells would need to be removed, the Airport Authority would be responsible for coordinating the decommissioning of them with the USEPA and in accordance with state requirements and relocation if required by USEPA.

### **Historical, Architectural, Archaeological, and Cultural Resources**

- If previously undocumented cemeteries, buried resources, or human remains are discovered or identified by contractors during construction activities, the Airport Authority shall cease all work in the immediate vicinity of the discovery. A buffer zone identified as a 100-meter radius around the discovery shall be established. Construction may continue outside the buffer zone. The Airport Authority, by and through its construction contractor, shall implement interim measures to protect the discovery from looting and vandalism, including, but not limited to, flagging or fencing the area, and providing additional security.
- Upon discovery, the Airport Authority shall notify the FAA and the SHPO of the discovery and the project archaeologist shall investigate the discovery and report to the FAA, SHPO and the Airport Authority its conclusions if the discovery is eligible for listing. The Airport Authority shall wait for conclusion of coordination between the SHPO and the FAA prior to commencing operations in the area of the discovery.
- If human remains are found the provisions of North Carolina General Statute Chapter 70, Article 3 would apply. The construction contractor would immediately notify the Airport Authority and the Airport Authority would notify local law enforcement / the county or state medical examiner. After preliminary review by local law enforcement and the medical examiner, if needed, the state archaeologist would then evaluate the remains for its significance and jurisdiction.

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<sup>[1]</sup> Lumley Road Relocation Project – Environmental Compliance Discussion; July 28, 2021 ([Lumley Road Environmental Challenges\\_07-28-2021\\_FINAL.pdf \(global.gsp\)](#))

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- One previously recorded cemetery (R. A. Burgess Cemetery 31WA0143) is likely within a dense wisteria thicket at 31WA2475 that is recommended as not eligible for the NRHP. The dense wisteria thicket will be avoided or additional fieldwork will be conducted to clear the vegetation and attempt to locate the cemetery. Due to the presence of two cemeteries (Burgess-Dunn Family Cemetery 31WA0145 and Abandoned Cemetery 31WA2472) in the proposed borrow site areas, avoidance will be required during construction of the Proposed Action. A 75-foot buffer zone has been established around the furthest extent of the boundaries of each cemetery. The boundaries of each cemetery and of the buffer zone will be flagged in the field and will be recorded with Global Positioning System (GPS) with sub-meter accuracy. The buffer zone will be fenced prior to the initiation of construction activities to provide protection from inadvertent damage by heavy machinery and to ensure that the immediate surroundings of the burial areas are maintained. No equipment staging or hauling roads will be permitted within the buffer zone. Following construction activities, graded and excavated areas adjacent to the cemeteries will be stabilized to prevent erosion or undermining of the cemetery and a cleared access route to the cemeteries will be established so family members can visit the burial areas after construction activities have ceased. The avoidance areas are shown in Exhibit 4-4. There are no current access routes to these cemeteries which are located entirely on Airport property. Family members who wish to visit these locations prior to, during, and after construction must give notification to the Airport Authority, as currently required.

### **Land Use**

- Offer to sound insulate 36 single-family housing units, the Raleigh Fire Station #29, and the Sorrell Grove Baptist Church (if the buildings are eligible and the owners agree) under FAA Order 5100.38D. If the housing units, fire station, and the church are eligible and cannot be sound insulated to the internal required noise level per current FAA Order 5100.38, the Airport Authority would offer to acquire the property and offer relocation assistance under the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 as amended.
- Offer to buy one mobile home and/or the property it's located on. Since mobile homes cannot be effectively sound insulated due to the type of construction, the owner of the property would be given an offer from the Airport Authority to acquire the property and/or the mobile home. Residents of the mobile home would also be offered relocation assistance under the Uniform Relocation Assistance and Real Property Acquisition Act of 1970.

### **Noise and Noise-Compatible Land Use**

- Offer to sound insulate 36 single-family housing units, the Raleigh Fire Station #29, and the Sorrell Grove Baptist Church (if the buildings are eligible and the owners agree) under FAA Order 5100.38D. If the housing units, fire station, and the church are eligible and cannot be sound insulated to the internal required noise level per current FAA Order 5100.38, the Airport Authority would offer to acquire the property and offer relocation assistance under the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 as amended.
- Offer to buy one mobile home and/or the property it's located on. Since mobile homes cannot be effectively sound insulated due to the type of construction, the owner of the property would be given an offer from the Airport Authority to acquire the property and/or the mobile home. Residents of the mobile home would also be offered relocation assistance under the Uniform Relocation Assistance and Real Property Acquisition Act of 1970.
- The Airport Authority will prepare and implement a Blasting Plan to ensure not only the safety of people in the area, but also to manage noise and prevent property damage from the activity, and limit

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dust disturbance. Blasting operations would be conducted per the Blasting Plan and all applicable federal, state, and local laws and regulations.

### **Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks**

- Prior to initiating construction, the Airport Authority shall obtain approval of an ESC Plan from the NCDEQ. This ESC Plan would include:
  - Access road locations to the borrow sites
  - Monitoring and maintenance of control measures
  - Vegetative Restoration plan
  - Waste management plan
- The Airport Authority shall leave 100 feet of the existing trees and vegetation along the perimeter of the borrow sites in place as a buffer with the exception of access for trucks. The areas within the 100-foot buffer for truck access will be replanted with trees of similar species to either side of the access, after removal of the borrow material from the borrow site. The planting plan must meet NCDEQ's standards of 320 native trees per acre and include three years of annual monitoring and reporting demonstrating survival of species and vegetative coverage.
- For the purposes of mitigating the impact to the EJ homes, two homes in the EJ area that are exposed to the significant noise impacts (>1.5 dB increase within the DNL 65), would be offered sound insulation if the buildings are eligible under FAA Order 5100.38D and the owners agree. If the housing units and the church are eligible and cannot be sound insulated to the internal required noise level per current FAA Order 5100.38, the Airport Authority would offer to acquire the property and offer relocation assistance under the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 as amended.
- To ensure that the borrow site activities do not adversely affect the EJ community, the Airport Authority, through its construction contractor, will ensure that measures are taken to reduce fugitive dust emissions by adhering to guidelines included in FAA Advisory Circular (AC) 150/5370-10H, *Standard Specifications for Construction of Airports*.

### **Visual Effects**

- Prior to initiating construction, the Airport Authority shall obtain approval of an ESC Plan from the NCDEQ. This ESC Plan would include:
  - Access road locations to the borrow sites
  - Monitoring and maintenance of control measures
  - Vegetative Restoration plan
  - Waste management plan
- The Airport Authority shall leave 100 feet of the existing trees and vegetation along the perimeter of the borrow sites in place as a buffer with the exception of access for trucks. The areas within the 100-foot buffer for truck access will be replanted with trees of similar species to either side of the access, after removal of the borrow material from the borrow site. The planting plan must meet NCDEQ's standards of 320 native trees per acre and include three years of annual monitoring and reporting demonstrating survival of species and vegetative coverage.

### **Water Resources**

- The Airport Authority shall conduct sediment sampling in ppb for PCBs in Brier Creek Reservoir in the areas of the relocated navigation lights and conveyor system in coordination with USEPA. The Airport Authority shall develop an appropriate plan, approved by the FAA, USACE, and USEPA, for installation of lights and/or conveyor system.

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- No work within Waters of the U.S. can occur until the Airport Authority has received approval from the USACE.
- If any potentially contaminated groundwater were encountered during dewatering, the Airport Authority would properly test and treat the water prior to discharge in accordance with the NPDES permit and local dewatering and groundwater discharge approval and permit requirements. Compliance with regulatory requirements would ensure dewatering activities, if required, would not violate discharge requirements or degrade groundwater quality.
- No construction shall occur until the Airport Authority submits an Erosion and Sediment and Control (ESC) Plan that is approved by the NCDEQ.
- No construction shall occur in a potentially jurisdictional water until the Airport Authority obtains the necessary Section 404 and Section 401 of the Clean Water Act permits/approvals from the USACE and NCDEQ respectively. The Airport Authority shall comply with all mitigation requirements as defined in the USACE and NCDEQ permits. For potentially jurisdictional impacts, the Airport Authority would use wetland banking and/or in lieu fee programs offered by NCDEQ Division of Mitigation Services to mitigate for the 1.56 acres of impacted wetlands, approximate 8,780 feet of impacted streams, and 3.48 acres of impacted non-stream surface open waters. Exact mitigation for the buffers (stream buffer areas of 22.6 acres and non-stream surface open waters buffers of 2.17 acres) will be identified depending on the final impact sizes and types determined in the permitting process. It is anticipated mitigation would be required at a 2:1 ratio unless otherwise justified due to reduced function determined by North Carolina Stream Assessment Method (NCSAM) and North Carolina Wetland Assessment Method (NCWAM). No construction shall occur in a non-jurisdictional wetland until mitigation for that impact has been completed. The Airport Authority will replace the wetlands with equivalent acreage credit (a 1:1 ratio) from a mitigation bank or in-lieu-fee program that has been approved by the USACE and NCDEQ, and where the area of impact is within the service area of the bank/in-lieu fee program. Proof of pre-construction mitigation must be submitted to the FAA – Airports District Office prior to impacting said wetland.

This FONSI / ROD is issued in acknowledgment of and contingent upon the Sponsor's fulfillment of these special conditions. As referenced, there are regulatory permits or certifications that impose mitigation requirements to minimize or mitigate environmental impacts during implementation of the Proposed Action. The Sponsor is responsible for acquiring and complying with all applicable permits, approvals and certifications prior to and throughout the implementation/construction of the Proposed Action.

Regulatory permits, approvals or certificates required for the Proposed Action include but are not limited to the following:

- National Pollutant Discharge Elimination System (NPDES) Permit
- NPDES Stormwater General Permit
- NPDES Construction General Permit
- North Carolina Department of Environmental Quality (NCDEQ) approval of Erosion and Sedimentation Control (ESC) Plan
- USACE Section 404 Clean Water Act (CWA) Permit
- State Section 401 Water Quality Certification
- Storm Water Pollution Prevention Plan (SWPPP) update
- Federal, state, and local blasting-related permits
- Wake County Approval for Modification to Brier Creek Reservoir



## **VIII. PUBLIC INVOLVEMENT**

The EA process has had several opportunities for public outreach activities that are described in Chapter 5 of the Final EA. The public outreach efforts were developed to solicit input from and provide information to the following groups:

- General population overall,
- General population with identified environmental impacts,
- General Environmental Justice (EJ) population,
- EJ population with identified environmental impacts, and
- Federal and state agencies.

The following agencies participated in coordination activities and/or received a Draft EA:

- U.S. Department of Transportation, Federal Aviation Administration (FAA)
- U.S. Fish and Wildlife Services (USFWS)
- U.S. Environmental Protection Agency (USEPA)
- U.S. Army Corps of Engineers (USACE)
- Federal Emergency Management Agency (FEMA)
- North Carolina Department of Transportation (NCDOT)
- North Carolina State Historic Preservation Office (NCSHPO)
- North Carolina Department of Natural and Cultural Resources (NCDNR)
- North Carolina Department of Environmental Quality (NCDEQ)
- North Carolina Department of Public Safety (NCDPS)
- North Carolina State Clearinghouse

At the beginning of the EA process, a public website (<https://www.airportprojects.net/rdu-ea/>) was developed to keep the general public informed about the EA, the NEPA process, and opportunities for public participation during the EA process. The website is being maintained throughout the EA process to keep the public updated on the NEPA process, project developments, and opportunities for public involvement. Due to health precautions related to COVID-19, there was no in-person scoping meeting. The Airport Authority and the FAA posted a narrated presentation for the public to review on the EA project website. Both a legal ad and display ad were published in the local newspaper, the News & Observer (legal ad and display ad published June 21, 2021, and follow up display ad published again on July 12, 2021). The virtual presentation was posted to the EA project website on July 21, 2021.

The Notice of Availability of the Draft EA and Notice of Intent to Hold a Public Hearing / Workshop was published on January 25, 2023, announcing the start of a 45-day public comment period. A Public Hearing / Workshop was held on February 28, 2023, between 5:00 p.m. and 7:00 p.m. The purpose of the Public Workshop was to summarize the findings of the Draft EA and collect comments for the public. Appendix A of the Final EA contains information on the public outreach and Appendix J includes comments received and responses to comments.

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**IX. FINDING OF NO SIGNIFICANT IMPACT**

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101 of NEPA and other applicable environmental requirements and will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(C) of NEPA.

APPROVED: \_\_\_\_\_  
Tommy L. Dupree, Manager, Memphis Airports District Office

DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_

**X. RECORD OF DECISION AND ORDER**

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

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

APPROVED: \_\_\_\_\_  
Tommy L. Dupree, Manager, Memphis Airports District Office

DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_

DATE: \_\_\_\_\_

***Judicial Review***

This Record of Decision represents the FAA's final decision and approvals for the identified proposed Federal actions, including those taken under the provisions of Title 49 of the United States Code, Subtitle VII, Part B. This decision constitutes a final order of the Administrator subject to review by the Court of Appeals of the United States in accordance with the provisions of 49 U.S.C. § 46110.