



Raleigh-Durham Airport Authority

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# Runway 5L/23R Replacement Project Environmental Assessment

Agency Scoping Presentation

# Overview

- The Raleigh-Durham Airport Authority (Authority) is planning to replace its primary runway (Runway 5L/23R)
- The Authority and the Federal Aviation Administration (FAA) are providing this presentation to review the following:
  - Environmental Assessment (EA) process
  - Roles and responsibilities
  - Purpose and need
  - Proposed Project description
  - Environmental resources to be analyzed
  - Potential alternatives
  - Schedule
  - How to provide your scoping comments



# Environmental Assessment Process

- Originally the Proposed Project included various project elements that have now been postponed or eliminated
- The FAA has agreed for the Authority to proceed with an EA rather than an Environmental Impact Statement (EIS) as long as:
  - Proposed Project does not include construction activities near the William B. Umstead State Park
  - FAA has discretion to determine the appropriate level of public outreach
  - FAA remains actively involved throughout the EA, including approving purpose and need, alternatives analysis, and scope of environmental analysis, prior to release of the draft EA



# Environmental Assessment Process

- An EA is a concise document used to describe a project's potential environmental impacts
- The FAA identifies the requirements of the EA because it is the lead federal agency
- If the FAA finds a project would not have a significant environmental impacts, then the FAA will issue a Finding of No Significant Impact (FONSI)
- If the FAA finds a project would have significant environmental impacts that could not be mitigated below the level of significance, then the FAA may prepare an EIS



# Roles and Responsibilities

- FAA is the lead federal agency
  - Ensures compliance with National Environmental Policy Act (NEPA) and oversight in the development of the EA
  - Determines whether it may take the federal actions necessary to allow implementation of the project
  - Determines appropriate level of public outreach for the EA
- Authority
  - Responsible for the development of the EA content
  - Responsible for obtaining FAA approval to construct the Proposed Project



# Roles and Responsibilities

- **Regulatory / Resource Agencies**
  - Helps ensure compliance with local, state, and federal environmental regulations
  - Helps identify potentially significant environmental impacts
  - Assists in identifying or evaluating potential alternatives
  - Reviews and comments on EA findings
  - Issues environmental permits where applicable
- **Public**
  - Provides input on the most pertinent issues and potential environmental impacts during scoping
  - Reviews and comments on EA findings





## RDU has three runways

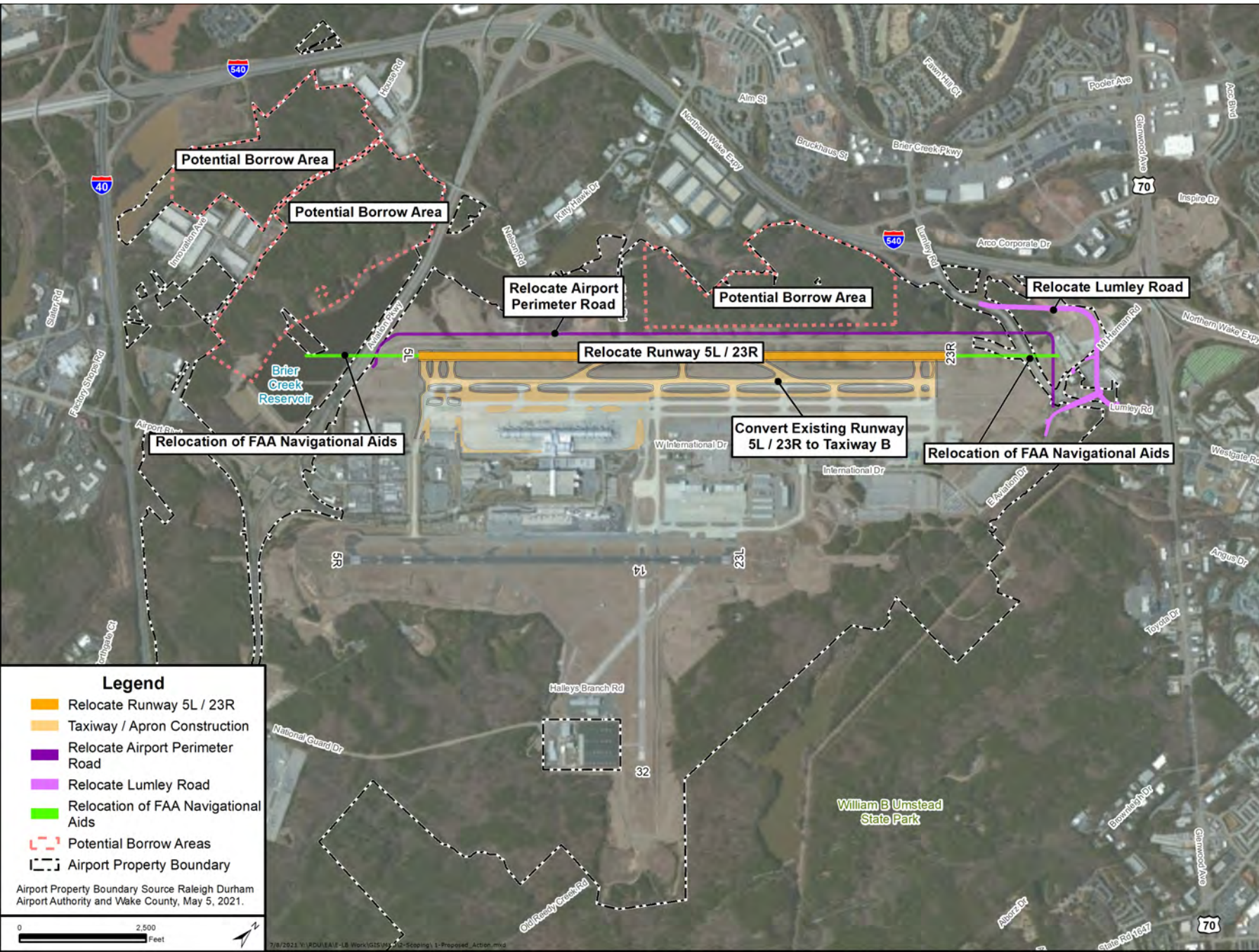
- Runways 5L/23R and 5R/23L are parallel to each other and Runway 14/32 is perpendicular to these runways
- Runway 5L/23R is 10,000 feet long and 150 feet wide and is the primary runway at RDU
- Runway 5R/23L is 7,500 feet long and 150 feet wide
- Runway 14/32 is 3,570 feet long and 100 feet wide

# Purpose and Need

- The need is to reconstruct a rapidly deteriorating Runway 5L/23R
  - Runway 5L/23R has exceeded its design life and does not meet FAA's runway Airplane Design Group (ADG) V standards
  - It is not practical to continue repairs and full reconstruction is needed
- The purpose of the Proposed Project is to preserve the existing infrastructure and operational capabilities at RDU
  - Runway 5L/23R is the primary runway at RDU and closure for an extended period of time would have an adverse effect to the National Airspace System and Raleigh-Durham region







# Proposed Runway 5L/23R Replacement Project

- Relocate Runway 5L/23R
- Convert Existing Runway to taxiway
- Relocate FAA Navigational Aids
- Relocate Lumley Road and Airport Perimeter Road
- Use fill material from borrow sites on Airport property

# Proposed Project Description

- Relocate Runway 5L/23R 537.5 feet west of the existing runway and replace at approximately the same length and width of the existing runway
- Use up to 5 million cubic yards of fill for the relocated runway
  - Fill will come from airport property and, if necessary, from offsite locations
  - Fill will not be sourced from airport property adjacent to Umstead State Park
  - Acquisition of fill material will require vegetation/tree clearing at borrow site
- Use up to 150,000,000 gallons of water from Brier Creek Reservoir for hydrocompression of fill material
  - If not sufficiently available or unsuitable, water will come from local municipal sources
  - Water would be used gradually over time to not deplete the reservoir



# Proposed Project Description (continued)

- Construction of safety areas associated with runway and taxiway development
- Relocate and/or install lighting systems associated with runway and taxiway development
- Construction of associated and connecting taxiways to the relocated Runway 5L/23R
- Construction of associated drainage improvements to provide for the additional impervious pavement areas



# Proposed Project Description (continued)

- Conversion of the existing Runway 5L/23R to a full-length parallel and connecting taxiway after the relocated runway is completed
- Relocate a portion of Lumley Road out of the relocated Runway 5L/23R's safety areas, to include necessary utility relocations
- Construction of a new airport perimeter road around the relocated Runway 5L/23R
- Relocate FAA navigational aids and development and/or modification of associated arrival and departure procedures
- Tree/vegetation/obstacle removal for Runway Object Free Area (ROFA), Taxiway Object Free Area (TOFA), Threshold Siting Surface (TSS), Part 77, and Terminal Instrument Procedure (TERPs) surfaces



# Consideration of Alternatives

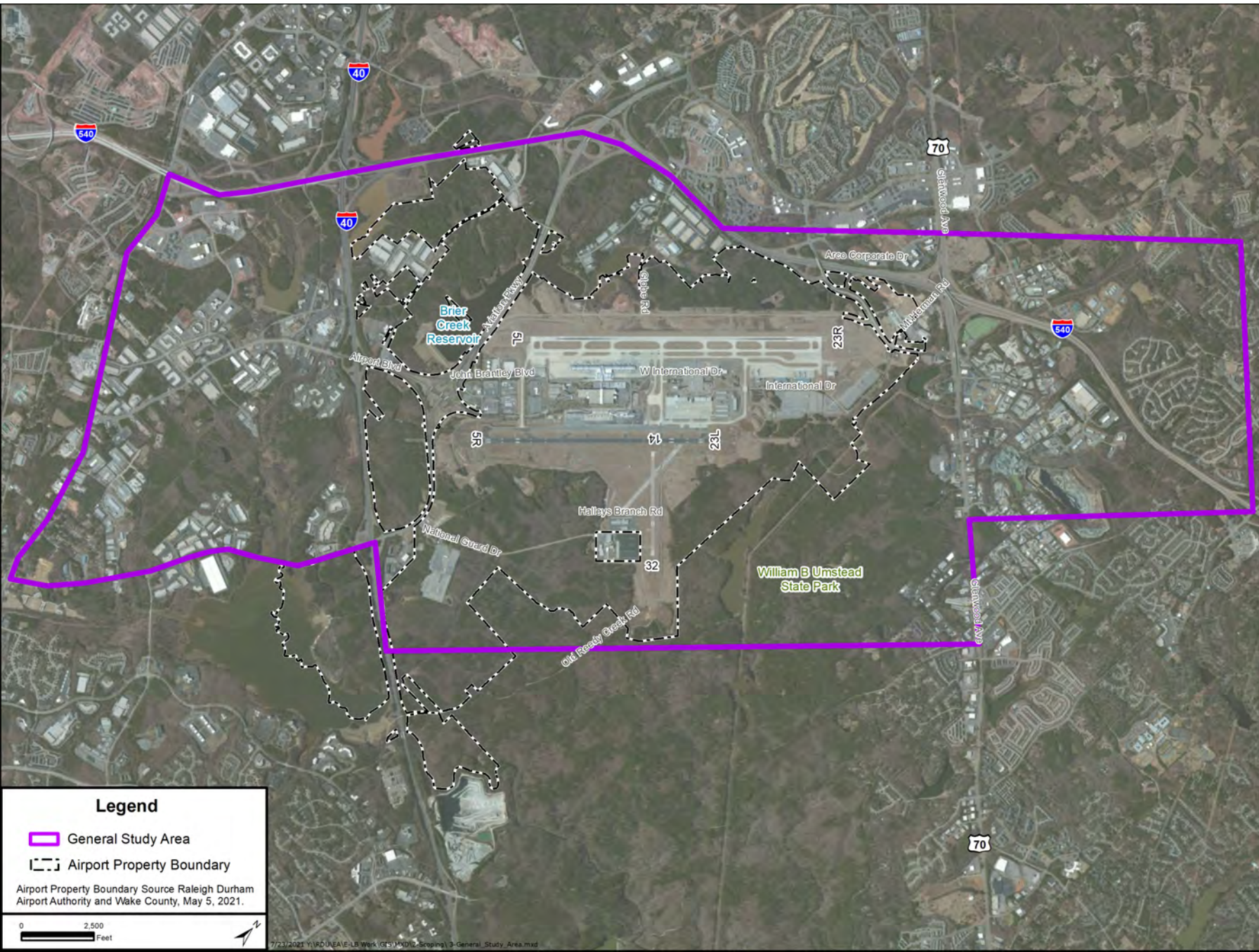
- A range of alternatives will be reviewed in the EA including:
  - No action (no changes from the existing conditions- must be evaluated as a requirement of NEPA)
  - Various other development alternatives on airport property to replace the primary runway



# Environmental Resources to be Analyzed

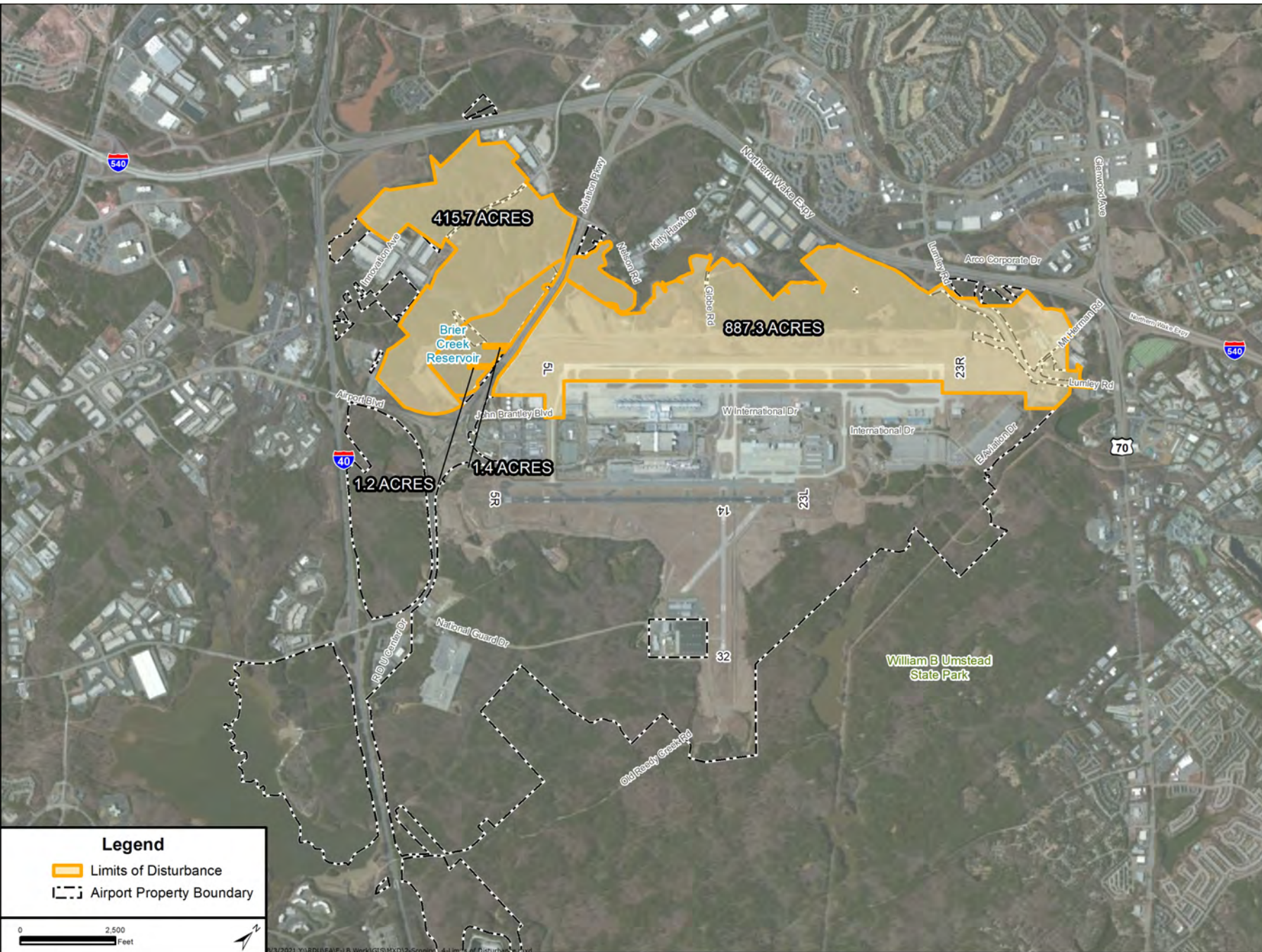
- Air Quality
- Biological Resources (Fish, Wildlife, and Plants)
- Climate
- Coastal Resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Noise-Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks
- Visual Effects (including light emissions)
- Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)





# General Study Area

- Area where impacts may occur
- Based on RDU's future noise contours (2025) from the Master Plan Study Vision 2040
- Enlarged and squared off to follow roadways and other identifiable features
- Includes Umstead State Park



## Detailed Study Area

- Area that may be physically disturbed by construction activities
- No borrow sites near Umstead State Park



# Air Quality

- Not a capacity project so no anticipated increase in aircraft activity from Proposed Project
- May increase taxi time which would result in additional emissions
- Construction includes large amount of earth moving for fill, with a preference for borrow sites on Airport property
- Use FAA model Aviation Environmental Design Tool (AEDT) to determine emissions from aircraft
- Use of EPA Motor Vehicle Emissions Simulator (MOVES) to determine potential construction emissions
- Compare Proposed Project to the No Action Alternative to determine any exceedance of applicable *de minimis* thresholds



# Biological Resources

- Potential tree and vegetation clearing
- Potential removal of and impacts to surface waters, wetlands, streams
- Field surveys are being conducted to determine presence of any Federal / state species



# Hazardous Materials

- Portions of the Proposed Project would occur on an EPA Superfund National Priorities List (NPL) site
- Site placed on EPA's NPL because of contaminated fish tissue, sediment and soil caused by facility operations which discharged polychlorinated biphenyls (PCBs)
- Potential use of water in Brier Creek Reservoir may cause sediment disturbance during construction in NPL Operable Unit 1
- Potential use as new corridor for Lumley Road would cause soil disturbance during construction in NPL Operable Unit 2



# Historic and Cultural Resources

- Confirm Area of Potential Effects with State Historic Preservation Office
- Review available historical data
- Analyze historical imagery, soils, and slope data
- Conduct field surveys on moderate to high probability areas
- Assess any found sites for National Register of Historic Places eligibility
- Consultation under Section 106 of the National Historic Preservation Act



# Noise

- Potential shift of noise due to the Proposed Project reconstruction of the runway west of the existing location
- Use FAA's noise model AEDT to conduct noise analysis to assess any potential change to aircraft operations
- Determine population and sensitive land uses in impacted areas
- Identify mitigation requirements, if necessary



# Environmental Justice

- Environmental Justice analyzes potential impacts of the Proposed Project on minority and low-income populations
- Minority populations have been identified to the south and west of the Airport in the General Study Area using U.S. Census Bureau's data
- No low-income populations identified in the General Study Area
- Analysis will determine if there are significant impacts in other environmental categories that would disproportionately impact environmental justice communities
- EA process will include public outreach efforts for environmental justice communities



# Water Resources

- Potential impacts to wetlands, open water (ponds), streams
  - Ground disturbing activities at borrow sites
  - Fill materials would be placed in Brier Creek Reservoir for new approach lighting
  - Up to 150 million gallons of water needed for hydrocompression of fill material
- Conduct field surveys to delineate Waters of the US and to quantify impacts
- Section 404 (USACE) and Section 401 (NCDEQ) – Depending on quantities impacted / Jurisdictional Determinations
- Erosion and Sediment Control Plan
- NPDES Industrial Stormwater General Permit for Construction Activities



# EA Schedule

- Field Surveys – July / August 2021
- Scoping – July / August 2021
- Publish Draft EA for public review – February 2022
- Hold Public Hearing – March 2022
- Final EA – Summer 2022
- FAA issues its finding – Summer 2022





# Agency Participation for Scoping

- The Authority and the FAA ask the agencies to provide written comments to help identify potential environmental issues
- The Authority and FAA will review all comments provided during scoping and will determine if it is necessary to perform additional analyses on any specific potential environmental resource beyond what is normally conducted in an EA



# Submit Comments

Comments may be submitted by September 3, 2021 using one of the following methods:

## Mail

Chris Babb Re: RDU EA  
Landrum & Brown  
4445 Lake Forest Drive, Suite 700  
Cincinnati, OH 45242

## Email

[RDUEA@landrumbrown.com](mailto:RDUEA@landrumbrown.com)





Thank you

