

FINAL

# Environmental Assessment for Capacity Enhancement Projects

Charlotte Douglas International Airport

Charlotte, North Carolina

PREPARED FOR

CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

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

PREPARED BY

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February 2022

This environmental assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA Official.

Responsible FAA Official

Date

## GENERAL INFORMATION ABOUT THIS DOCUMENT

**WHAT IS IN THIS DOCUMENT?** This document is the Final Environmental Assessment (EA) for Proposed Capacity Enhancement Projects at the Charlotte Douglas International Airport (CLT). The Proposed Action includes the construction of a new fourth parallel runway and associated exits and taxiways and expansion of the terminal (Concourse B and C building and ramp). The City of Charlotte, in cooperation with the Federal Aviation Administration (FAA), prepared this EA document to disclose the analysis and findings of the potential environmental impacts of the three proposed development alternatives and the No Action Alternative.

**BACKGROUND.** The FAA issued a Federal Register Notice on March 22, 2018 announcing its intent to prepare an Environmental Impact Statement (EIS) for Proposed Capacity Enhancements and Other Improvements at Charlotte Douglas International Airport, Charlotte, Mecklenburg County, NC. During the preparation of the EIS, the FAA updated the aviation forecasts at CLT. The FAA also prepared a runway length analysis to validate the need for a 12,000-foot runway during the EIS preparation. The runway length analysis was completed in October 2018 and concluded that only a 10,000-foot runway was required to meet the purpose and need for the project instead of a 12,000-foot runway, as was recommended in the CLT Master Plan Update: Phase 1, Airport Capacity Enhancement Plan, February 2016. Given this change to a major element of the Sponsor's Proposed Action, the FAA began a process of reevaluating the appropriate level of environmental documentation for compliance with the National Environmental Policy Act of 1969 (NEPA), 40 Code of Federal Regulations (CFR) Parts 1500-1508, FAA Order 1050.1F, and FAA Order 5050.4B. The FAA determined that this was a sufficient change to one of the proposed capacity enhancements to warrant cancellation of the EIS and conversion to an EA. This was made public in the FAA's publication of a Notice of Cancellation in the Federal Register on February 27, 2019.

The City of Charlotte conducted a set of public information workshops after the conversion to an EA. The public information workshops were held on October 21 and 24, 2019. The Draft EA which identified Alternative 1 as the Proposed Action was released on April 16, 2021. Public Workshops and Hearings on the Draft EA were conducted on May 17 and 18, 2021. The comment period for the Draft EA was open from April 16, 2021 to June 1, 2021. Notices of the opportunities to comment on the Draft EA were published in local newspapers and were sent to governmental agencies and to individuals and organizations who expressed interest in commenting on the proposed project. The City of Charlotte released the Revised Draft EA on October 8, 2021 to address the decision to change its Proposed Action from Alternative 1 to Alternative 2. In the Revised Draft EA, Alternative 2 is referred to as the Proposed Action. A Public Meeting and Hearing on the Revised Draft EA was conducted on November 8, 2021. The comment period for the Revised Draft EA was open from October 8, 2021 to November 22, 2021. Notices of opportunities to comment on the Revised Draft EA were published in local newspapers and were sent to governmental agencies and to individuals and organizations who expressed interest in commenting on the proposed project.

The City of Charlotte submitted the Preliminary Final EA to the FAA in December 2021. In January 2022, it was determined an update to the geometry of the Proposed Action was warranted in order to meet design requirements outlined in FAA AC 150/5300-13A, *Airport Design*, paragraph 415(a). This change would not change the operation of aircraft on the airfield and would not impact airfield capacity or delays. As such, an Addendum to the Final EA that identifies the updated Proposed Action geometry was submitted to the FAA in January 2022 and is included in **Appendix M** of this Final EA. The body of this Final EA does not reflect this update to the geometry; however, the EA data, analyses, and results remain substantially valid.

The document presented herein represents the Final EA for the federal decision-making process, in fulfillment of FAA's policies and procedures relative to NEPA and other related federal requirements. Copies of the document are available for review online at <https://www.airportprojects.net/clt-capacity-ea/documents-reports> and at the CLT Center.

**WHAT HAPPENS AFTER THIS?** Pursuant to Title 40, CFR § 1506.4, the FAA will issue a Finding of No Significant Impact (FONSI) / Record of Decision (ROD) pursuant to NEPA or elect to prepare an EIS. Issuance of a FONSI / ROD would complete NEPA requirements for the project pursuant to 40 CFR § 1506.10. The project may begin as funds become available and as mitigation requirements set forth in the Final EA are completed.

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## Acronyms

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The following is a list of acronyms used in the EA:

AA	American Airlines
AAC	Aircraft Approach Category
AC	Advisory Circular
ACEIT	Airport Construction Emissions Inventory Tool
ACEP	Airport Capacity Enhancement Plan
ACHP	Advisory Council on Historic Preservation
ACIP	Airports Capital Improvement Plan
ACM	Asbestos Containing Material
ACS	American Community Survey
ADG	Airplane Design Group
ADS-B	Automatic Dependent Surveillance Broadcast
AEDT	Aviation Environmental Design Tool
AIP	Airport Improvement Program
Airport	Charlotte Douglas International Airport
AKH	Gastonia Municipal
ALP	Airport Layout Plan
ALSF-II	Approach Lighting System with Sequenced Flashers - Category II
APE	Area of Potential Effect
APU	Auxiliary power units
ARFF	Aircraft Rescue and Fire Fighting
ARTCC	Air Route Traffic Control Centers
ASDE-X	Airport Surface Detection Equipment, Model X
ASR-11	Airport Surveillance Radar
AST	Aboveground storage tanks
ASV	Annual service volume
ATC	Air Traffic Control
ATCT	Air Traffic Control Tower
ATD-2	Airspace Technology Demonstration 2
AvGas	Aviation gasoline
BFE	Base Flood Elevations
BGPA	Bald and Golden Eagle Protection Act
BMP	Best management practices
BTU	British thermal units
C&D	Construction and Demolition
CAA	Clean Air Act (as amended in 1990)
CATS	Charlotte Area Transit System
CDOT	City of Charlotte Department of Transportation
CEO	Chief Executive Officer
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980



CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
CH <sub>4</sub>	Methane
CIP	Capital Improvement Program
CLOMR	Conditional Letter of Map Revision
CLT	Charlotte Douglas International Airport or Airport
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> E	Carbon Dioxide Equivalent
CWA	Clean Water Act
dB	Decibel
DDFS	Design Day Flight Schedule
DNL	Day-Night Average Sound Level
DOI	U.S. Department of Interior
DORA	Direction, Oversight, Review, and Agreement
DSA	Detailed Study Area
EA	Environmental Assessment
EAT	End-Around Taxiway
EIS	Environmental Impact Statement
EO	Executive Order
EQY	Charlotte-Monroe Executive Airport
ERAM	En Route Automation Modernization
ESC	Erosion and Sedimentation Control
FAA	Federal Aviation Administration
FBFM	Flood Boundary and Floodway Map
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Map
FIS	Federal Inspection Services
FRA	Federal Railroad Administration
FWCA	Fish and Wildlife Coordination Act
GAO	General Accounting Office
GHG	Greenhouse Gas
GPS	Global Positioning System
GSA	General Study Area
GSE	Ground Support Equipment
GWP	Global Warming Potential
GWS	Groundwater and Wastewater Services
H <sub>2</sub> O	Water Vapor
HAP	Hazardous air pollutants
HFC	Hydrofluorocarbon
HIRL	High Intensity Runway Lights
HUC	Hydrologic Unit Code

ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IMC	Instrument Meteorological Conditions
IPCC	Intergovernmental Panel on Climate Change
IPJ	Lincolnton-Lincoln County Regional Airport
ITWS	Integrated Terminal Weather System
Jet-A	Jet fuel
JO	Joint Order
JQF	Concord-Padgett Regional Airport
LHA	Light housing assemblies
LOMR	Letter of Map Revision
LOS	Level of Service
LQG	Large Quantity Generator
LWCF	Land and Water Conservation Fund Act
MITL	Medium Intensity Taxiway Lighting
MOA	Memorandum of Agreement
MOVES	Motor Vehicle Emission Simulator
MSA	Metropolitan Statistical Area
MTP	Metropolitan Thoroughfare Plans
MWh	Megawatt-hours
N <sub>2</sub> O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NC ANG	North Carolina Air National Guard
NC RGA LF	North Carolina Recovered Government Archive Solid Waste Facilities
NC SHWS	North Carolina Inactive Hazardous Sites Inventory
NCDCR	North Carolina Department of Natural and Cultural Resources
NCDEQ	North Carolina Department of Environmental Quality
NCDHHS	North Carolina Department of Health and Human Services
NCDOT	North Carolina Department of Transportation
NCNHP	North Carolina Natural Heritage Program
NCRPA	North Carolina Recreation and Parks Association
NCSHPO	North Carolina State Historic Preservation Office
NEPA	National Environmental Policy Act of 1969, as amended
NHPA	National Historic Preservation Act
NLEB	Northern long-eared bat
NLR	No Longer Regulated
NLR	Noise Level Reduction
NMFS	National Marine Fisheries Service
NO <sub>2</sub>	Nitrogen Dioxide
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Association



NOI	Notice of Intent
NOx	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NPIAS	National Plan of Integrated Airport Systems
NPL	National Priorities List
NRCS	USDA Natural Resource Conservation Service
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
OPA	Oil Pollution Act
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in diameter
PM <sub>10</sub>	particulate matter less than 10 microns in diameter
PAPI	Precision Approach Path Indicator
Pb	Lead
PFC	Passenger facility charges
PPA	Pollution Prevention Act
RCRA	Resource Conservation and Recovery Act of 1976
REL	Runway Entrance Lights
RON	Remain Over Night
RPZ	Runway Protection Zone
RUST	Regional Underground Storage Tank
SF <sub>6</sub>	Sulfur Hexafluoride
SARA	Superfund Amendments and Reauthorization Act
SCDNR	South Carolina Department of Natural Resources
SCRPA	South Carolina Recreation and Parks Association
SCSHPO	South Carolina Historic Preservation Office
SDWA	Safe Drinking Water Act
SFHA	Special Flood Hazard Areas
SIP	State Implementation Plan
SLOPES	Standard Local Operating Procedures for Endangered Species
SO <sub>2</sub>	Sulfur Dioxide
SPCC	Spill Prevention, Control and Countermeasure
Sponsor	City of Charlotte
SQG	Small Quantity Generator
STARS	Standard Terminal Automation Replacement System
SWIM	System Wide Information Management
SWMP	Storm Water Management Plan
TAF	Terminal Area Forecasts
TAMIR	Terminal Automation and Replacement
TDZ	Touchdown Zone
TFDM	Terminal Flight Data Manager
THL	Takeoff Hold Lights
THPO	Tribal Historic Preservation Officers
TRACON	Terminal Radar Approach Control
TSCA	Toxic Substances Control Act of 1976



USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
UZA	Rock Hill-York County Airport
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
VFR	Visual flight rules
VMC	Visual Meteorological Conditions
VOC	Volatile Organic Compound
WAAS	Wide Area Augmentation System
Wake CAT	Wake Turbulence Recategorization
WPA	Works Progress Administration