Grab your Boarding Pass and Check your Bags!

DIVISION OF AVIATION
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BOARDING PASS

Name	Title	Gate
LUNCH N' LEARN		B1
From	**Date**	**Seat**
AIRPORTS 101 FOR HIGHWAY ENGINEERS	01-25-2024	2A
To	**Boarding Time**	**Flight**
DIVISION OF AVIATION ROLES/RESPONSBILITIES CONTACT US	11.45 AM	A828

FIRST CLASS

Ticket Number

5 1 0 8 7 2 4 7 7 1

BOARDING PASS

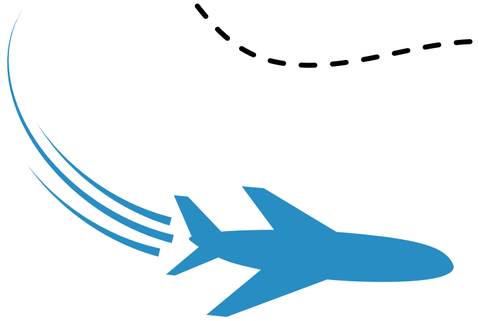
LUNCH N' LEARN

From	Date
AIRPORTS 101 FOR HIGHWAY ENGINEERS	01-25-2024
To	**Boarding Time**
DIVISION OF AVIATION ROLES/RESPONSIBILITIES CONTACT US	11.45 AM

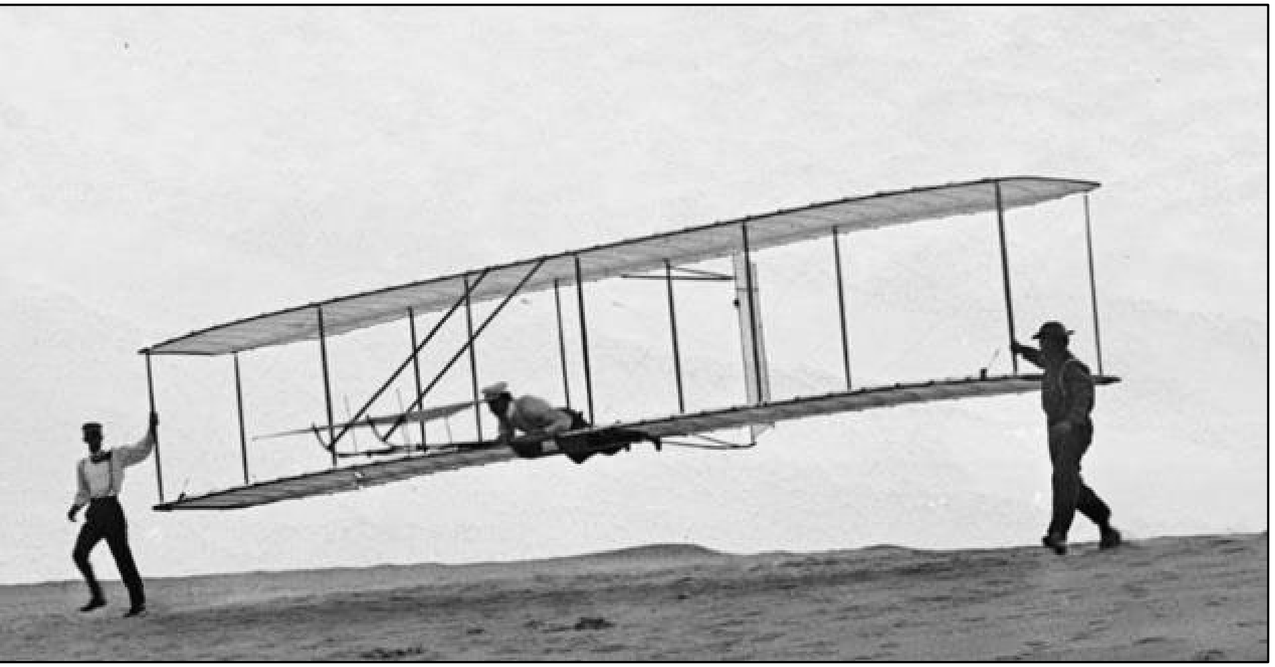
FIRST CLASS

Our Flight Path

1. Division of Aviation Background & Core Functions
2. Airports 101 for Highway Engineers & Components of an Airport
3. Airport Planning & Project Development



North Carolina: Forever First in Flight



December 17, 1903

World’s first powered manned flight

Kitty Hawk, N.C.

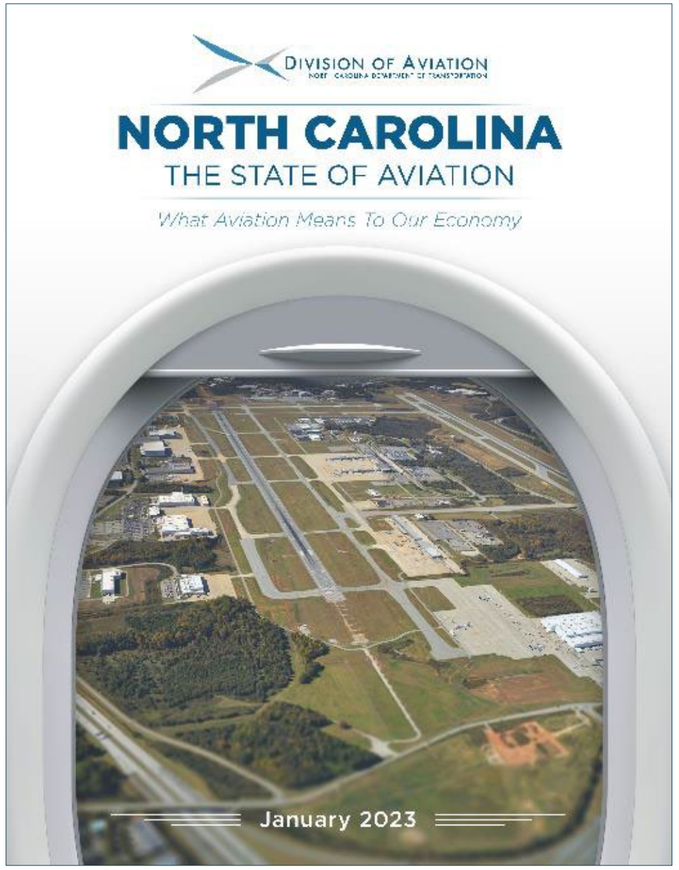
January 7, 2020

North America’s first unmanned air taxi flight

Raleigh, N.C.

N.C. Airports Contribute $72 Billion Annually to the Economy

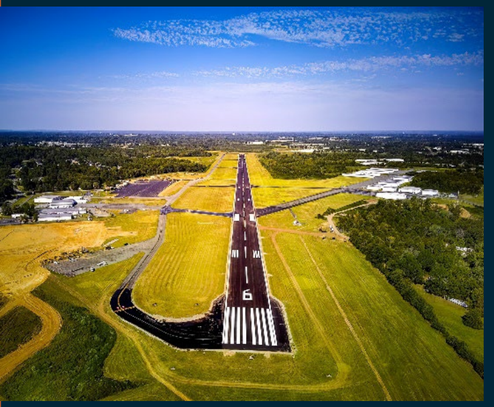
11% of North Carolina's Gross Domestic Product



NCDOT Aviation Mission: Expanding Aviation's Impact

- **Promoting the economic well-being of North Carolina by developing a safe and robust air transportation system**

CORE FUNCTIONS



Airport Capital Improvement & Maintenance Programs

Unmanned Aircraft Systems & Advanced Air Mobility Integration

Aviation Business & Workforce Development

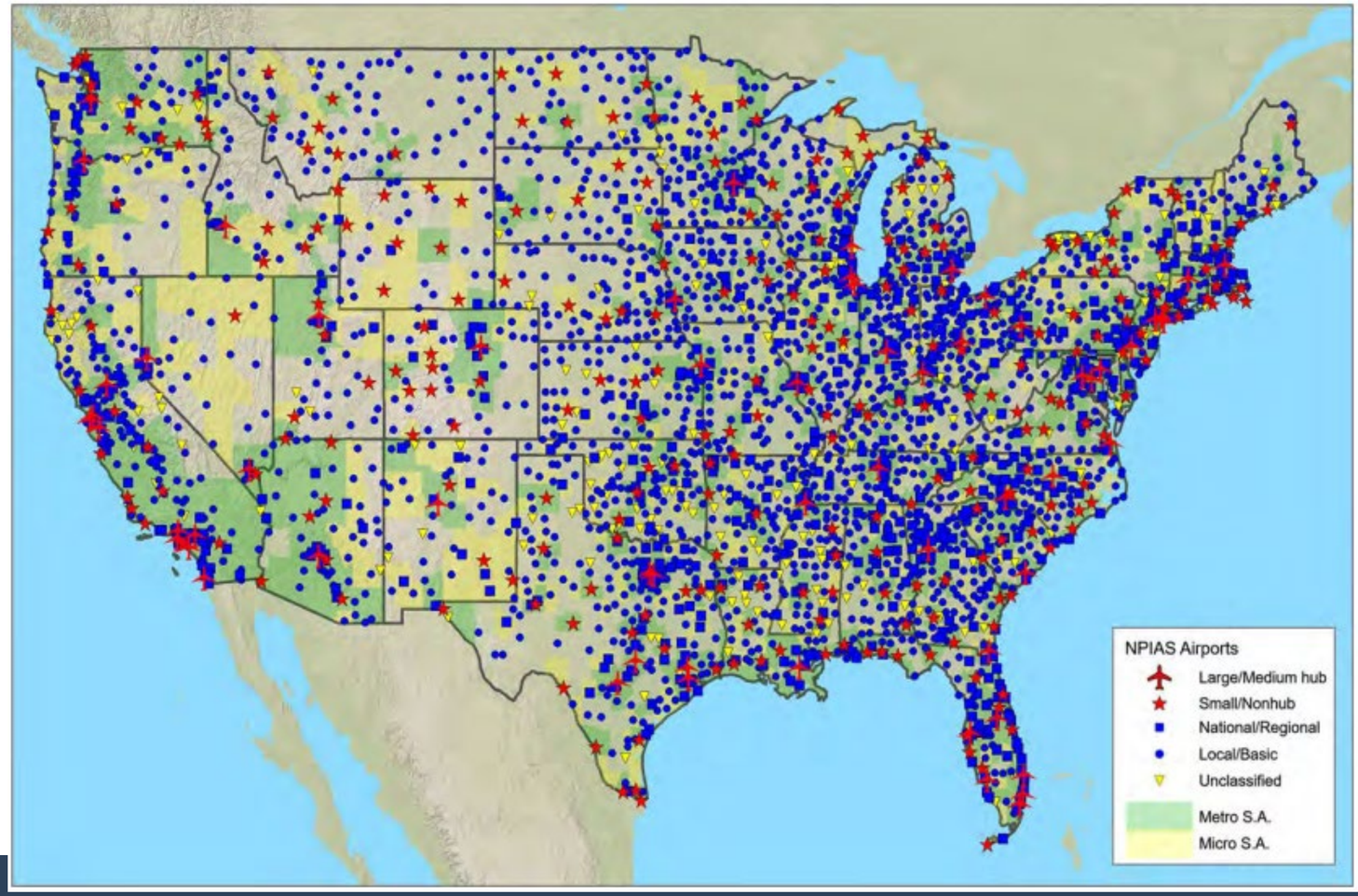
State Agency Flight Services

Aviation Finance & Grants Management

Airports 101 for Highway Engineers

Types of Airports

- Public-Use, Public-Owned
  - Commercial Service
  - General Aviation (GA)
- Public-Use, Private Owned
- Private-Use, Private Owned

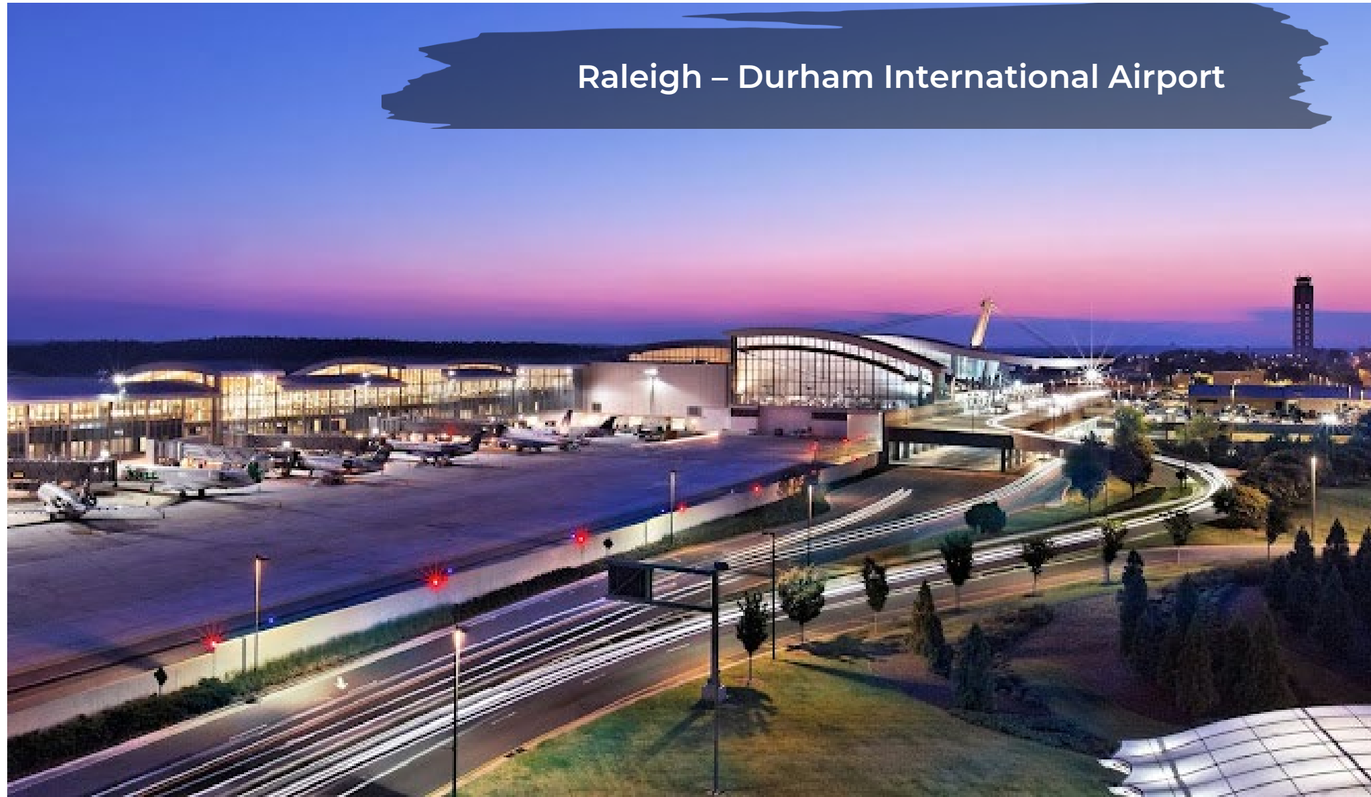


National Plan of Integrated Airport Systems (NPIAS)

Commercial Service Airports


Fayetteville Regional Airport


Charlotte Douglas International Airport


Raleigh – Durham International Airport

General Aviation (GA) Airports

Commercial and General Aviation Airports Support Communities in Many Ways

- Aerial firefighting
- Aerial ambulance
- Agricultural spraying
- Air transportation
- Business/corporate travel
- Cargo transport
- Disaster relief
- Drug enforcement
- Flight training
- Military training
- Organ transport
- Recreation
- Search and rescue
- Traffic advisory

Abbreviations

GA: General Aviation

NPIAS: National Plan of Integrated Airport System

NCDOA: North Carolina Division of Aviation

NAVAID: Navigational Aids

POC: Point of Contact

FAA: Federal Aviation Administration

ADO: Airport District Office

FMV: Fair Market Value

ALP: Airport Layout Plan

ADS-B: Automatic Dependent Surveillance–Broadcast

BCA: Benefit-Cost Analysis

RWY: Runway

TWY: Taxiway

AC: Advisory Circular

CMAR: Construction Manager at Risk

ARFF: Aircraft Rescue and Fire Fighting

PCI: Pavement Condition Index

CIP: Capital Investment Plan

FHWA: Federal Highway Administration

NEPA: National Environmental Policy Act

SBG: State Block Grant

CSPPs: Construction Safety and Phasing Plan

NOTAMs: Notice to Air Missions

SPAM: Statewide Preservation and Maintenance

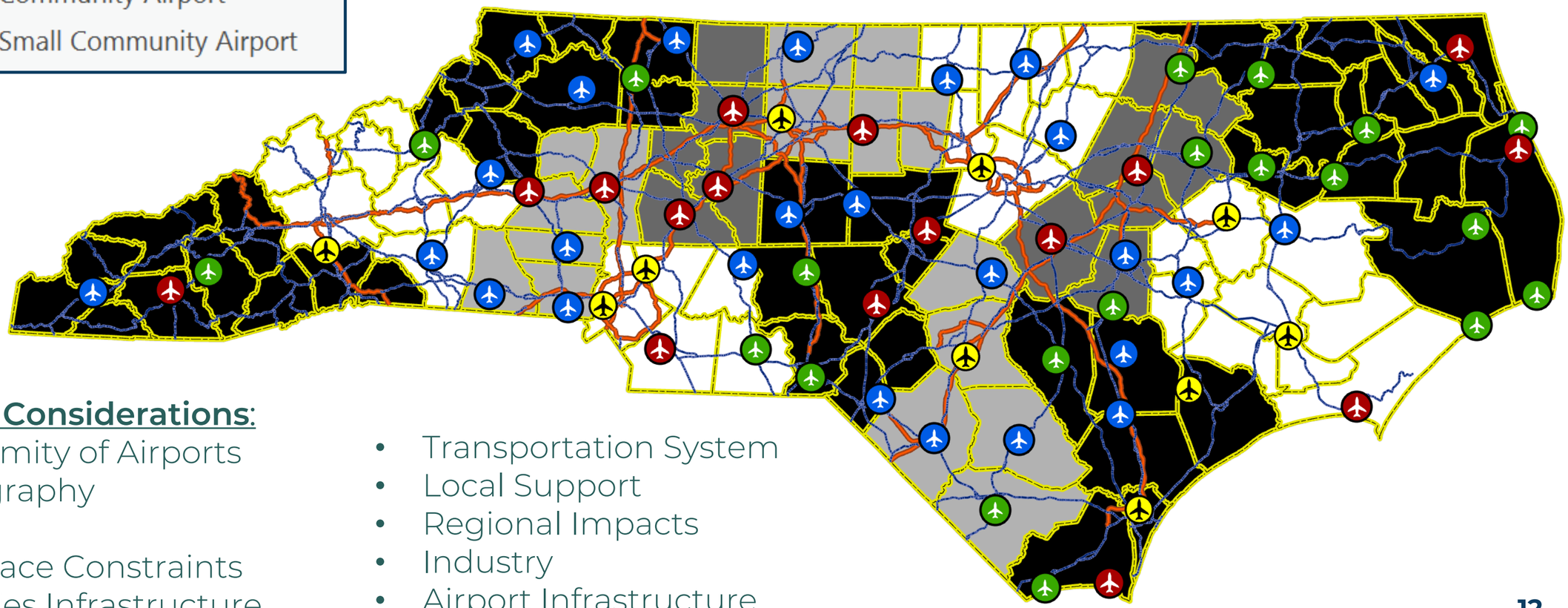
FOD: Foreign Object Debris

State Classification System

- Commercial Service Airport
- GA Regional/Business Airport
- GA Community Airport
- GA Small Community Airport

Economic Indicators (County-Level):

- Total Population
- Population Growth (2000-2010)
- Annual Per Capita Income
- Gross Retail Sales
- Tourism Revenues



Additional Considerations:

- Proximity of Airports
- Geography
- Cost
- Airspace Constraints
- Utilities Infrastructure
- Transportation System
- Local Support
- Regional Impacts
- Industry
- Airport Infrastructure

Division 1

Airport	Location	DOA Region
Currituck County Regional Airport (ONX)	Currituck	NE
Dare County Regional Airport (MQI)	Manteo	NE
Elizabeth City Coast Guard Air Station (ECG)	Elizabeth City	NE
Northeastern Regional Airport (EDE)	Edenton	NE
Tri-County Airport at Henry Joyner Field (ASJ)	Ahoskie	NE
Hyde County Airport (7W6)	Engelhard	NE
Martin County Airport (MCZ)	Williamston	NE
Plymouth Municipal Airport (PMZ)	Plymouth	NE
Billy Mitchell Airport (HSE)	Hatteras	NPS
First Flight Airport (FFA)	Kill Devil Hills	NPS
Ocracoke Island Airport (W95)	Ocracoke	NPS

Division 2

Airport	Location	DOA Region
Albert J Ellis Airport (OAJ)	Jacksonville	CS
Coastal Carolina Regional Airport (EWN)	New Bern	CS
Pitt-Greenville Airport (PGV)	Greenville	CS
Michael J Smith Field Airport (MRH)	Beaufort	SE
Washington-Warren Airport (OCW)	Washington	NE
Kinston Regional Jetport at Stallings Field (ISO)	Kinston (GTP)	SE

Division 3

Airport	Location	DOA Region
Wilmington International Airport (ILM)	Wilmington	CS
Cape Fear Regional Jetport (SUT)	Oak Island	SE
Duplin County Airport (DPL)	Kenansville	SE
Henderson Field Airport (ACZ)	Wallace	SE
Odell Williamson Municipal Airport (60J)	Ocean Isle Beach	SE
Clinton-Sampson County Airport (CTZ)	Clinton	SE

Division 4

Airport	Location	DOA Region
Johnston Regional Airport (JNX)	Smithfield	NE
Rocky Mount/Wilson Regional Airport (RWI)	Rocky Mount	NE
Wayne Executive Jetport Airport (GWW)	Goldsboro	SE
Tarboro-Edgecombe Airport (ETC)	Tarboro	NE
Halifax/Northampton Regional Airport (IXA)	Roanoke Rapids	NE
Mount Olive Municipal Airport (W40)	Mount Olive	SE

Division 5

Airport	Location	DOA Region
Raleigh-Durham International Airport (RDU)	Raleigh/Durham	CS
Triangle North Executive Airport (LHZ)	Louisburg	NE
Henderson/Oxford Airport (HNZ)	Oxford	NE
Raleigh Regional Airport at Person County (TDF)	Roxboro	NW

Division 6

Airport	Location	DOA Region
Fayetteville Regional Airport/Grannis Field (FAY)	Fayetteville	CS
Curtis L. Brown Jr. Field Airport (EYF)	Elizabethtown	SE
Harnett Regional Jetport Airport (HRJ)	Erwin	SE
Lumberton Regional Airport (LBT)	Lumberton	SE
Columbus County Municipal Airport (CPC)	Whiteville	SE

Division 7

Airport	Location	DOA Region
Piedmont Triad International Airport (GSO)	Greensboro	CS
Burlington/Alamance Regional Airport (BUY)	Burlington	NW
Rockingham County NC Shiloh Airport (SIF)	Reidsville	NW

Division 8

Airport	Location	DOA Region
Raleigh Executive Jetport (TTA)	Sanford	SW
Moore County Airport (SOP)	Southern Pines	SW
Siler City Municipal Airport (SCR)	Siler City	NW
Asheboro Regional Airport (HBI)	Asheboro	NW
Laurinburg/Maxton Airport (MEB)	Maxton	SW
Montgomery County Airport (43A)	Star	SW
Richmond County Airport (RCZ)	Rockingham	SW

Division 9

Airport	Location	DOA Region
Davidson County Airport (EXX)	Lexington	NW
Smith Reynolds Airport (INT)	Winston-Salem	NW
Mid-Carolina Regional Airport (RUQ)	Salisbury	NW

Division 10

Airport	Location	DOA Region
Charlotte/Douglas International Airport (CLT)	Charlotte	CS
Concord-Padgett Regional Airport (JQF)	Concord	CS
Charlotte-Monroe Executive Airport (EQY)	Monroe	SW
Stanly County Airport (VUJ)	Albemarle	SW
Anson County Airport - Jeff Cloud Field (AFP)	Wadesboro	SW

Division 11

Airport	Location	DOA Region
Ashe County Airport (GEV)	Jefferson	NW
Mount Airy/Surry County Airport (MWK)	Mount Airy	NW
Wilkes County Airport (UKF)	North Wilkesboro	NW
Avery County Airport (Morrison Field) (7A8)	Spruce Pine	NW
Elkin Municipal Airport (ZEF)	Elkin	NW

Division 12

Airport	Location	DOA Region
Statesville Regional Airport (SVH)	Statesville	NW
Shelby-Cleveland County Regional Airport (EHO)	Shelby	SW
Gastonia Municipal Airport (AKH)	Gastonia	SW
Lincolnton-Lincoln County Regional Airport (IPJ)	Lincolnton	SW

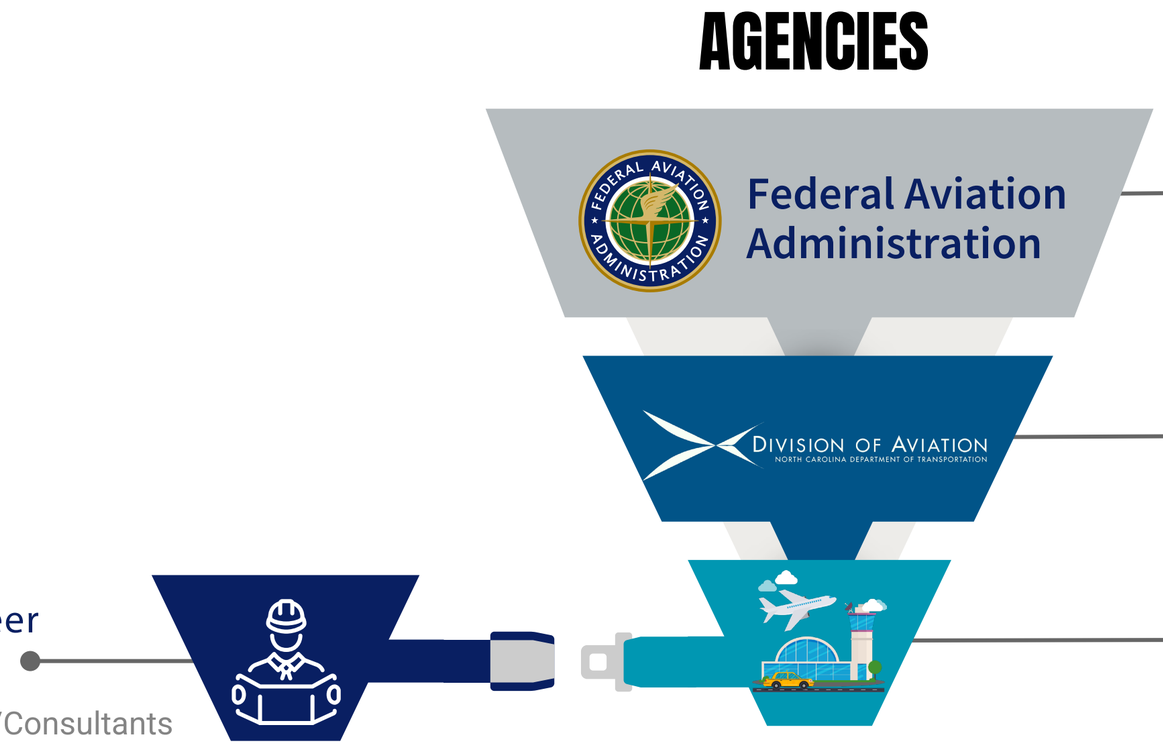
Division 13

Airport	Location	DOA Region
Asheville Regional Airport (AVL)	Asheville	CS
Hickory Regional Airport (HKY)	Hickory	NW
Foothills Regional Airport (MRN)	Morganton	NW
Rutherford County Airport/Marchman Field (FQD)	Rutherfordton	SW

Division 14

Airport	Location	DOA Region
Macon County Airport (1A5)	Franklin	SW
Western Carolina Regional Airport (RHP)	Andrews	SW
Jackson County Airport (24A)	Sylva	SW

Airports Key Players



Federal Aviation Administration (FAA)

FAA has regional field offices known as Airport District Offices (ADO). The NC ADO office sits in Memphis, TN. They are also over the states of Tennessee and Kentucky.

NC Department of Transportation

The Division of Aviation, coordinates with the FAA ADO and administers all federal grants to GA Airports in NC and has authority over NEPA.

Airports/Sponsors

General Aviation and Commercial Service Airports work with their Engineers of Record/Consultants in order to complete projects and meet compliance with the FAA/NCDOT.

Consultants/Engineer on Record

The Engineer on Record/Consultants are chosen by the airport through the RFQ process. They help the GA airports with planning, design, and construction oversight.

How are public airports different from other public transportation facilities and right-of-way?

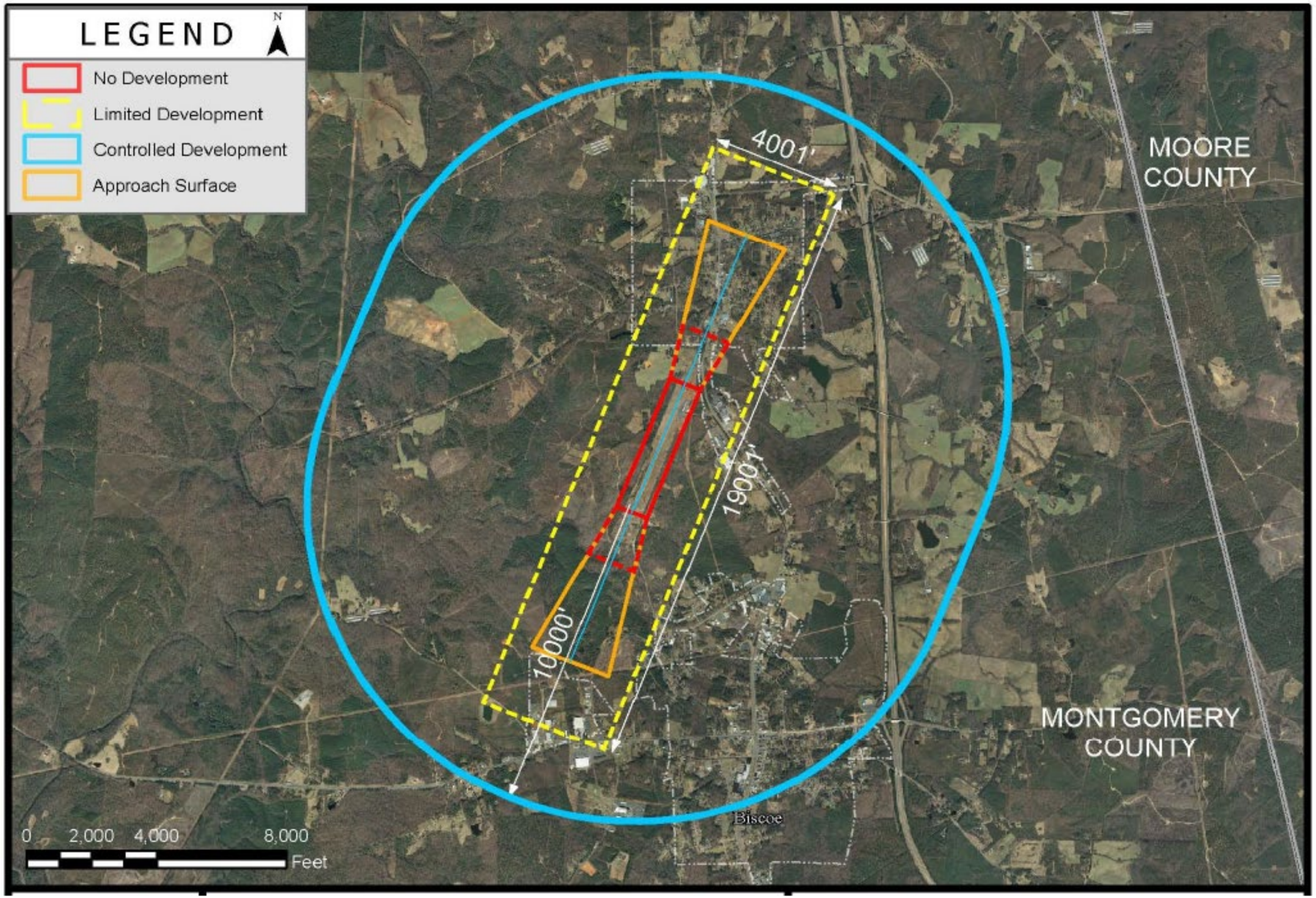
Grant Assurances (Obligations)

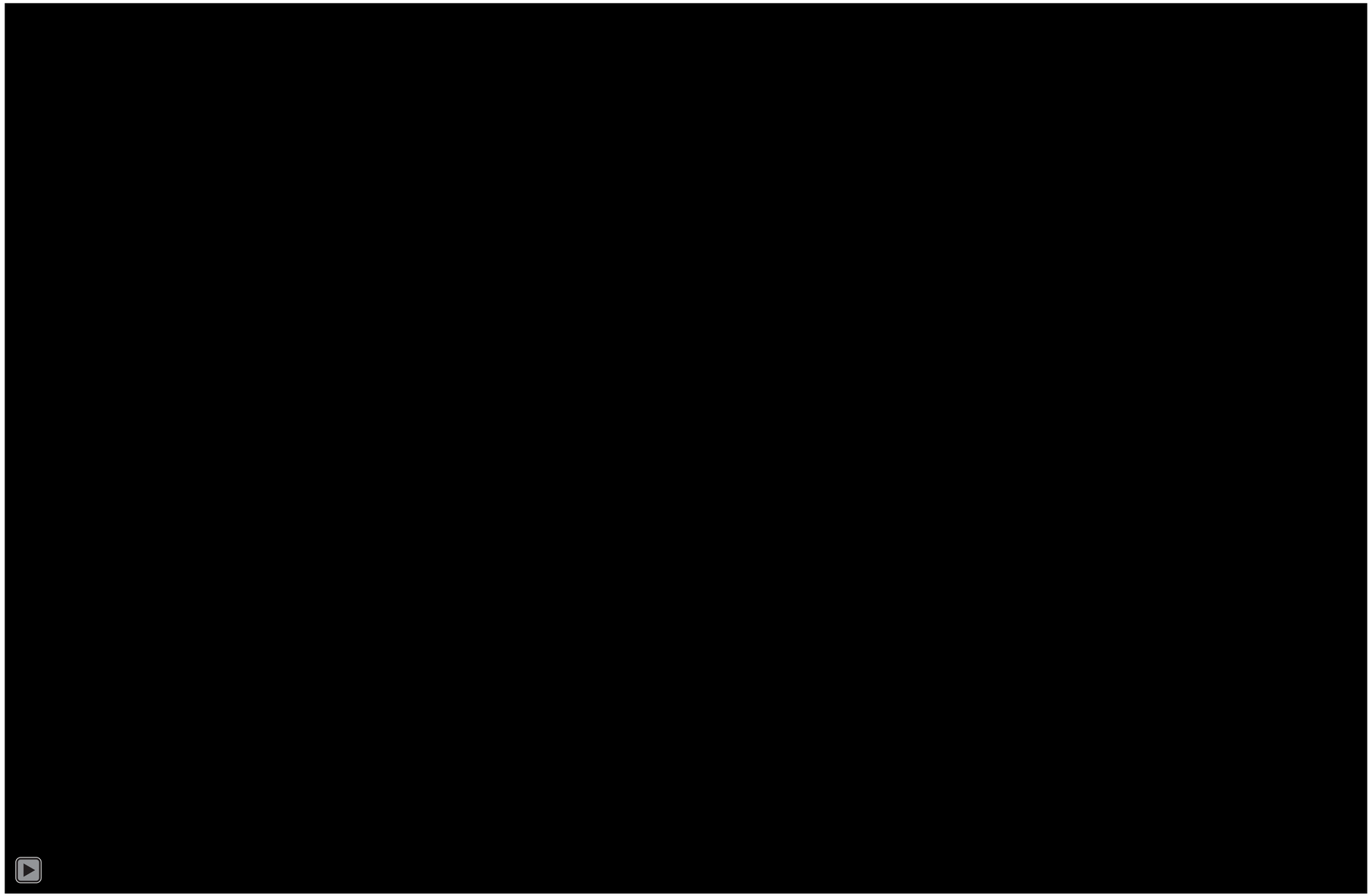
When airport owners and operators accept federal assistance, they agree to certain obligations and conditions, which may be incurred by contract or by restrictive covenants in property deeds. The Airport Compliance Program serves to protect the public interest in civil aviation and ensure compliance with applicable Federal laws, FAA rules, and policies.

Major Obligations

1. Self-sustainability of the airport & related use of airport revenue
2. Use of airport land for aeronautical purposes
3. Disposal of federally acquired land
4. Compatible land use
5. Maintaining an approved Airport Layout Plan (ALP) and adhering to it
6. Airspace protection

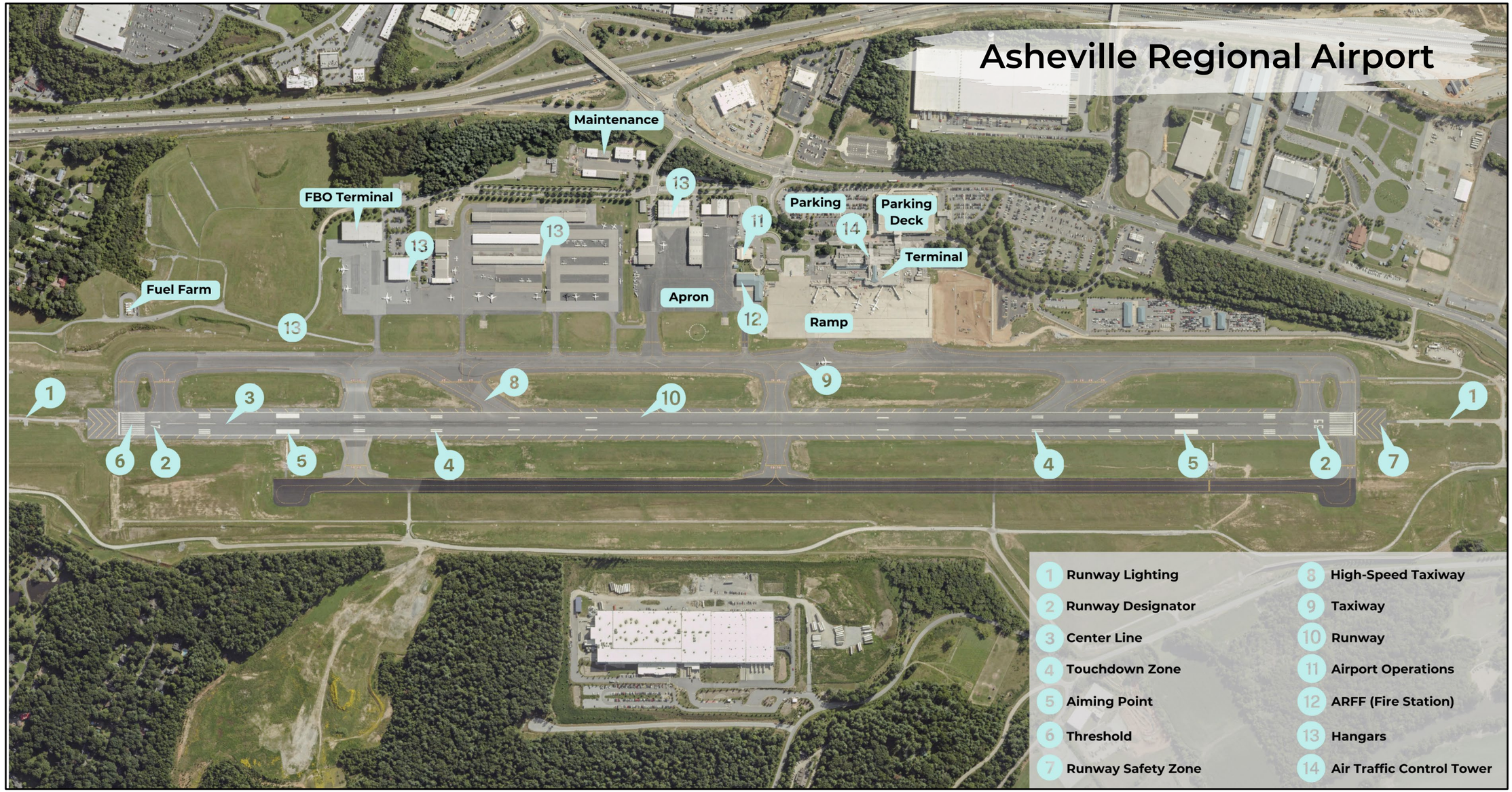
Compliance: Airspace Protection





Components of an Airport

Components of an Airport



Airside Facility Inventory

Runways

- The number of runways at an airport ranges from only one runway at smaller airports to as many as four at Charlotte-Douglas International Airport.

Taxiways

- Taxiways creates mobility for aircraft that have just landed or those aircraft preparing to land/depart.

Apron

- Parking areas for an aircraft

Navigational Aids - NAVAIDS

- NAVAIDS provide enroute and terminal information to pilots and include both lighting and navigational equipment. NAVAID types are listed below.
    - Automated Weather Operating System (AWOS)
    - Instrument Approach Capabilities
    - Visual Glide Slope Indicators & Precision Approach Path Indicators
    - Runway End Identification Lights (REILs)
    - Approach Lighting System

Statesville Regional Airport

Harnett Regional Jetport

Landside Facilities

Fuel Services

- All Airports can generate revenue through fuel services

Hangars & Transient Aircraft Tie-Down

- Airports typically lease indoor hangar space for aircraft storage as well as outdoor “tie-down” parking for transient aircraft storage

Terminal Facilities

- Most public airports have a terminal facility to house airport administration services, and which is open to the traveling public. Terminals also serve pilots in providing the use of telephones, restrooms, rest/sleeping quarters, and flight planning resources.

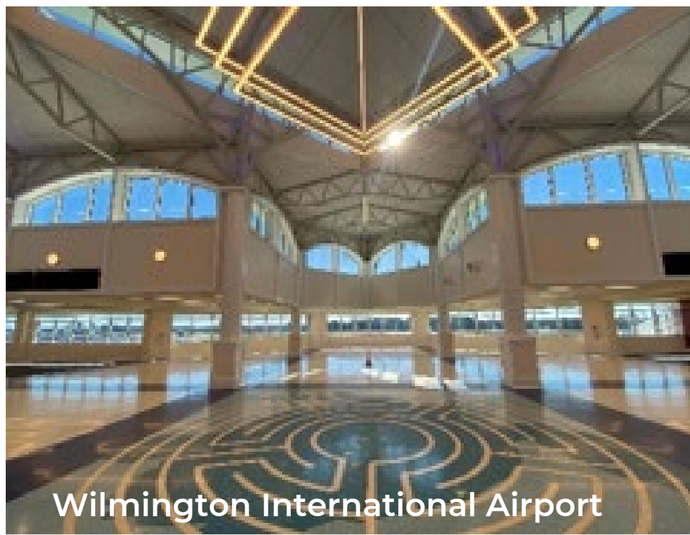

Michael J. Smith Field Airport


Ashe County Airport


Rocky Mount-Wilson Regional Airport


Mount Airy/
Surry County Airport

Cape Fear Regional Jetport


Wilmington International Airport

Airside Facilities

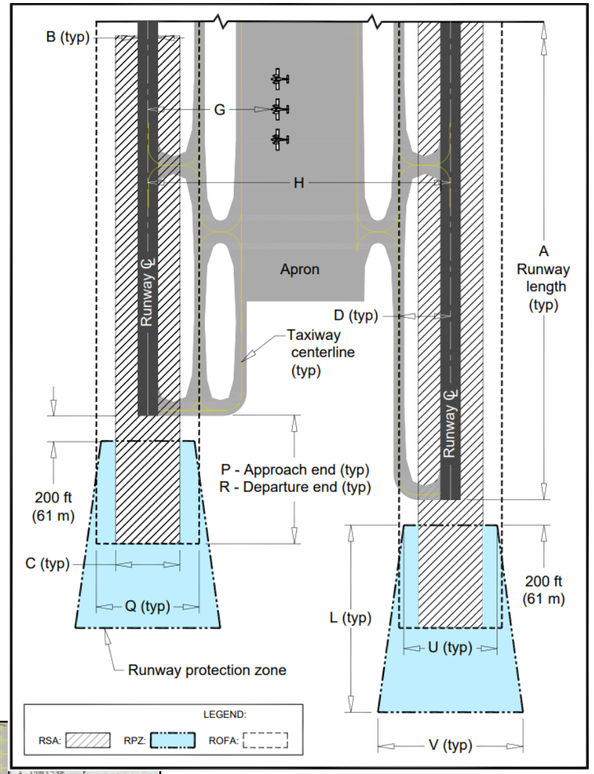
Airfield Safety Areas

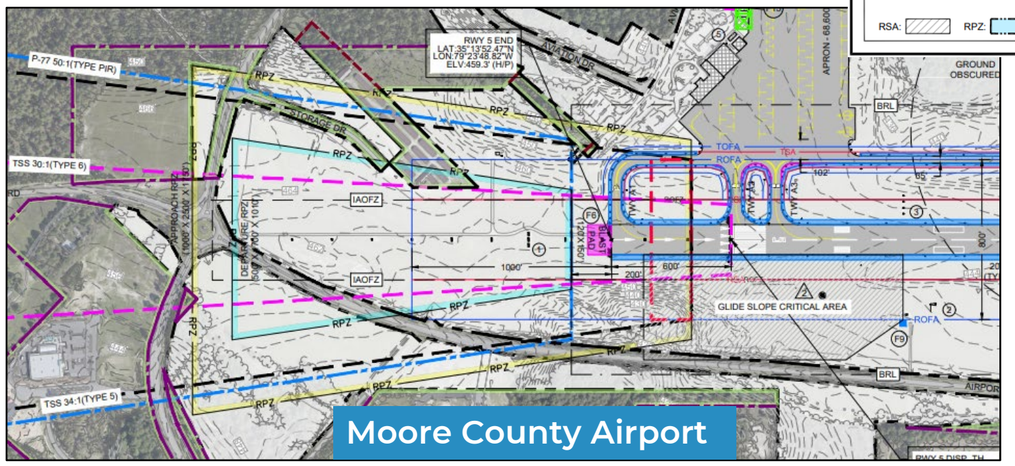
Runway Safety Areas

- A Runway Safety Area (RSA) is a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft in the event of an undershoot, overshoot, or excursion from the runway.

Runway Protection Zones

- A Runway Protection Zone (RPZ) is an area at ground level prior to the threshold or beyond the runway end to enhance the safety and protection of people and property on the ground.

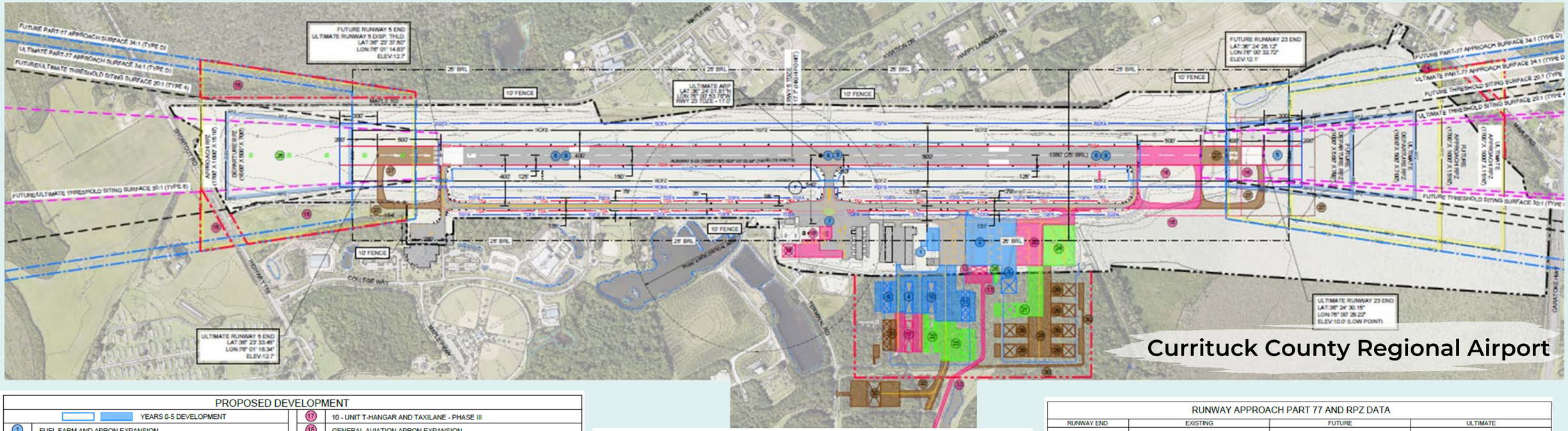




McKinney, Texas – Airplane overshoots the runway

Airport Planning

Airport Master Plan: Airport Layout Plan (ALP)



PROPOSED DEVELOPMENT			
	YEARS 0-5 DEVELOPMENT		
1	FUEL FARM AND APRON EXPANSION	17	10 - UNIT T-HANGAR AND TAXILANE - PHASE III
2	CORPORATE APRON EXPANSION - PHASE I	18	GENERAL AVIATION APRON EXPANSION
3	120' X 120' CORPORATE HANGAR	19	100' X 100' CORPORATE HANGAR - PHASE I
4	10 - UNIT T-HANGAR AND TAXILANE - PHASE I	20	CORPORATE APRON EXPANSION - PHASE II
5	RUNWAY 23 END APPROACH CLEARING		YEARS 11-20 DEVELOPMENT
6	RUNWAY 5-23 LIGHTING SYSTEM REHABILITATION	21	100' X 100' CORPORATE HANGAR PHASE II, TAXILANE, AND APRON
7	ELIMINATE TERMINAL APRON DIRECT ACCESS	22	10 - UNIT T-HANGAR AND TAXILANE - PHASE IV
8	4 - UNIT CORPORATE BOX HANGARS AND TAXILANE - PHASE I	23	4 - UNIT CORPORATE BOX HANGARS AND TAXILANE - PHASE III
9	RUNWAY REHABILITATION AND STRENGTHENING	24	CORPORATE APRON EXPANSION - PHASE III
10	10 - UNIT T-HANGAR AND TAXILANE - PHASE II	25	RUNWAY 5 ODALS INSTALLATION
11	4 - UNIT CORPORATE HANGAR AND TAXILANE - PHASE II	26	AIRFIELD EQUIPMENT STORAGE BUILDING
	YEARS 6-10 DEVELOPMENT		ULTIMATE OR ON-DEMAND DEVELOPMENT
12	NEW TERMINAL BUILDING	27	ULTIMATE RUNWAY EXTENSION TO 7000'
13	NEW TERMINAL ACCESS ROAD AND PARKING	28	CORPORATE TAXILANE EXTENSION
14	RUNWAY 23 RPZ LAND ACQUISITION FOR ¾ VISIBILITY MINIMUM	29	100' X 100' CORPORATE HANGARS AND APRON - PHASE III
15	RUNWAY 5 RPZ LAND ACQUISITION FOR ¾ VISIBILITY MINIMUM	30	ACCESS ROAD EXTENSION AND PARKING
16	RUNWAY 23 500' EXTENSION AND PAPI REPLACEMENT	31	4-UNIT CORPORATE BOX HANGARS AND TAXILANE - PHASE IV
		32	COMMERCE PARK TAXILANE EXTENSION, APRON AND HANGAR

RUNWAY DATA						
ITEM	EXISTING		FUTURE		ULTIMATE	
RUNWAY	5	23	5	23	5	23
RUNWAY DESIGN CODE (RDC)	B-II		B-II		B-II	
RUNWAY REFERENCE CODE (RRC)	B/II/5000		B/II/4000		B/II/4000	
LENGTH X WIDTH	5502' X 150'		6002' X 150'		7000' X 150'	
EFFECTIVE GRADIENT *	0.09%		0.08%		0.11%	
PAVEMENT SURFACE	ASPHALT-CONCRETE					
SURFACE TREATMENT	NONE					
GROSS WEIGHT (IN THOUSANDS POUNDS)	SW 35, DW 47.5		> 60		> 60	
STRENGTH BY PCN	NOT AVAILABLE					
MARKING	NPI	NPI	NPI	NPI	NPI	NPI
LIGHTING	MIRL/SIGNAGE		MIRL/SIGNAGE		MIRL/SIGNAGE	
VISUAL GLIDE SLOPE INDICATOR (VGSI) **	PAPI 4R	PAPI 2L	PAPI 4R	PAPI 4L	PAPI 4R	PAPI 4L
AERONAUTICAL SURVEY REQUIRED	NVGS	NVGS	VGS	VGS	VGS	VGS
APPROACH LIGHTS **	REILS	REILS	ODALS	REILS	ODALS	REILS
RUNWAY DECLARED DISTANCES						
TAKE OFF RUN AVAILABLE (TORA)	5502'	5502'	6002'	6002'	7000'	7000'
TAKE OFF DISTANCE AVAILABLE (TODA)	5502'	5502'	6002'	6002'	7000'	7000'
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	5502'	5502'	6002'	6002'	7000'	7000'
LANDING DISTANCE AVAILABLE (LDA)	5502'	5502'	6002'	6002'	6502'	7000'

RUNWAY APPROACH PART 77 AND RPZ DATA			
RUNWAY END	EXISTING	FUTURE	ULTIMATE
5	NON-PRECISION APPROACH - RNAV (GPS) SURFACE VISIBILITY MINIMUMS NOT LOWER THAN 1 MILE 500' X 10000' X 3500' 10000' @ 34:1 SLOPE RUNWAY PROTECTION ZONE (LENGTH X INNER WIDTH X OUTER WIDTH) APPROACH - 1000' X 500' X 700' DEPARTURE - 1000' X 500' X 700'	NON-PRECISION APPROACH - RNAV (GPS) SURFACE VISIBILITY MINIMUMS NOT LOWER THAN 3/4 MILE 1000' X 10000' X 4000' 10000' @ 34:1 SLOPE RUNWAY PROTECTION ZONE (LENGTH X INNER WIDTH X OUTER WIDTH) APPROACH - 1700' X 1000' X 1510' DEPARTURE - 1000' X 500' X 700'	NON-PRECISION APPROACH - RNAV (GPS) SURFACE VISIBILITY MINIMUMS NOT LOWER THAN 3/4 MILE 1000' X 10000' X 4000' 10000' @ 34:1 SLOPE RUNWAY PROTECTION ZONE (LENGTH X INNER WIDTH X OUTER WIDTH) APPROACH - 1700' X 1000' X 1510' DEPARTURE - 1000' X 500' X 700'
23	NON-PRECISION APPROACH - RNAV (GPS) SURFACE VISIBILITY MINIMUMS NOT LOWER THAN 1 MILE 500' X 10000' X 3500' 10000' @ 34:1 SLOPE RUNWAY PROTECTION ZONE (LENGTH X INNER WIDTH X OUTER WIDTH) APPROACH - 1000' X 500' X 700' DEPARTURE - 1000' X 500' X 700'	NON-PRECISION APPROACH - RNAV (GPS) SURFACE VISIBILITY MINIMUMS NOT LOWER THAN 3/4 MILE 1000' X 10000' X 4000' 10000' @ 34:1 SLOPE RUNWAY PROTECTION ZONE (LENGTH X INNER WIDTH X OUTER WIDTH) APPROACH - 1700' X 1000' X 1510' DEPARTURE - 1000' X 500' X 700'	NON-PRECISION APPROACH - RNAV (GPS) SURFACE VISIBILITY MINIMUMS NOT LOWER THAN 3/4 MILE 1000' X 10000' X 4000' 10000' @ 34:1 SLOPE RUNWAY PROTECTION ZONE (LENGTH X INNER WIDTH X OUTER WIDTH) APPROACH - 1700' X 1000' X 1510' DEPARTURE - 1000' X 500' X 700'

Aviation Activity Forecast

Forecast Elements:

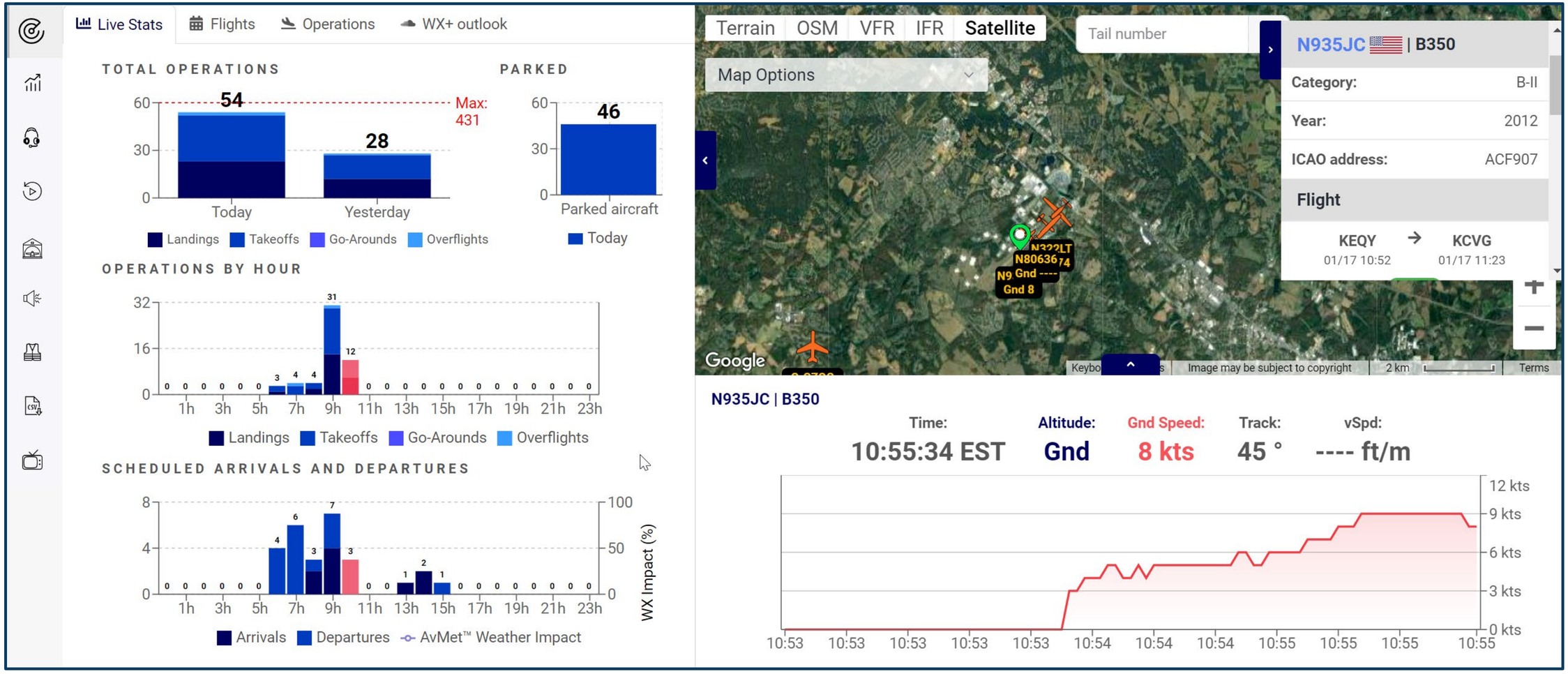
- Local operations vs. itinerant operations
- Based Aircraft (planes stored on-site)
- Civil vs. Military
- Operations conducted using Visual Flight Rules (VFR) vs. operations conducted using Instrument Flight Rules (IFR)
- Passenger enplanements
- Mix of aircraft completing operations

Critical Aircraft

The most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of the airport. “Regular use” is defined as 500 operations per year.

Airport Master Plan: Aviation Activity Forecasting

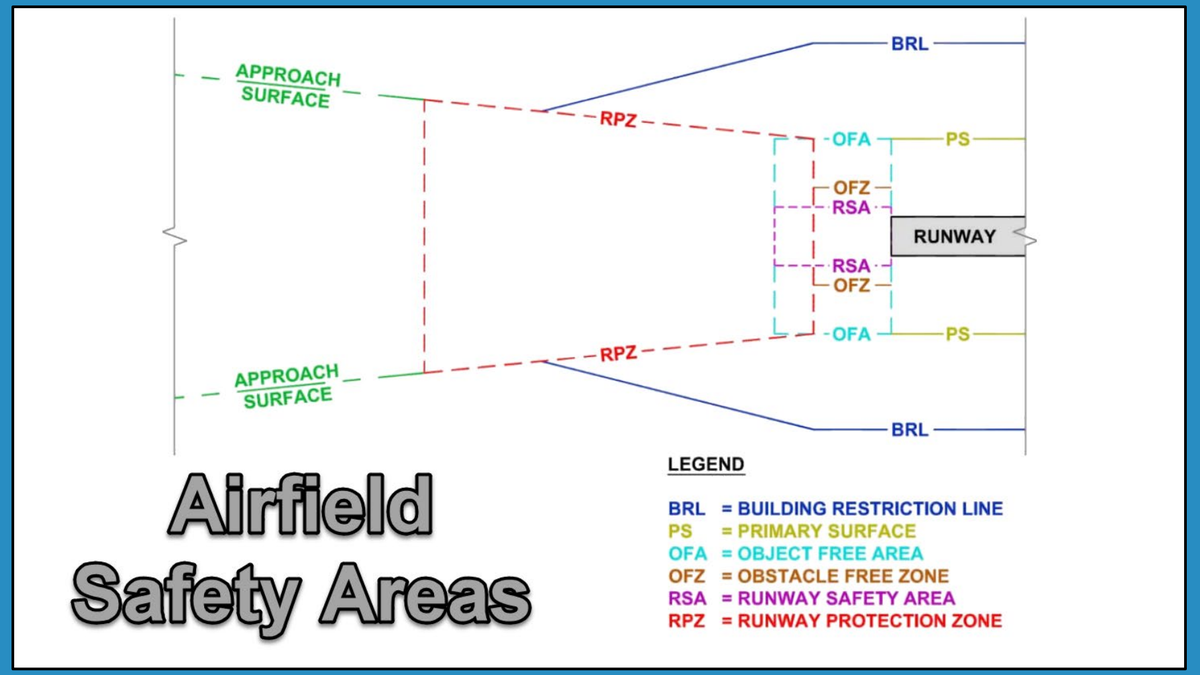
NCDOT TALONS (Tracking Aviation Logistics, Operations, Navigation & Security) Program



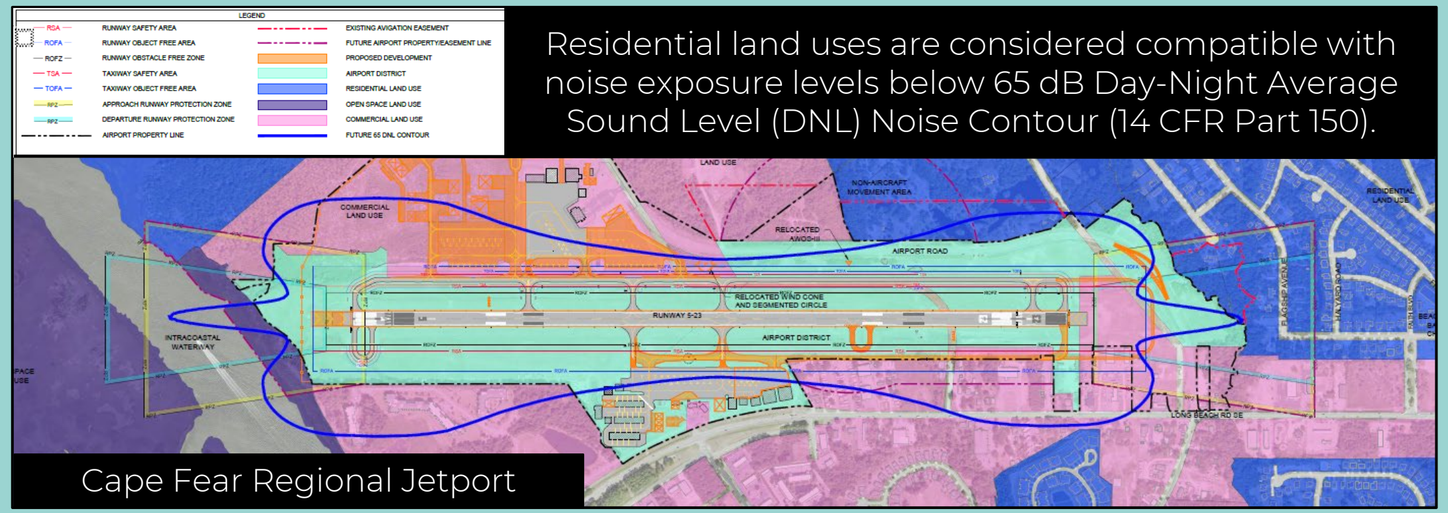
ncdot.gov

Airport Land Use Compatibility Planning

Compatibility of uses in Airfield Safety Areas



Noise-Compatibility Planning Around the Airport



Managing for Wildlife Hazards

Airport Master Plan & Airport Layout Plan (ALP): Takeaways

- The master plan provides the **facility layout** at present and projected into the future.
- Dimensional standards depicted in the ALP are based on current critical aircraft and visibility minimums but **may contain speculative growth that is not yet justified**. Individual project justification is reviewed at the time a project funding request is received.
- The master plan **may include aeronautical and non-aeronautical uses**, although FAA and NCDOT Division of Aviation approval authority only extends to aeronautical uses.
- The master plan contains an **airport property inventory** that includes all existing airport-owned property as well as nearby property proposed for acquisition in the future. Proposed future acquisitions may be speculative.
- Public transportation facilities located in airfield safety areas (Runway Safety Area (RSA), Runway Protection Zone (RPZ), Runway Object Free Area (ROFA), etc.) are considered incompatible land uses that may pose a risk to the safety of people and property on the ground.
- **Not fiscally constrained**
- **Not a locally adopted plan**

Airport Project Types

Project Types

Safety First

- Obstruction Clearing

- Navigational Aid

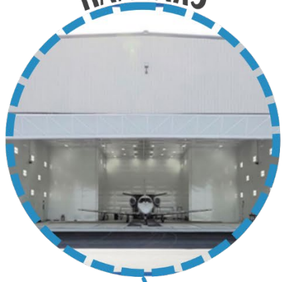
- Airfield Lighting

- Pavement Rehab

Revenue Generating

- Fuel Farm

- Hangars



- Taxiway to Hangars

- Apron Expansion

Capacity

- Taxiway/Runway Extension

Special Projects

- Traffic Control Tower

- Terminals

Pavement Rehab

Airfield Lighting

SAFETY FIRST

Obstruction Clearing

Navigational Aids

Airport Special Projects

Air Traffic Control Tower

Terminal

Airport Revenue – Generating Projects

Project Development

Airport Coordination: Annual Planning Meeting

Airport Project Manager Tasks

- CIP – Capital Improvement Plan
- System Plan Objectives
- 5010 Inspection
- Pavement Management Program – Pavement Condition Index (PCI) Report
- Wildlife Inspection
- Airport Layout Plan
- Funding Sources
    - Multiple State and federal funding sources

Jackson County Airport (24A)

Project Scoping

Airport Project Manager Tasks

- Project type
- Airport Layout Plan
- Safety vs. other project types
- Design & construction fund availability
- Justification for project – FAA Airport Improvement Handbook (AIP) & traffic count
- Share as-builts with maintenance group expansion of new pavements

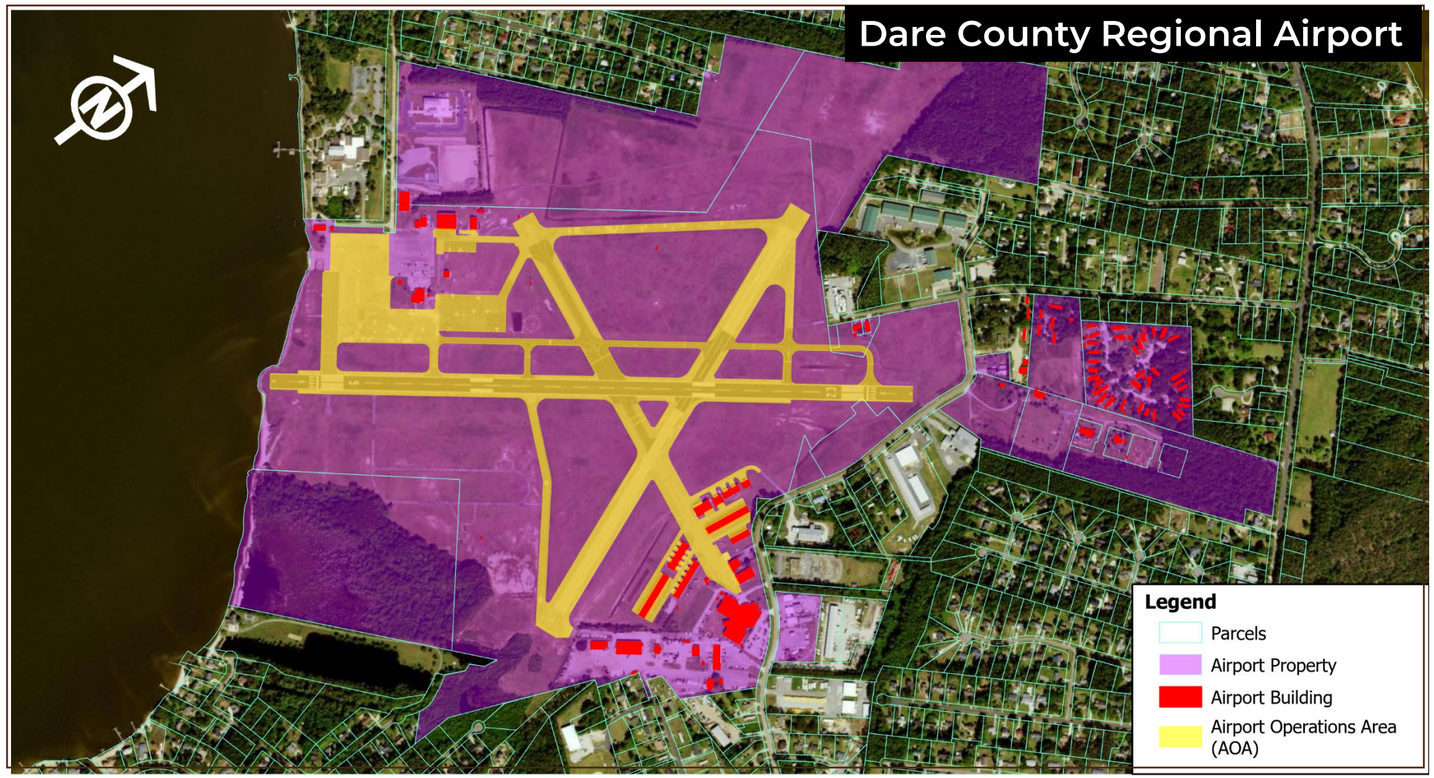
Airport Layout Plan

The airport layout plan utilizes the most demanding aircraft type. The project needs to be located on the airport layout plan prior to scoping.

FAA Jurisdictional Determination over a Development Action

Section 163 of the FAA Reauthorization Act of 2018

1. Does the FAA have ALP approval Authority over the proposed development action?
2. Does the FAA have land use authority over the proposed action?



Environmental Review & Documentation

Aviation Projects vs. Highway Projects

- FAA ≠ FHWA

Different federal agencies with their own NEPA implementing procedures.

- Airports as the facility owner vs. NCDOT as the facility owner

Airports are the NEPA applicants and permittees.

- Programmatic Agreements & MOAs/MOUs

NCDOT and FHWA agreements with other agencies that apply on Highways projects do not automatically carry over to Aviation projects.

- NEPA vs. SEPA

As reviewed in the Section 163 Determination, most state-funded projects in NC remain under jurisdiction of the FAA and are therefore subject to NEPA.

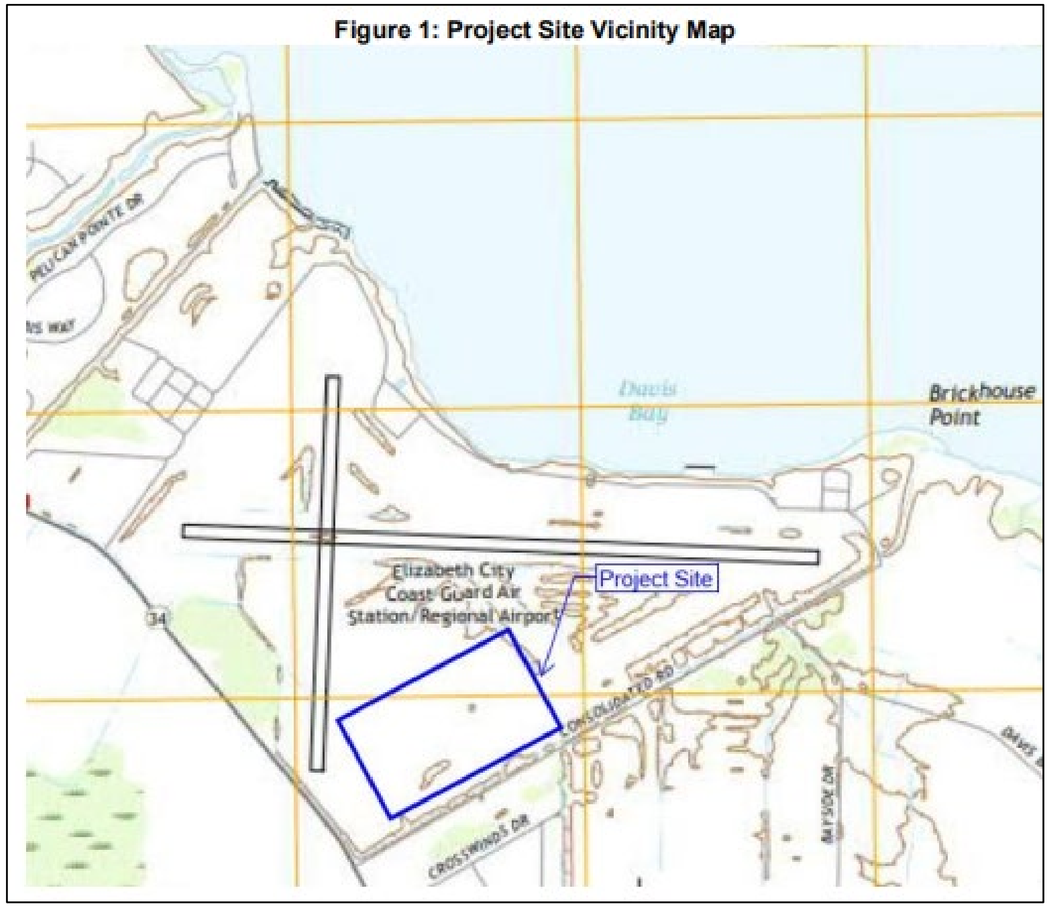
Airport Engineering, Design & Construction

Advisory Circulars (AC)

- FAA produces advisory circulars for standards for the design and construction of the airfield
- Examples of AC's for design and construction
  - AC 150/5300-13B - Airport Design
  - AC 150/5370-10H - Standard Specifications for Construction of Airports
  - AC 150/5000-17: Critical Aircraft and Regular Use Determination

Procurement

- Typically design-bid-build , and can utilize Construction Manager at Risk (CMAR) and design-build methods



Airport Design Characteristics

Michael J. Smith Field Airport (MRH)

Macon County Airport (1A5)

Design & Construction

Airport Project Manager Tasks

Design Tasks

- Discusses environmental considerations and design changes with engineer
- Reviews plans & specs
- Confirm low bidder/minority goals
- Attend Pre-con

Construction Tasks

- Consult on change orders/identify funding
- Attend interim project meetings/site visits
- Attend final inspections
- Review final closeout documents

Moore County Airport (SOP)

Pre-Construction & Construction

CSPP, NOTAMs, 7460s

CSPPs- Construction Safety and Phasing Plans

- Airports provide us with their CSPP for comment prior to construction

NOTAMS- Notices to Air Missions

- Airports provide NOTAMs during construction to provide pilots with information on restrictions and other procedures that are occurring at the airport

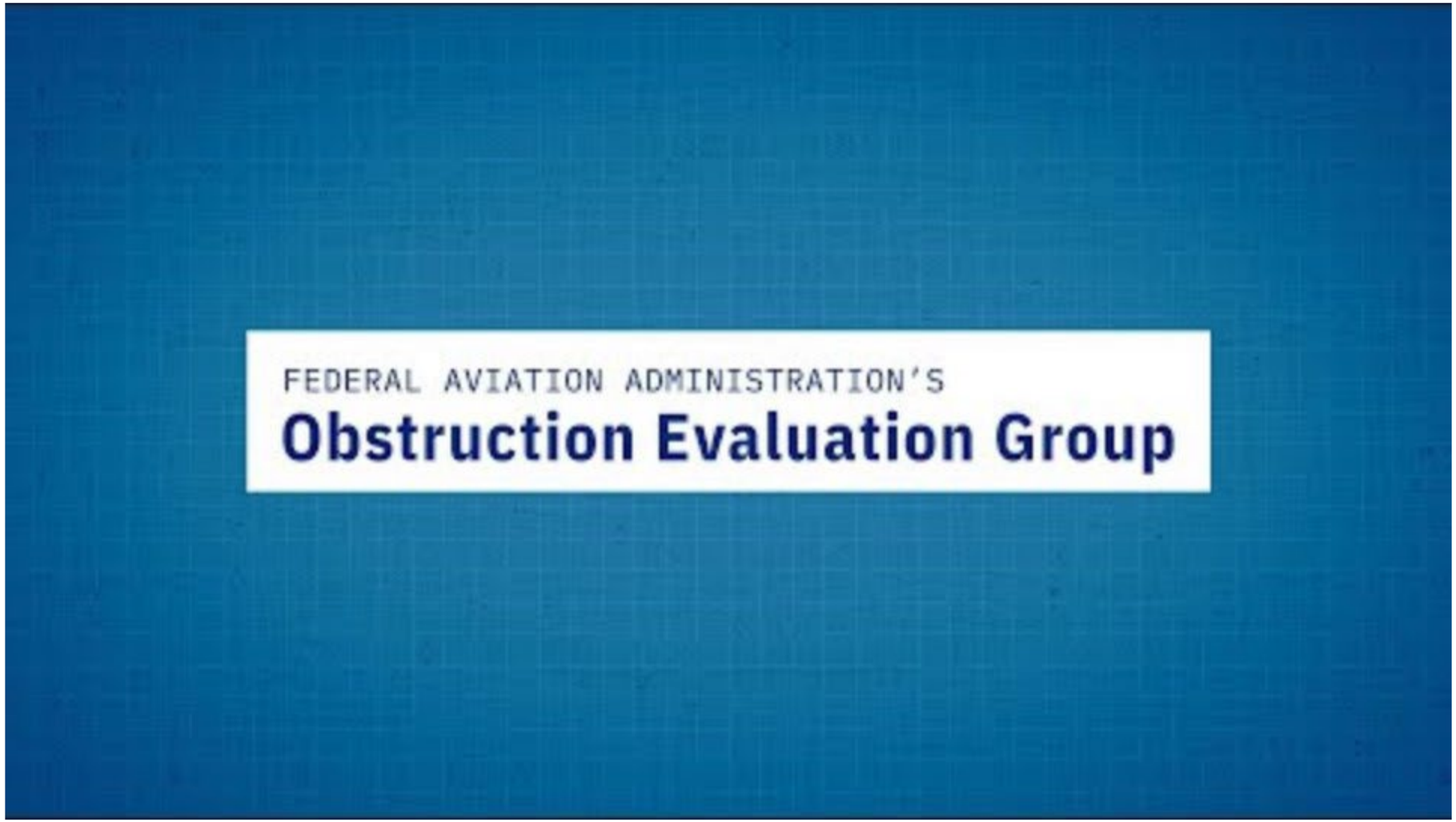
7460s-Notice of Proposed Construction or Alteration

- Submitted by the airport/engineer prior to construction.
- These may need to be updated throughout construction
- Approved by FAA prior to construction

Shelby-Cleveland County Regional Airport (EHO)

Airspace Protection

FAA Form 7460-1: Notice of Proposed Alteration or Construction



7460 Determination of Need

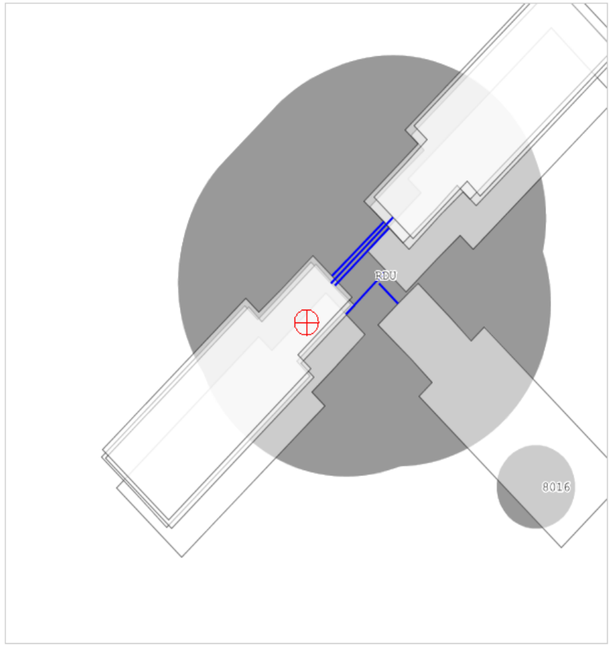
- https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm
- Fill in the information to the right to determine if your project will need to complete a 7460

Results

You exceed the following Notice Criteria:

Your proposed structure exceeds an instrument approach area by 24 feet and aeronautical study is needed to determine if it will exceed a standard of subpart C of 14CFR Part 77. The FAA, in accordance with 77.9, requests that you file.

The FAA requests that you file



The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference CFR Title 14 Part 77.9.

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
- your structure will emit frequencies, and does not meet the conditions of the FAA Co-location Policy
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
- your structure will be on an airport or heliport
- filing has been requested by the FAA

If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the Air Traffic Areas of Responsibility map for Off Airport construction, or contact the FAA Airports Region / District Office for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

* **Structure Type:**	SELECT ONE Please select structure type and complete location point information.
Latitude:	Deg M S N
Longitude:	Deg M S W
Horizontal Datum:	NAD83
Site Elevation (SE):	(nearest foot)
Structure Height :	(nearest foot)
Is structure on airport:	(•) No ( ) Yes
	Submit

Types of Structures

TEMPORARY

Determinations are good for 18 months or until expiration date.

Examples:
- Cranes
- Towers
- Construction Sites

PERMANENT

Determinations do not expire.

Examples:
- Buildings
- Power Lines
- Light Poles
- Water Towers
- Bridges
- Monuments
- Wind Turbines

ITEMS TO REMEMBER:

- A 7460 must be completed for each latitude and longitude of the obstruction.
  - Example: Four (4) Form 7460's will be need to be submitted for each corner of a building, they can each be tied together in the portal.
- Each structure must have their own 7460.
- If there are any changes during construction, you must update the case in the portal.

THE 7460 ROADMAP

Airports for Highway Engineers

12 WEEKS PRIOR

DETERMINE NEED

12 weeks before the project is scheduled for construction, you must determine the need to complete form 7460 required by CFR 14 Part 77.

Reasons why you must fill out a 7460 form:

1. An obstruction to air navigation, in which case the FAA may require appropriate obstruction marking and/or lighting
2. A hazard to air navigation (i.e., the project interferes with the safe and efficient use of airspace)

10 WEEKS PRIOR

AVIATION TECHNICAL SERVICES REVIEW

10 weeks before the project is scheduled for construction. Aviation Technical Services reviews 7460 questionaires and analyzes the project for any potential conflict.

6 TO 8 WEEKS PRIOR

SUBMIT TO FAA

At least 6 to 8 weeks prior to schedule construction, the 7460 should be submitted to the FAA through their portal. Form 7460 must be submitted at least **45 days** before the start date of the proposed construction or alteration.

TAKES 45 - 60 DAYS

FAA REVIEW

After receiving the Form 7460, through the portal, the FAA will issue a determination letter that states one of the following:

- Determination of No-Hazard
- Determination of No-Hazard, Conditional No-Objection
- Determination of Hazard

If you there is no hazard, the project may take off to construction.
If there is a hazard, you have 60 days to accept, deny, request further study of the Notice of Preliminary Findings. Once the issues are mitigated, the project can continue to construction.

Project can take off!

Contacting your Flight Crew

Airports for Highway Engineers

CLEAR Lunch and Learn – January 25th

Presenters:

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Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

Resources for your future flight endeavors!

- 7460 Form:
  - https://oeaaa.faa.gov/oeaaa/external/portal.jsp
- 7460 Determination:
  - https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm
- 7460 Informative Youtube Video:
  - https://youtu.be/FrvNJAb6J-8?si=HgaRLPEBNPvOsrC9
- Part 77 Video:
  - https://youtu.be/bYor0A3pu50?si=akpYckJ8I-rDfY8N&t=18
- Division of Aviation Website:
  - https://www.ncdot.gov/divisions/aviation/Pages/default.aspx

On behalf of everyone at the Division of Aviation,

Thank you for flying with us!