## Master Plan Update: Project Status

### **Purpose:**

Road map for efficiently meeting airport demand through the foreseeable future while preserving flexibility necessary to respond to changing aviation industry conditions. Last CVG Master Plan update completed in 2012.

### General Goals and Objectives:

- Framework for providing near-, medium-, and long-range plans (2050 plan horizon)
- Graphic depictions of existing airport features, future airport development, and anticipated land uses
- Realistic schedule and financial plan for implementation of proposed development
- Comply with FAA requirements

### Primary Drivers for 2017 Update:

- Completion/start of projects in 2012 Master Plan: Demolition, CONRAC, Common Use Cargo Development
- Increased Land Development
- Operational Changes
- Facility Lease Expirations
- Concourse Allocations
- Condition/Age of Facilities



## **Project Flow**



2

## CVG Today - Airfield





## CVG Today - Terminal





# CVG Today - Cargo





## **Aviation Forecast**

### **Planning Activity Levels**

For the purposes of master planning, the requirements presented herein are tied to four Planning Activity Levels (PALs). The use of PALs rather than years provides the Airport with flexibility to plan for the implementation of future projects based on actual growth in traffic, rather than a point in time.

	Passenger		Cargo		Totals*		
	Annual	Annual	Peak Hour	Annual	Millions of	Annual	Peak Hour
	Passengers	Operations	Passenger	Operations	Tons	Operations	Operations
2017	7,800,000	104,978	2,620	36,000	1.0	150,000	46
PAL 1	11,000,000	126,270	3,210	67,000	1.9	200,000	56
PAL 2	12,800,000	143,120	4,100	107,000	2.7	260,000	71
PAL 3	15,700,000	168,040	5,340	171,000	4.5	350,000	102
PAL 4	19,200,000	200,380	5,790	246,000	6.7	460,000	136

\*Includes General Aviation and Military

### **Master Plan Update Critical Aircraft**

The specific set of guidelines to which an airfield is to comply is determined by the size and needs of the largest aircraft which operates at an airport, or the "critical aircraft." FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, defines a critical aircraft as the most demanding aircraft with at least 500 annual operations.

FAA Parameter	Existing	PAL 4
Critical Aircraft	B747-8	B747-8
Aircraft Approach Category (AAC)	D	D
Aircraft Design Group (ADG)	VI	VI
Airport Reference Code (ARC)	D-VI	D-VI
Taxiway Design Group (TDG)	6	6

## Facility Requirements

### PAL 1 Major Facility Needs

- Expand ticketing lobby
- Improve Kentucky 212 (KY 212)/I-275 intersection, Loomis Road/Donaldson Road, and Wendell Ford Boulevard
- Expand auto parking
- Expand south airfield cargo (under construction)

#### PAL 2 Major Facility Needs

- Expand existing terminal
- New security checkpointRelocate international
- arrivals facility
- Expand concourse(s)
- Reconstruct I-275 interchange
- Improve entrance road
- Expand auto parking
- Improve runway exits
- Add new crossfield taxilane

### PAL 3 Major Facility Needs

- Expand concourse(s)
- Improve Donaldson Road
  and Loomis Road
- Expand auto parking
- Extend Taxiway E to the south

PAL 4 Major Facility Needs

- Expand concourse(s)
- Improve Terminal Drive
- Expand auto parking
- Improve runway exits
- Extend Taxiway C
- Extend Runway 18R/36L





18R

25

36L

20

1

hind

21

18L

25

36R

21

18C

36C

25

21

25

21

## CVG 2050 Master Plan ALP

		Project List
	1	Terminal Expansion
	2	Concourse A Improvements
	3	Concourse B Improvements
	4	Taxiway N Extension
	6	Taxiway C Extension
	6	Taxiway E Extension
	7	Taxiway Relocation/Demo (D2,E9,S4,S8,S6/S7,E,J2,J4)
a	8	Parallel Crossfield Taxiway
8/	9	Runway High Speed Exits (36C,18L,36R,18C)
1	10	Reconstruct 275 Interchange
~	1	Parking/Ground Transportation
1	12	Terminal Drive/Donaldson Road Improvements
	13	KY 20/Petersburg Road 275 Ramp
	14	Wendell Ford Boulevard Improvements
	15	Aero/Mineola Parkway Improvements
	16	Widen S. Airfield Drive
		Ground Run-up Pad and Enclosure
	18	Deicing Pad
	19	Police Facilities
	20	Aviation Related/Support Development
	21	Cargo Development
	22	Hangar Development
	23	General Aviation/Corporate Development
	24	Commercial Development
	25	Post Planning Period Airfield Improvements

Airside

andside

Support



### CVG 2050 Land Use Plan

18R

36L

18C

36C

18L

36R

### LEGEND

AIRFIELD TERMINAL/CONCOURSE/APRON AIR CARGO GENERAL AVIATION/CORPORATE AVIATION SUPPORT COMMERCIAL DEVELOPMENT VACANT ASR CRITICAL AREA FUTURE AIRFIELD DEVELOPMENT FUTURE AIR CARGO DEVELOPMENT FUTURE GA/CORPORATE DEVELOPMENT FUTURE AVIATION RELATED DEVELOPMENT FUTURE COMMERCIAL DEVELOPMENT FUTURE ASR CRITICAL AREA POST PLANNING PERIOD RUNWAY ----- AIRPORT PROPERTY BOUNDARY

N NOT TO SCALE

## CVG 2040 Off-Airport Land Use & Interim Noise Contours

70 DNI

NOT TO SCALE

75 DN

DNL stands for day/night average sound level. DNL describes the total noise exposure over a 24-hour period with an extra weight of 10 decibels assigned to any sound levels occurring between the hours of 10:00 p.m. and 6:59 a.m. This extra weight treats one nighttime noise event as equivalent to 10 daytime events of the same magnitude.

**65 DNL** 

65 DN

Image depicts the Master Plan 2040 interim noise contour. The contour is based solely on the Master Plan and is not used to determine mitigation eligibility. Noise compatibility and mitigation programs are developed through a FAR Part 150 Noise Compatibility Study process which will be initiated approximately one full year after the Amazon cargo hub is operational.

Contact Information for Questions: 859-767-7020 noise@cvgairport.com https://www.cvgairport.com/flight/noiseabatement/

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8	PAL	Total Annual Ops.	Total Peak Hour Ops.			
a	Existing	150,000	46			
-	PAL 1	200,000	56			
	PAL 2	260,000	71			
1	PAL 3	350,000	102			
-	PAL 4	460,000	136			
1	The noise cont	The noise contours you see on the map assume the following				

65 DNL

The noise contours you see on the map assume the following inputs:

Existing runway configuration/utilizations

2

- During nighttime hours (10:00 pm to 6:59 am), Runway 09/27 is the preferred runway, with operations on the north/south runways as required by operational necessity.
- Daytime runway use typically consists of operations on Runways 18C/36C and 18L/36R with departures on Runway 27.
  - 2040 Master Plan forecast aircraft operations levels

	LAND USE	LAND USE		
Item	Description	ltem	Description	
	Airport Property Boundary		Recreation	
## DNL	Noise Contour (DNL=Day Night Level)		Rural Density Residential	
	Airport		Transportation	
	Agricultural		Urban Density Residential	
	Business Park		Woodland	
	Commercial		Vacant	
	High Suburban Density	<b></b>	School	
	Hydrology	A	Place of Worship	
	Industrial	Ω	Cemetery	
	Mixed-Use	<u>II</u>	Library	
	Public / Institutional		Hospital/Nursing Home	

# Master Plan Program Costs

- Estimated Master Plan program costs = \$3.2 billion through PAL 4
- PAL 1 & PAL 2 projects estimated at \$1.1 billion

Project Costs (in millions)



KCAB-Funded Funded by Other Sources Total Cost

Notes: Excludes current near-term KCAB capital projects not included in Master Plan. Funding plan is preliminary and subject to change.

## Financial Feasibility Reasonableness Considerations

Five rating criteria for airports:

- Revenue Risk Volume
- Revenue Risk Price
- Infrastructure
  Development/Renewal
- Debt Structure
- Financial Profile



Cost Per Enplaned Passenger



Days Cash on Hand



Debt per Enplaned Passenger



Sources: FitchRatings - Peer Review of U.S. Airports October 2018.

# Sustainability

## Prioritize Environmental Stewardship

A core value of the KCAB is to minimize CVG's impact on its surroundings while still ensuring the safety and operating efficiency of the airport. The current sustainability practices at CVG are in keeping with the goals of the Airport's board and leadership, which are to be innovative, efficient and mindful of the airport's surroundings.

### **Current Programs and Initiatives**

#### **Management of Waste**

The recycling program at CVG includes airfield materials, building materials, electronics, and passenger items in the terminals.

### Water Quality

In order to safeguard the environment from chemicals used during deicing operations at CVG, the Airport has installed a bio-treatment system designed to capture the majority of stormwater runoff and snowmelt occurring within in a 4.5 square-mile area of the airfield.

### **Emissions Reduction**

CVG's efficient airfield assists airlines in lowering aircraft emissions and has begun adding hybrid vehicles to the maintenance fleet.



## Master Plan Next Steps

- Obtain public comments on Master Plan
- Finalize and submit ALP Set and Master Plan document to FAA for review
- Implement short-term projects as demand warrants
  - Gain understanding of COVID-19 impact