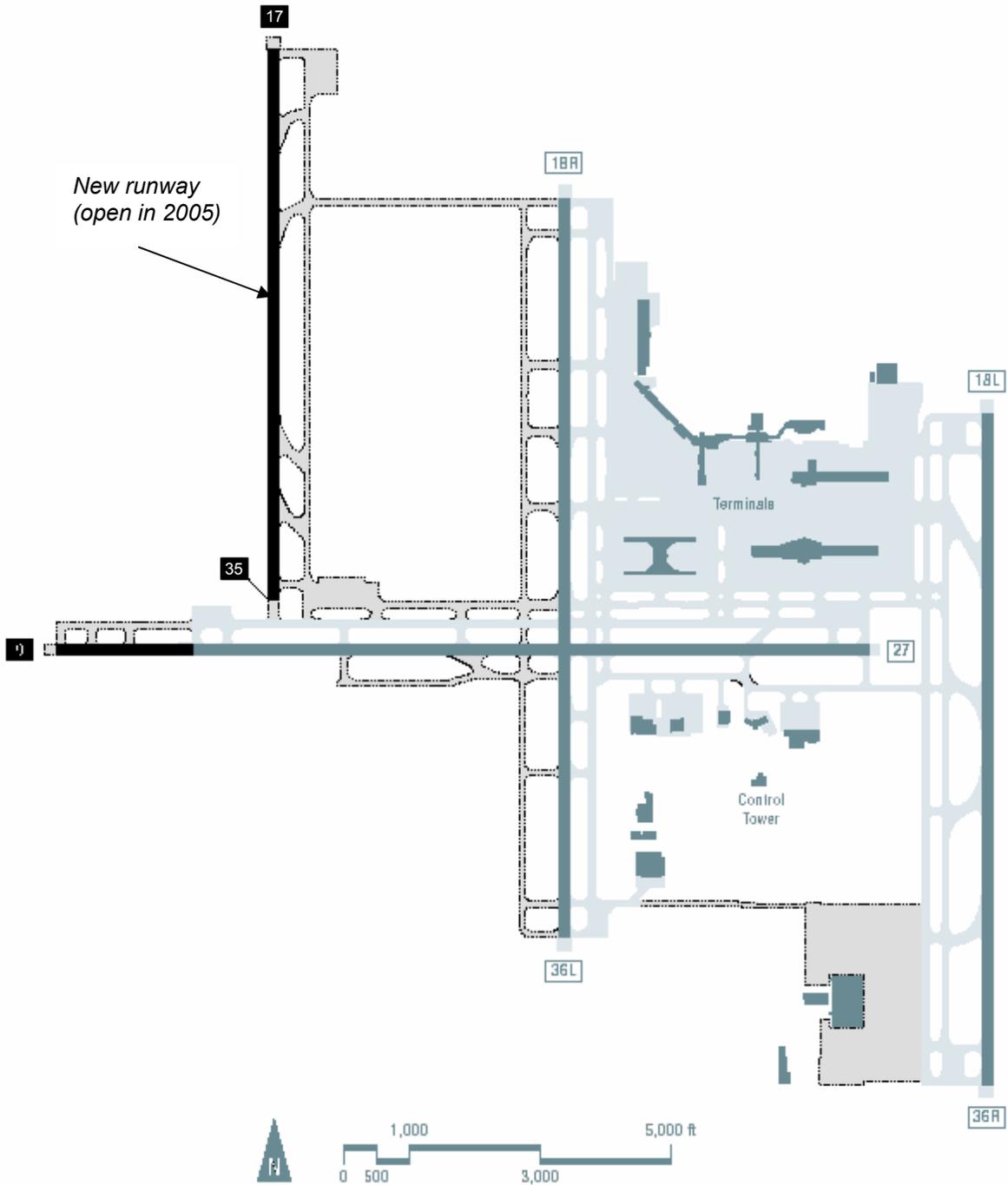


CINCINNATI – Cincinnati/Northern Kentucky International (CVG)



CINCINNATI – Cincinnati/Northern Kentucky International Airport (CVG)

Benchmark Results

- The capacity benchmark for Cincinnati/Northern Kentucky International Airport today is 120-125 flights per hour (arrivals and departures) in Optimum weather, when visual approaches can be conducted.
- The benchmark rate decreases slightly to 120-124 flights per hour in Marginal conditions, and to 102-120 flights per hour in IFR conditions, for the most commonly used runway configuration in these conditions. Throughput may be less when ceiling and visibility are low or adverse winds force the use of other runway configurations.
- These benchmark rates represent balanced operations, with equal numbers of arrivals and departures per hour. Greater total throughput may be possible during arrival or departure peaks.
- A new runway, planned for completion in 2005, will allow triple simultaneous approaches, increasing the benchmark capacity by 30-35 percent. This increase can occur *only* if ground infrastructure, environmental constraints, and other operational factors allow the planned use of the new runway. The increase in actual operations may be less if airspace restrictions prevent full use of the new runway.
- Other planned technological improvements at CVG would increase the benchmark capacity by 7-9 additional percentage points. This additional benefit derives mainly from improved delivery accuracy that is assumed to result from advanced TMA and RNAV procedures. Another planned improvement, CEFR, will allow visual separations for suitably equipped aircraft in Marginal conditions.
- This increased delivery accuracy, together with the new runway, is also expected to increase throughput during arrival peaks. CEFR will provide a further increase in arrival capacity in Marginal conditions.
- The following charts compare actual hourly traffic with the calculated capacity curves for CVG. A few points lie outside the capacity curves. There are many possible reasons why this may occur without affecting operational safety. Efficient aircraft sequencing or above-average pilot and controller performance can contribute to higher throughputs. Also, actual weather conditions during the hour may have been better than the hourly readings in the database, allowing more efficient ATC procedures than were modeled.

These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the airport or for the individual programs.

The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.

CINCINNATI – Cincinnati/Northern Kentucky International Airport (CVG)

Weather	Scenario	Configuration	Procedures	Benchmark Rate (per hour)
Optimum Rate Ceiling and visibility above minima for visual approaches (2900 ft ceiling and 3 mi visibility) <i>Occurrence: 55%</i>	Today	Arrivals on Runways 18L, 18R Departures on 18L, 18R, 27 <i>Frequency of Use: 79% in Optimum conditions</i>	Visual approaches, visual separation	120-125
	New Runway (2005)	Arrivals on Runways 18L, 18R, 17 Departures on 18L, 18R, 27	Same, with triple simultaneous visual approaches	168
	Planned improvements (2013), including new runway	Same		176
Marginal Rate Below visual approach minima but better than instrument conditions <i>Occurrence: 35%</i>	Today	Arrivals on Runways 18L, 18R Departures on 18L, 18R, 27 <i>Frequency of Use: 75% in Marginal conditions</i>	Instrument approaches, visual separation	120-124
	New Runway (2005)	Arrivals on Runways 18L, 18R, 17 Departures on 18L, 18R, 27	Same, with triple simultaneous instrument approaches	166
	Planned improvements (2013), including new runway	Same	Triple simultaneous visual approaches, visual separation	176
IFR Rate Instrument conditions (ceiling < 1000 ft or visibility < 3.0 miles) <i>Occurrence: 10%</i>	Today	Arrivals on Runways 18L, 18R Departures on 18L, 18R <i>Frequency of Use: 63% in IFR conditions</i>	Instrument approaches, radar separation	102-120
	New Runway (2005)	Arrivals on Runways 18L, 18R, 17 Departures on 18L, 18R, 27	Same, with triple simultaneous instrument approaches	132
	Planned improvements (2013), including new runway	Same		141

NOTE: Data on frequency of occurrence of weather and runway configuration usage is based on FAA ASPM data for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time.

Full operational use of the new parallel runway will require digital controller displays (but not PRM) to enable triple simultaneous instrument approaches, and an airspace redesign to deliver aircraft efficiently to the approaches.

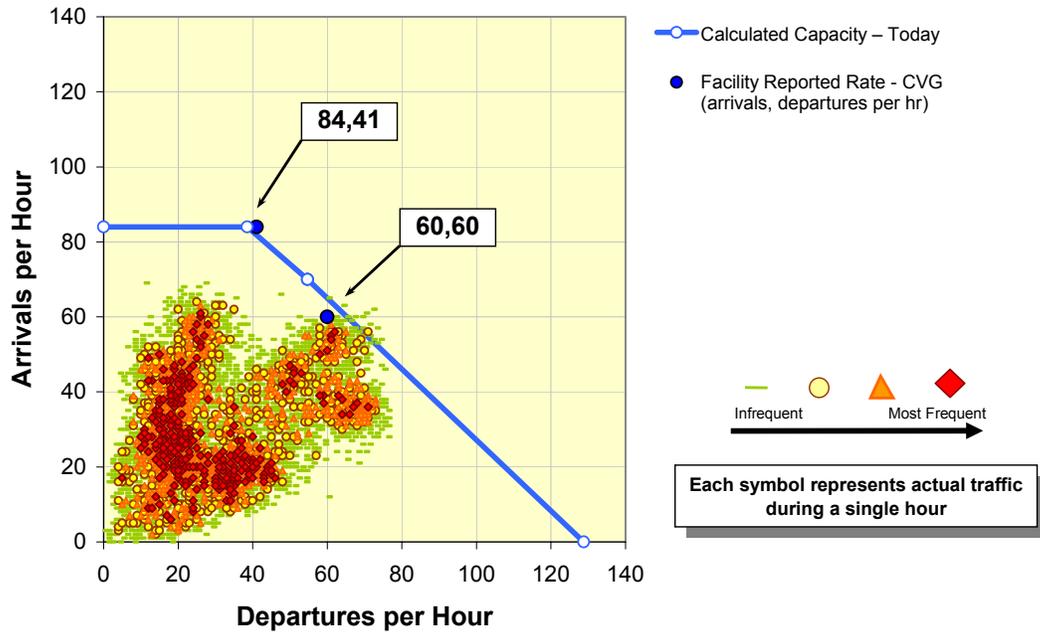
Other planned improvements at CVG include:

- CEFR, for reduced in-trail separations between arrivals in Marginal conditions.
- Advanced TMA/RNAV, to improve delivery accuracy and help CVG consistently utilize available capacity.

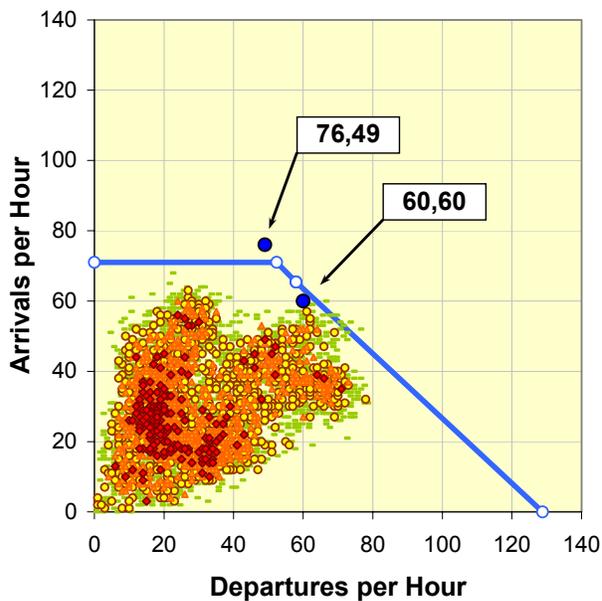
Additional information on these improvements may be found in the Introduction and Overview of this report, under “Assumptions.”

Calculated Capacity (Today) and Actual Throughput

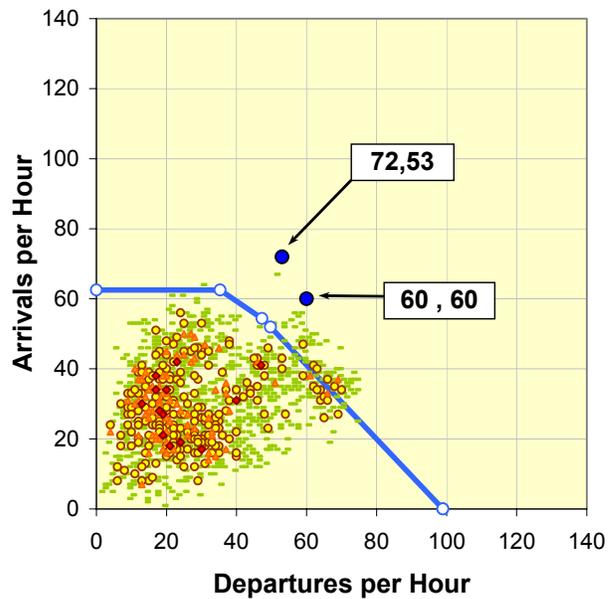
Optimum Rate



Marginal Rate



IFR Rate



Hourly traffic data was obtained from the FAA ASPM database for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time. Facility reported rates were provided by ATC personnel at CVG.