



O'HARE INTERNATIONAL AIRPORT PARALLEL RUNWAYS

The O'Hare Modernization Program's runway system that will eventually consist of six parallel runways in the primary east-west orientation and two in a northeast-southwest orientation for high wind days has been determined to be best suited to manage airport operations safely and efficiently in all weather conditions. This determination is a result of years of aviation industry study and detailed evaluation as part of the environmental review process, and is consistent with the best practices of the aviation industry worldwide. The partial implementation of the parallel runways has significantly reduced delays that would be dramatically worse without the OMP projects (O'Hare has experienced a 57 percent reduction in FAA-related delays as a result of the opening of Runway 9R/27L in 2008 and opening of 10C/28C in 2013.¹ These reductions are based on actual data measurements of flight and taxi times.)

The parallel runway configuration was studied and modeled extensively as part of the OMP process, and continues to be relevant today.

"The Illinois General Assembly finds and determines [...] O'Hare cannot efficiently perform its role in the State and national air transportation systems unless it is reconfigured with multiple parallel runways."²

The Federal Aviation Administration (FAA) used the Total Airspace & Airport Modeller (TAAM) to support the planning and environmental analyses of the OMP's Environmental Impact Statement (EIS). TAAM is a computer simulation model used to calculate aircraft delays and travel times as well as to provide information to be used in the air quality and noise analyses.³ In total, the FAA invested over 2,000 hours reviewing assumptions, animations, and draft/final analyses.⁴ Based on TAAM simulation results the delay reduction achieved by OMP is greater than the delay reduction of other proposed alternatives.

Parallel runway configurations are the airport standard nationwide.

The use of intersecting runways reduces aircraft throughput rates and thus the capacity of the airport. More importantly they increase operational safety concerns. Aware of these issues, the FAA further restricted converging operations in 2001 and 2014 in favor of full parallel runway system. The need for crosswind runways has diminished over time due to modern aircraft advances. Modern hub airports now rely on parallel runway layouts for safe and efficient operations (see examples in the back page). In October 2015 the south airfield will be a modern, parallel system, but the north airfield includes a complex inefficient layout designed in the 1950s.

"Today's modern aircraft are less dependent on wind conditions. Thus, new runway architecture, as demonstrated at Atlanta, Dallas/Fort Worth, and Denver, feature parallel, non-intersecting, 'independent runways' which permit constant streams of landings or take offs for each runway, regardless of what activity may be occurring on another parallel runway. The City of Chicago's proposal with its six parallel runways breaks the O'Hare 'runway triangle' and allows for far more operations in all weather conditions without compromising safety."⁵

"By definition, the FAA will not allow any runway configuration to be operated in an unsafe manner. However, some runway alignments allow greater efficiencies in the movement of aircraft both in the air and on the ground. Other combinations of runways produce the potential for unsafe conditions, which then requires the FAA to reduce the volume of traffic to or from those runways to a level that insures safety will not be compromised. [Parallel runway configurations] give controllers a measure of operational flexibility in directing constant streams of arrivals and departures in all weather conditions."⁶

¹ Federal Aviation Administration

² O'Hare Modernization Act, Illinois Public Act 93-0450, August 6, 2003; Section 5(a)(2).

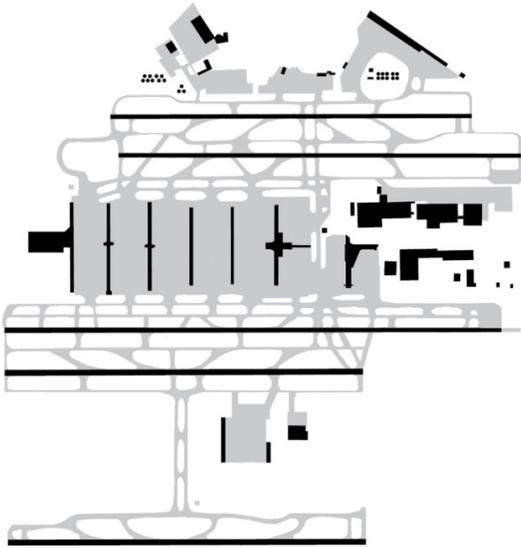
³ http://www.faa.gov/airports/airport_development/omp/modeling/delay_and_time/

⁴ Federal Aviation Administration; Record of Decision For O'Hare Modernization at Chicago O'Hare International Airport, September 2005; pg. 29. http://www.faa.gov/airports/airport_development/omp/eis/rod/Media/ORD_ROD_Final.pdf

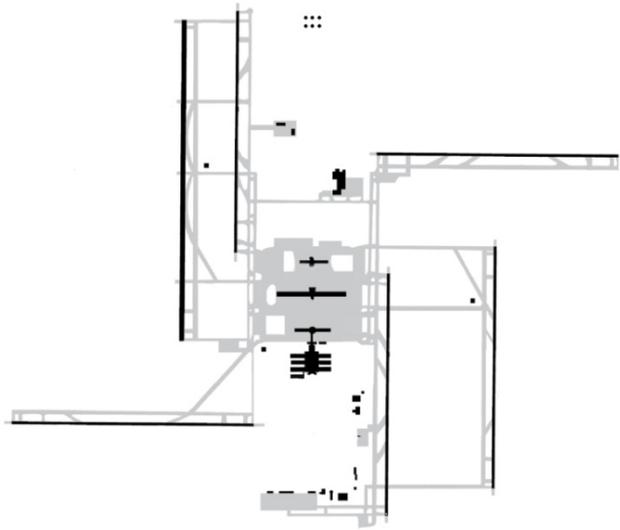
⁵ *Ibid.*, pg. 4.

⁶ *Ibid.*, pg. 97-98.

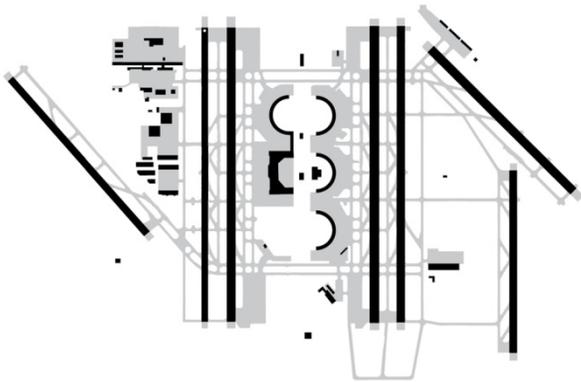
Examples of Airports with Parallel Runway Configurations



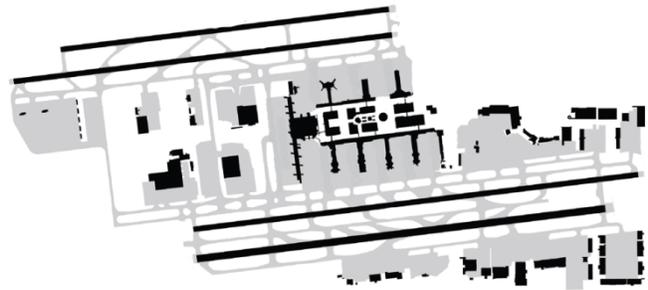
Hartsfield-Jackson Atlanta International Airport



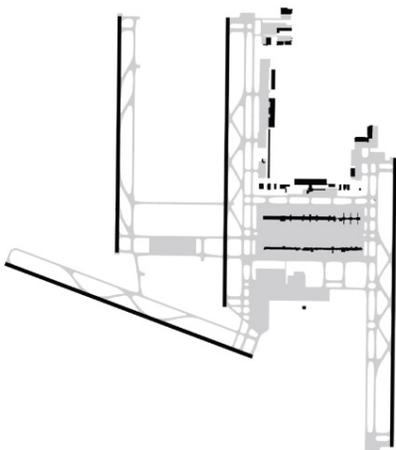
Denver International Airport



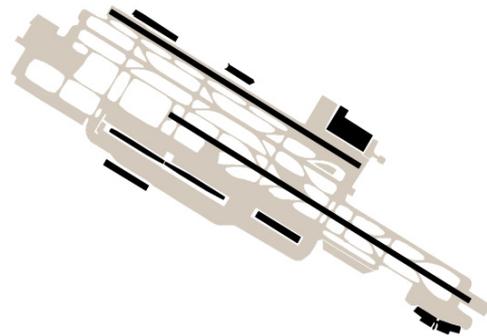
Dallas-Fort Worth International Airport



Los Angeles International Airport



Washington Dulles International Airport



Dubai International Airport