



As the end of the year approaches, Indianapolis International Airport is celebrating the anniversary of its first year in operation. Opening just in time for the 2008 holiday travel season, it is the first essentially new post-9/11 airport fully designed and built in the USA. The cornerstone of the US\$1.1 billion airport is a stunning glass-and-steel terminal that automatically became one of the city's most iconic new structures. The 110,000m², 40-gate terminal presents an iconic new image of Indianapolis to the world.

"The airport is an outstanding public asset for the city of Indianapolis and all of central Indiana," says Susan Sullivan, the Indianapolis Airport Authority's communications and media relations manager. "It will serve our region well for many years into the future with no need for major expansions to accommodate increases in passengers or cargo traffic."

The design acknowledges that in a global economy international airports are often the traveller's first and last impression of a metropolitan area. The Col. H. Weir Cook Terminal Building's focal point is Civic Plaza and its monumental, 65m-diameter skylight. As a pre-security gathering place



for passengers and airport visitors, Civic Plaza includes a number of restaurants and shops, comfortable couches and seating areas, and tables for dining or having a cup of coffee. Windows that reach up to five storeys high connect travellers to the region through panoramic views of the surroundings, including the downtown Indianapolis skyline. All passengers pass through this area, which serves as the point of access for entering the security checkpoints.

The terminal is the product of a design process that began just after the terrorist attacks in New York on 11 September 2001. This meant that, in addition to designing what is believed to become the

country's first free-standing green terminal (documentation has been submitted to the US Green Building Council for LEED certification), the design needed to accommodate massive, sweeping changes in US airport security protocols.

The Indianapolis Airport Authority structured the architectural design process to give Indianapolis the best of both worlds in terms of global aviation design expertise and meaningful local participation. HOK acted as master architect, with its aviation programmers, planners and designers developing the programme, conceptual design and schematic design for the terminal. AeroDesign Group, a joint venture of three Indianapolis-area architectural groups, served as architect of record. During design development, a combined HOK-AeroDesign Group team joined forces in an on-site project office, where they sat together and collaborated on the detailed drawings and design plans.

Since the new airport opened, the US airline industry has faced additional challenges triggered by the faltering economy. Though the reduction in air travel triggered by the economic downturn has reduced passenger volumes across the country, Indianapolis International Airport still projects that it will serve about 7.5 million passengers in 2009. And every day more than 10,000 people – from airport and airline employees to TSA security personnel, concession operators, and tenants such as FedEx Express, WellPoint and many others – work on the airport campus.

FRESH AND GREEN

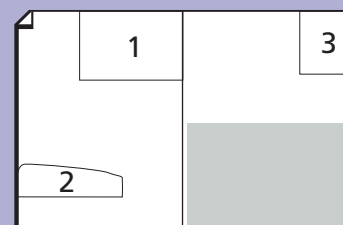
A NEW AIRPORT ELEVATES INDIANAPOLIS THROUGH ITS SUSTAINABLE DESIGN, HIGH-TECH SECURITY AND CONVENIENCE



1. The terminal was designed with the natural environment in mind

2. The newly opened 40 gate terminal served 7.5 million passengers in 2009

3. The terminal building's focal point is Civic Plaza, a central gathering place with a monumental 65m diameter skylight



Despite the vast scale of the new terminal, which doubled the size of the circa-1957 terminal it replaced, the design helps relieve the inherent stress of air travel. “The terminal is spacious, comfortable, easy to use, and efficient for passengers to move from parking to ticketing to security to their boarding gate,” says Sullivan. “It is attractive, clean and new. Rental vehicles are easy to obtain and passengers no longer have to board shuttle buses to reach rental car facilities. They like the public art, large, light-filled spaces, and shopping and dining options. Virtually all the feedback we get from passengers is positive.”

As a sustainable building, the terminal is shaped by a response to the natural environment. Travellers see out the windows and connect to the local landscape. High-performance glass curtain walls enclose the building. The roof is a broad shelter that creates a shade for the main terminal box while harvesting daylight through filtered glass that mitigates heat from solar gain. An abundance of daylight throughout

the terminal enhances the building’s open, transparent feeling.

The energy-efficient building systems include a radiant heating and cooling system with floor-embedded piping that chills the floor in the Civic Plaza space in the summer and warms it in winter. Energy to regulate temperature is only expended where it is needed – in the areas occupied by people in the 3m above the floor.

The site is treated as sustainably as possible by mechanically recapturing discharge from hydrocarbon emissions and de-icing material, and filtering the rest through bio swales with plants that consume them naturally. Detention ponds are managed to encourage the growth of micro-organisms that consume the discharge.

The terminal’s location between two parallel runways has reduced taxiing times for aircraft compared with the old terminal, resulting in a drop in fuel consumption and carbon emissions. There is now an average of just over eight minutes less taxiing time each way to and from the terminal. For a



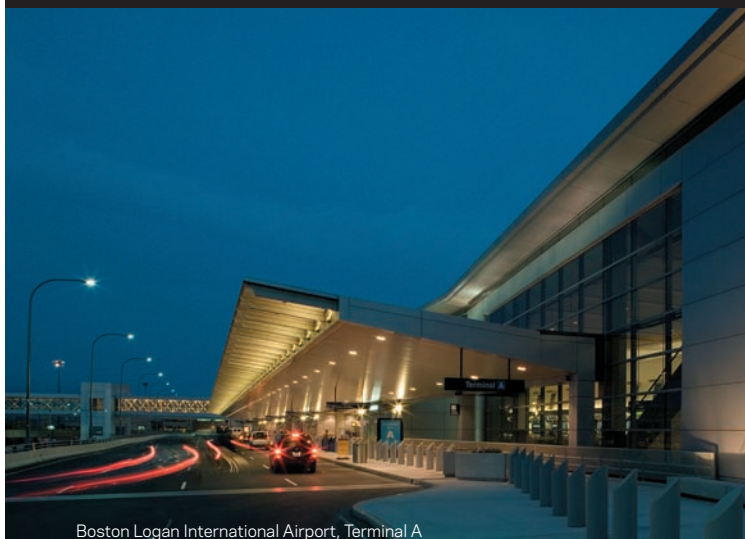
typical 737 aircraft, this equates to US\$1,900 in fuel used compared with the previous US\$3,700. The IAA expects this to equate to an annual savings of US\$1 million for each airline serving Indianapolis.

Though the art and science of designing airport terminals of the future is still evolving, Indianapolis International Airport has created a beautiful new terminal that accommodates its current and future needs. The terminal minimises consumption of precious natural resources while providing a convenient, memorable air travel experience for millions of visitors each year.



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