

// In 2010, Miami International Airport spent an average of \$40 million monthly on construction.



> MIAMI INTERNATIONAL AIRPORT

## Man of *Miami*

AS DIRECTOR OF MIAMI INTERNATIONAL AIRPORT, JOSÉ ABREU IS RESPONSIBLE FOR THE \$6.4 BILLION CAPITAL IMPROVEMENT PROGRAM.

BY KATHRYN JONES

**Situated on 3,230 acres of land near** downtown Miami, Miami International Airport (MIA) is the largest U.S. gateway for Latin America and the Caribbean, and one of the leading international passenger and freight airports in the world. It ranks first in international freight, second in international passengers and third in total freight among U.S. airports. Its annual economic impact is \$26.7 billion.

With its \$6.4 billion capital improve-

ment program underway, all aspects of MIA's operations have been or are undergoing significant renovation and expansion. In 2003, MIA completed the construction of its fourth runway, an 8,600-foot airstrip that has increased its airfield capacity by 25 percent. Throughout the years, the airport's cargo program has grown to more than 2.7 million square feet through 17 new cargo buildings. Its apron space has grown to more than 3.8 million square feet.

Extending the north and south terminals will add more than 4 million square feet to the airport's existing 3.2 million square feet for a total of 7.2 million square feet, which will make MIA one of the world's largest airports. The south terminal was completed in 2007; the north terminal will be completed later this year. Combined, they will have 130 gates – 30 domestic and 100 domestic or international – with 556 ticket counters and 120 self-service check-in devices.

**PROFILE**

Miami International Airport

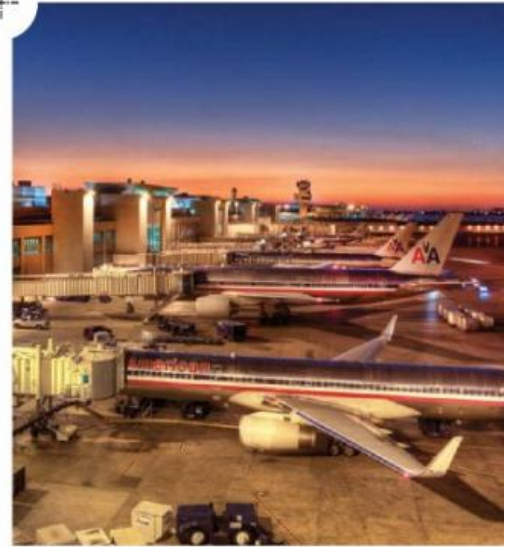
[www.miami-airport.com](http://www.miami-airport.com)

Headquarters: Miami

Specialty: Airport

Employees: 36,000+

"At times I feel like I'm running a construction site as opposed to an airport." -José Abreu, Director



// Miami International Airport is undergoing a multibillion-dollar capital improvement project.

MIA also built a state-of-the-art people mover, SkyTrain, on top of the north terminal, which is capable of transporting 9,000 passengers per hour. That has been up and running since September 2010.

The state of Florida recently opened a 3.4 million-square-foot rental car center with 16 different rental car companies working under one roof – an industry first. The MIA Mover, which will be opened by the airport this October, will run from MIA to the rental car facility and has the capacity to transport 3,000 passengers per hour.

The rental car facility and MIA Mover are part of the Miami Intermodal Center, a massive ground transportation hub being developed by the Florida Department of Transportation (FDOT) that will link rail, light rail, automobile and bus traffic. MIA also is making significant

roadway improvements all around the airport to alleviate traffic congestion and improve accessibility.

All of this is overseen by one individual: José Abreu, the airport's director. "At times I feel like I'm running a construction site as opposed to an airport," he admits. "Of course, we've had major milestones accomplished throughout the entire capital improvement program. In 2010 alone, we averaged \$40 million a month in construction – that's almost unimaginable. I am a civil engineer and a certified contractor, and I can assure you, I have never seen anything quite like this. To say it's been challenging is the understatement of the century."

#### **Meeting Goals**

When asked what the long-term vision for MIA was, Abreu, who came to the air-

"I THINK WE SHOULD ALL HAVE A VISION, BUT ... WE ARE UNDERESTIMATING THE POWER OF SHORT-TERM GOALS,"

port in 2005, responds with a good-natured chuckle. "I get all these questions from the media – God bless them – 'What is your vision?'" he says. "I think we should all have a vision, but at this airport and in this community, we are underestimating the power of short-term goals attainment. We didn't have the luxury of building a brand-new terminal, opening it and there it was. It's more like retiling your bathroom while you take a shower."

## Handling Baggage

### Siemens delivers the Largest Conventional Belt-Conveyor Baggage Handling System Ever Built in North America at Miami International Airport North Terminal

After check-in your luggage could travel miles before it is loaded onto the plane. Surprised? Consider the size of the North Terminal at Miami International Airport (MIA), designed to serve more than 20 million passengers annually and provide nearly 300 daily flights. "The In-line Baggage Handling System designed and provided by Siemens Infrastructure Logistics for MIA, "features state-of-the-art technology and is the largest conventional belt-conveyor baggage handling system ever built in North America. It consists of a staggering conveyor length of 57,200 feet or 10.8 miles," says Lee Seward, Vice President, Siemens Airports and Logistics Solutions.

The contract was to design, manufacture, install, including commissioning, testing, training and documentation. It has gone through significant changes because the original contract was signed before the 9/11 attacks. The requirements for the 'customer facing' elements were mostly unchanged. The system is designed to receive baggage from over 100 ticket counters and 26 curbside positions. The part of the system that is 'behind the walls' so to speak is where substantial changes occurred during the course of the multi-year project due to federally mandated security regulations regarding baggage screening and code changes.

Among the many changes needed were: mandatory screening of all bags, integration of sophisticated explosive detection devices and TSA hand inspection stations, as well as new fire and security door safety requirements. Changes to a system encompassing this degree of complexity required superlative engineering and project management capabilities; in this regard Bernie MacDonald, Siemens Project Manager for the MIA NTD project, indicated that "Siemens has drawn on its global resource pool to staff this project with the right number of technical and project management people with the appropriate skill level required to deliver this project."

Lee Seward added: "We strive to be the supplier of choice in the industry by providing the best overall solutions and service, and by conducting business with the highest ethical standards."

Siemens baggage handling equipment may also be found in other major airports including, Tom Bradley International Terminal at LAX, Buffalo-Niagara Airport, Indianapolis Midfield terminal, Denver International Airport, DFW Airport, Detroit's North Terminal, as well as at many other domestic and international air hubs.

Globally, Siemens is a powerhouse in electronics and electrical engineering, operating in the industry, energy and healthcare sectors. For more than 160 years, Siemens with 405,000 employees in 190 countries, has built a reputation for leading-edge innovation and quality of its products, services and solutions. Siemens Infrastructure Logistics is part of the Siemens Industry sector which is the world's leading supplier of production, transportation and building technology solutions. The company's integrated hardware and software technologies enable comprehensive industry-specific solutions for industrial and infrastructure providers to increase their productivity, sustainability and profitability.

Siemens Infrastructure Logistics Group is located at 2700 Esters Blvd., Suite 200B, DFW Airport, Texas 75261. For more information, call 972-947-7600, e-mail [infrastructurelogistics.sea@siemens.com](mailto:infrastructurelogistics.sea@siemens.com) or log on to [www.siemens.com/airports](http://www.siemens.com/airports).



TRANSPORTATION & LOGISTICS

We had to use interim gates, which was brutal for us and for the passengers.

"You're looking at anywhere between 85,000 and 100,000 people moving through here each day that you have to reroute and maze to the left and to the right, while putting up one wall and taking down another," he describes. "It was like having the Super Bowl every day. Thank God we're 92 percent complete now. The single-biggest segment we're still working on is the federal inspection area, which is going to be the size of two football fields, with 72 passenger control booths and 10 baggage claim devices. We'll be able to process over 4,000 passengers per hour."

But it has been a long and arduous process, he admits. The terminal construction initially was to be handled by American Airlines. However, the project was turned over to Miami-Dade County in 2005 after the airline terminated the general contractor and decided construction was not its cup of tea.

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When Abreu was hired as director of the airport two weeks later, only 30 percent of the work had been completed and the design wasn't even finished. Also, the airport was accumulating a massive amount of debt, "with nothing to show for it," he says. To make matters worse, the contractors working under the previous regime filed more than \$400 million worth of claims.

"This was absolutely nightmarish," Abreu confides. "We hired forensic engineers to go into the claims and only a few went to court. My analogy would be this: every kid wonders what's in the center of a baseball, and when you try to pull it apart, you eventually get the one string that will take you all the way to the end. That's how I felt. I wanted to get to the bottom of this thing in order to move it forward. The first thing I did was a constructability review to finish the plans. It took over eight months,

"WE CREATED SCHEDULES DRIVEN BY THE PASSENGERS BECAUSE PEOPLE DON'T WANT TO KNOW WHEN YOU'RE GOING TO POUR THE SLAB."

and people were getting impatient with me. But there is no such thing as a perfect set of plans when they are 100 percent done, so imagine them being only 30 percent done."

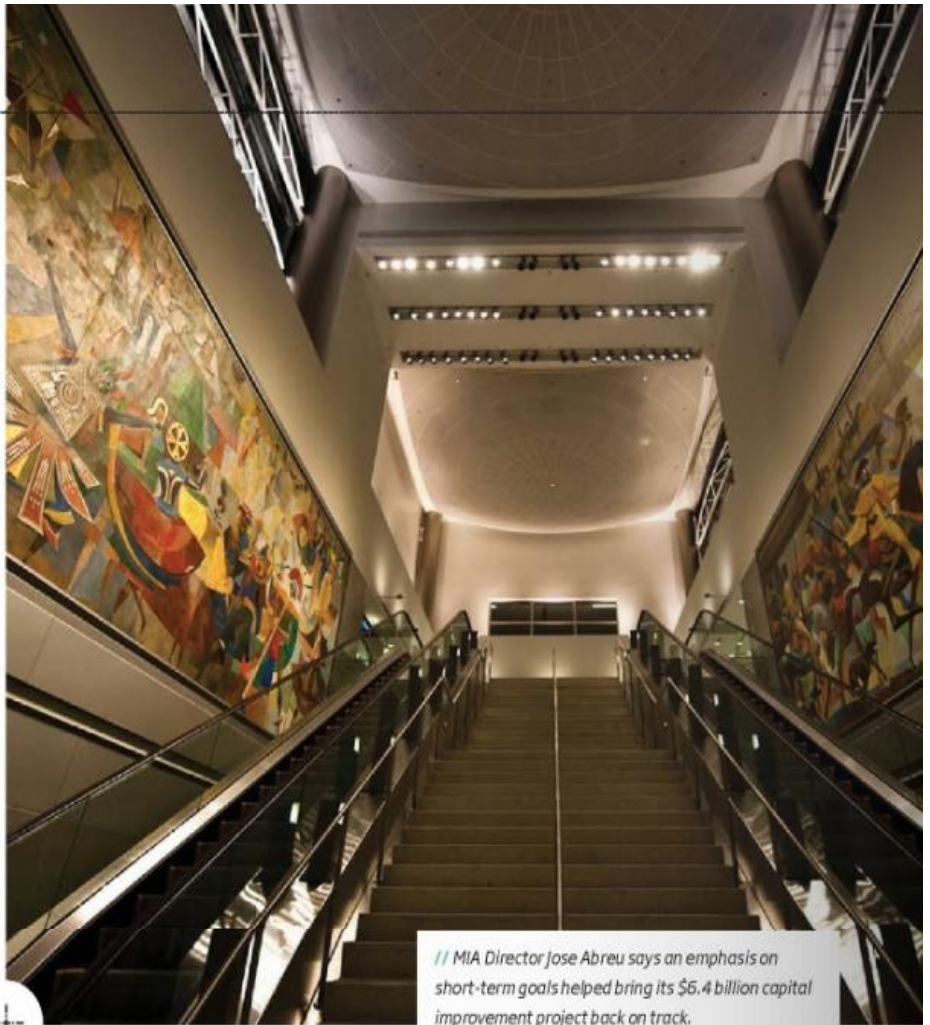
With a new team of engineers, architects and contractors in place, MIA created short-term construction goals and set out to complete them.

"We created schedules driven by the passengers because people don't want to know when you're going to pour the slab—they want to know how many gates are going to be open and when," Abreu says.

"We made some tough decisions such as closing concourse A—16 gates—and converting it into land side to facilitate the movement of construction workers in and out," he continues. "There have been some challenges with that and times where I say, 'No, I can't live with this; let's negotiate.' But at the end of the day, we have great partners."

#### **Was it Fate?**

It is no coincidence that MIA appointed a construction professional to the chief executive position. Before he was hired as director of the airport, Abreu was appointed by Gov. Jeb Bush to be secretary of the Florida DOT. FDOT had been



// MIA Director Jose Abreu says an emphasis on short-term goals helped bring its \$5.4 billion capital improvement project back on track.

working closely with the airport on the rental car facility and Miami Intermodal Center projects, as well as the road construction portion of the capital improvement program, for several years.

Therefore, Abreu "had a certain familiarity" with the airport, he says.

In fact, MIA was the airport that welcomed Abreu when he first set foot on American soil at age 13. A native of Cuba, he immigrated to the United States through the Division of Unaccompanied Children's Services in 1968. "I came to the U.S. to live with my uncle, and thankfully, three years later, I reunited with my family here in Miami," he says. "It's prophetic

that this is the very airport that I came to Miami through. I remember it so well.

"My uncle, his wife and my two cousins came to pick me up," he recalls. "I had no luggage with me; I lost it or it was stolen in New York at JFK Airport. All I had were the clothes on my back. My uncle's wife said, 'You know, we're going to take you to a place called downtown where we can buy you some clothes. Your uncle is going to drive you on a super highway, the kind you have never seen. It's called an expressway.' For me to have been in charge of every expressway in the State of Florida and now MIA, it's so prophetic. It really is." *•mt*

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