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Know of a project that should be covered in a future issue of Airport Improvement?

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Publisher's Blog

State of Play

All too often when we look at our airports, businesses and industry, it's difficult to pinpoint when direction has changed or momentum has shifted. When did we fall into a recession and then climb out? When did sustainability become so important to airports? When did a \$4.50 PFC become inadequate? [\[more\]](#)

Goats, Horses & Tents

Just another day at the airport. What, you may ask, do goats, horses and tents have to do with running an airport? The answer is everything. Everything creative that is. [\[more\]](#)

Kermit Was Wrong

Terminals

Key West Shares Terminal Construction Risk with Contractor

By Jodi Richards

As published in: [Airport Improvement Magazine - January-February 2010](#)



Key West, FL, is an escape to paradise for millions of visitors every year. It's anything but, though, for construction projects. Literally located at mile marker zero, Key West International Airport faced unique challenges during its recent, much-needed \$31 million terminal improvement project.

Facts & Figures

Project: Terminal Expansion & Renovation

Location: Key West (FL) International Airport

Owner/Operator: Monroe County

Cost: \$31 million

Funding: 30-year bond; \$8 million county funds

Project Format: Construction Manager at Risk

Construction Manager/General Contractor: The Morganti Group

Architect: URS Corporation

Outbound Baggage Conveyor: G&S Airport Conveyor

Other Project Components: Parking facility, adaptive reuse of existing terminal, construction of bag makeup building and

The need for more terminal space at the county-owned and -operated airport is undeniable, says Peter Horton, the airport's director of ten years. The original 24,000-square-foot terminal was constructed in 1957, and it served some 20,000 passengers annually.

In 2005, passenger volume peaked at 618,000 per year. And roughly 4,000 square feet of the terminal was claimed by administrative space for the airport, rental car companies and Transportation Security Administration (TSA). A restaurant occupied 3,000 square feet, leaving just 17,000 square feet to handle all passenger functions, including ticketing, departures, arrivals and TSA screening.

When TSA brought in new mandated screening equipment in 2002, the need for space was even more evident, Horton explains. At the time, Key West International had more than 600,000 passengers each year through the airport. A study by Federal Aviation Administration (FAA) officials indicated that the airport should have at least 50,000 square feet devoted to passenger services. "That's something we had known for some time," Horton states. "We had people literally waiting outside the door to get into the checkpoint."

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We're heading into the 4th Quarter. The bottom hasn't dropped out of the industry. Rather we're moving on and doing what what's needed to grow and prosper. It has become abundantly clear that there is real growth and prosperity to be had. [\[more\]](#)



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Industry Insider

Sharing Knowledge

Baggage systems are a key operating component of any airport and shouldn't be an afterthought. They should receive the same attention as runways, control towers and/or any other critical function that is at the heartbeat of an airport. [\[more\]](#)

The Virtues of Transparency

We hear a lot about transparency lately, especially in light of the federal stimulus package that is introducing \$787 billion into the national economy. [\[more\]](#)

Airports Going Green

It has been an active and productive summer for the Chicago Department of Aviation. While moving forward with construction on the O'Hare Modernization Program (OMP), we recently released our new Sustainable Airports Manual. And along with the American Association of Airport Executives, we hosted the second "Airports Going Green" conference. [\[more\]](#)

adaptive reuse of maintenance building



A New Approach

A movement to expand the airport in 1994 was set aside due to opposition from the community, recalls Horton. But in 2005, Monroe County officials decided to move forward with the terminal project, taking a unique approach. Instead of the traditional design-bid-build process, The Morganti Group built the terminal project under a construction manager at risk (CMAR) format.



According to Morganti officials, the airport's terminal project was the first CMAR project for the FAA

and Florida Department of Transportation (FDOT) in the state. Under CMAR, Morganti acted as an advocate for the owner, working with architects and consultants to provide project controls throughout the design and construction phases.

"Our company takes all risk for the cost, quality and schedule of the project," explains Jim Auld, vice president of The Morganti Group. "We are the general contractor, but we work as an extension of the owner's staff to get the project done to their goals."



Ground breaking took place in early 2006 on the \$31 million McCoy Terminal project and parking deck addition. The project included a 30,000-square-foot addition to the terminal, a parking facility underneath it and an adaptive reuse of the existing terminal building. Additionally, a bag makeup building was constructed on the ramp, which also houses the airport's generator, air conditioning equipment and most of the electrical switchgear. A maintenance building was adaptively reused as well, Horton adds.

Although the footprint of the existing terminal did not change, the interior was thoroughly updated. Everything from ceiling tiles, paint and HVAC to carpeting, windows, doors and security equipment was modernized. The updated space also features new ticketing, luggage and security areas, along with a central space for retail and concessions. It even includes a "beach," complete with sand, tables, boardwalk and waterfall.

Room to Breathe

"Our departure concourse went from 700 square feet to 7,000 square feet; 80 seats to 400 seats, and we're filling that up," Horton reports.



Shortly after the terminal project was complete, Key West International gained daily 737 traffic with Delta Air Lines, and AirTran Airways began daily service in mid-December. American Eagle, US Airways, Cape Air and Continental Airlines also operate at the airport.

Retail and concessions space in the new terminal increased by three to four times, Horton estimates. Originally the airport had one restaurant and one gift shop. Now it boasts two restaurants, two gift shops and six commercial spaces that recently went out to bid.



The terminal addition is cast-in-place reinforced concrete and walls are a panelized system. Flooring in the terminal is a decorative epoxy made to resemble the ocean. Epoxy is more durable, lower cost and easier to maintain than terrazzo and is an environmentally friendly material, Auld notes.

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The airport's new upper parking deck doubles as a secure shelter for Monroe County's emergency response equipment.

Island Idiosyncrasies

Location was a major challenge of the project for The Morganti Group. "It's mile marker zero - the end of the road," explains project manager Bruce Harkness. "To get any product in, it's three to four hours over the bridges."

Jim Singletary, project manager with architect URS Corporation, agrees that the Key West locale added significant and unique challenges to the terminal project - especially when "getting your arms around cost." The majority of construction supplies and workforce had to be brought to the island.

During two years of construction, the project faced formidable island weather, including three named storms and major flooding. "The weather conditions were some of the most challenging that we have faced in south Florida," Auld comments.

Another challenge, he says, was utilizing local lime rock to the best advantage. "Most foundations don't go deeper than four feet in Key West," Auld explains. "Our foundations went down over 15 feet through that lime rock base, and that's why the building is so strong."

Because the airport is in a flood zone, Horton notes, the structure had to be built 12 feet above sea level and strong enough to handle hurricane-force winds.

Paying the Bills

The \$31 million project was funded through a 30-year bond issue, which Horton says the airport expects to pay off within eight years of its signing using passenger facility charge revenue, FAA entitlement dollars and FDOT revenue share of aviation fuel taxes. The county also pledged \$8 million toward the project. "This is the first time we ever built a project that we couldn't write a check for at the end," Horton notes.



The county originally set the project budget at \$28 million, he notes. But after Morganti came back with an estimate of \$33 million, the project was pared down to \$31 million. The overage caused the airport to cut some aspects of the project, like "redundancies."

"As an example, we're short one elevator, which hasn't been a huge problem," reports Horton. "But in the next round of FDOT funding, we're going to put that elevator back."

Building in redundancies, he explains, is crucial because the airport is at the "end of the road." That includes 100% emergency generation power for all buildings. Fuel storage capacity was upgraded from 500 gallons to 1,000 gallons, and all generators were converted to accept diesel and kerosene (Jet A). "I have 30,000 gallons of kerosene at the fuel farm," Horton explains.

"If we have a hurricane event, of which we've had several, and can't get diesel, we simply use our supply of Jet A to power our generators."

Court of Public Opinion

In 2006, the airport experienced a downward trend in passenger traffic, making it and its expansion project the target of criticism. In 2008, Key West International served 458,000 passengers, but Horton says that is turning around. "We saw increases this year in April, May, June, August, September and October," he reports. In fact, September 2009 was up 36.6% compare to September 2008 - typically the slowest month for the island airport.

On the public relations upside, The Morganti Group received the 2009 FDOT Commercial Airport Project of the Year award for its collaborative work with Monroe County on the project.

[Airport Improvement Magazine - January-February 2010](#)

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