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Salt Lake City Int'l Constructs 21st Century Terminal

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Salt Lake City Int'l Constructs 21st Century Terminal

BY JODI RICHARDS

In mid-September, Salt Lake City International (SLC) unveiled the first phase of its $4.1 billion redevelopment project, a comprehensive series of much-needed operational and aesthetic upgrades throughout the entire airport. Last year, SLC served 26 million passengers in facilities designed 50 years ago to handle just 10 million passengers.

Airports Director Bill Wyatt explains that the redevelopment program is creating a "new SLC" that meets the needs of 21st century passengers with an efficient and functional facility. It was also very important for the new facilities to reflect the feel and culture of Salt Lake City and Utah.

BILL WYATT

"Because we're a hub, many people who use the airport don't actually set foot outside," says Wyatt. "We want passengers to

know where they are, and the airport to look like the surrounding environment."

The long-term project is replacing three aging terminals with a single central terminal that contains four concourses.

Key elements of Phase 1 include:
- a new 908,754-square-foot terminal with separate check-in areas on two levels;
- two new linear concourses, one solely occupied by Delta Air Lines and another shared by six other carriers;
- a 3,600-stall garage with visitor parking and rental car facilities;
- a new elevated roadway for departures traffic; and
- a new central utility plant.

Phase 2, which is currently in the works, includes the completion of the new concourses A and B and construction of a pedestrian

PHOTO: SALT LAKE CITY INT'L AIRPORT

tunnel to connect the two. Although the COVID-19 pandemic continues to hammer airlines and airports alike, SLC is making the best of the situation by accelerating Phase 2 with the support of its carriers. Airport officials estimate that decreased passenger traffic will allow the project team to reduce the overall redevelopment schedule by two years and save as much as $300 million. Phase 2 is now slated to be complete in 2024 or 2025.

Regarding Phase 1, Wyatt points to the new 28,000-square-foot Delta Sky Club (the largest in the airline's entire worldwide system) as an example of the outstanding cooperation that exists between SLC and its carriers. The new members-only lounge was originally planned to be 18,000 square feet, but Delta decided to increase its size and add an outdoor deck when construction was already underway. "We could never have done this without the deep bond that we have built with Delta," Wyatt says. "You can't do projects like this without that kind of partnership."

SLC officials are proud of the airport's affordable rates and charges for airlines, something they plan to maintain despite substantial investments in the redevelopment program. Prior to construction, the airport had socked away $1.5 billion in cash. Wyatt emphasizes that despite borrowing for construction, SLC will still be one of the lowest-cost airports in the U.S.

Long-Term Effort

Planning for the current redevelopment goes back to the airport's 1996 master plan. At that time, SLC's configuration was not compatible with its role as a hub facility because its finger concourses did not allow for bank movement of aircraft.

But huge increases in passenger volume required the airport to move forward with expansion plans, Wyatt explains. Specifically, SLC was growing at an average of 5% annually, despite forecasted growth of 1.5% each year. A large redevelopment project wasn't the easiest sell for SLC officials after the 2008 Great Recession, but they knew something had to change.

"We were just bursting at the seams," says Wyatt.

In 2014, the airlines committed to supporting the redevelopment program, and plans moved forward.

While some components of SLC's 1996 master plan changed throughout the years, the importance of a linear concourse configuration has remained a guiding force. "For the last 25 years or so, we've been making choices about the roadway and any additions to the airport that would not impact the construction," Wyatt relates. "It's been a thoughtful, long-term process."

The two new linear concourses will allow simultaneous movement of aircraft without interruption—an especially critical aspect for Delta Air Lines, which typically flies up to nine banks each day at SLC. Under normal market condition, the airport has 100 nonstop destinations, and roughly 70% of Delta's volume at SLC is connecting traffic.

After the demolition of terminals 1 and 2 is complete, the remainder of the dual taxi lanes will be constructed, further improving airfield operations.

Function & Affordability

In 2008, the airport hired HOK to take inventory and assess the architecture, structural and engineering condition of its facilities. The redevelopment team used the information to help determine what portions of the master plan it could implement without busting the budget.

"The client was very concerned about spending too much money and overbuilding," relates Matt Needham, an HOK principal.

Ultimately, the architecture firm developed a design for new facilities that achieved the main goals of the Salt Lake City Department of Airports. The "new SLC" had to be functional, affordable and timeless.

MATT NEEDHAM

Wyatt highlights the airport's two check-in locations as a unique design element. Check-in counters and kiosks in the new Gateway Center, which attaches to the parking garage on

the second level, will be particularly convenient for passengers returning rental cars or parking their own vehicles. Passengers being dropped off at the airport will likely use the more conventional ticket lobby on the third level.

Officials have always considered SLC's location, just five miles from downtown Salt Lake City, a valuable convenience for local and visiting passengers alike. Wyatt notes that having a bi-level roadway with multiple lanes on both levels will further increase the airport's convenience, safety and capacity.

"When you talk to local people, they love that you can park in the garage and be at your gate within 15 minutes, which is amazing," he relates.

The challenge for HOK's architects and designers was to maintain that treasured convenience in the new terminal. "That's what the Gateway will do," explains Wyatt.

"That kind of layout is highly functional and highly responsive to what the folks of Utah really wanted," agrees Needham. "They wanted the ease of transport without multiple level changes."
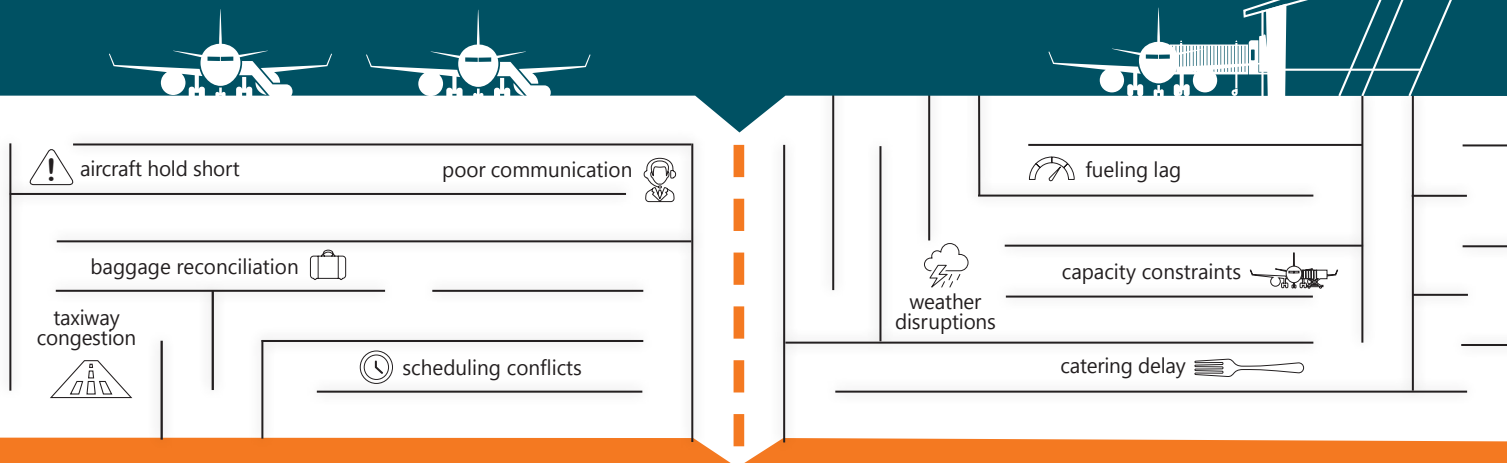
With the new terminal configuration, space planners predict that fully half of SLC passengers will not need to change levels at all.
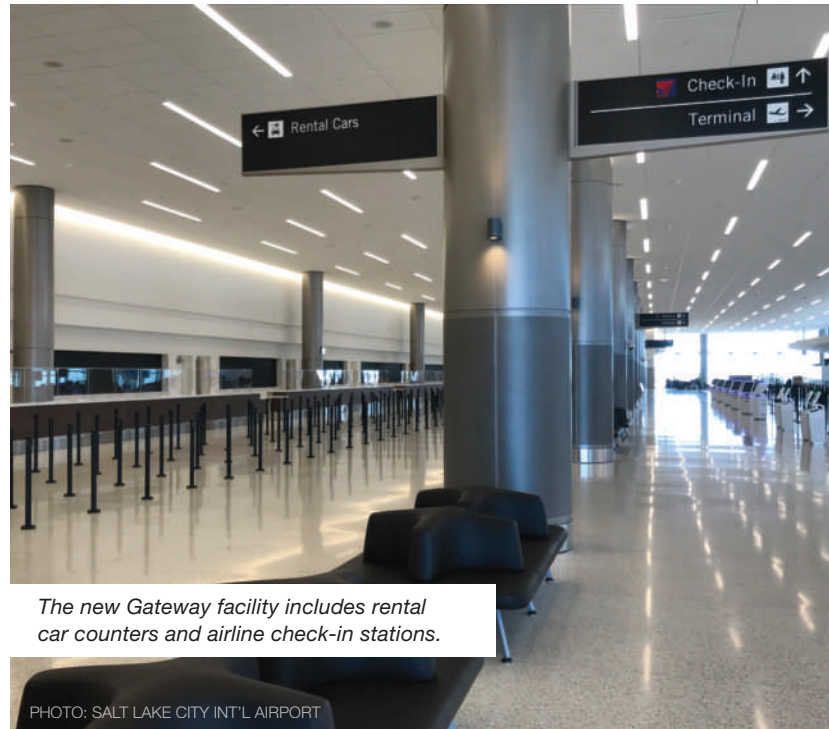
The new Gateway facility includes rental car counters and airline check-in stations.

PHOTO: SALT LAKE CITY INT'L AIRPORT

PHOTO: SALT LAKE CITY INT'L AIRPORT

The new 3,600-stall garage includes space for visitor parking and rental cars.

The new Gateway Center, which includes rental car counters as well as check-in facilities, is designed specifically for SLC's operational flow of non-overlapping peaks. The airport experiences its main departures peak in the morning, and the main arrivals peak occurs in the afternoon. Instead of having a common circulation path in the middle, with queuing for ticketing to the north and queuing for rental cars to the south, HOK placed a line of columns in the middle. During the morning peak, circulation for ticketing is south of the columns, and in the afternoon, circulation for the rental cars is north of the columns. "By having a shifting circulation path, we actually reduced the size of that building by roughly 20% and the construction cost by millions of dollars," Needham explains.

The airport's new 3,600-stall garage houses rental car facilities, including a ready return area, on the first floor. The second level is for passenger/visitor parking and connects directly to the Gateway. Elevators and escalators are positioned to allow passengers who do not need to check a bag to enter the Gateway and head right to the security checkpoint. "It's all organized for ease of passenger movement—as minimal walking distance as you can have," says Needham.

In the garage, an automated guidance system from Park Assist uses camera-based sensors to direct drivers to vacant spaces with color-coded LED lights. The lights turn from red to green when spaces become available, which helps decrease search times and traffic. When travelers return to the garage, they can use the Find Your Car app or kiosk to locate their vehicle with just a portion of its license plate number. The airport also offers complimentary assistance to customers with dead batteries, flat tires and empty gas tanks.

Park Assist also offers a software extension to help airports increase security in parking garages. The airport sets automated rules and norms, and the system automatically alerts parking management of any policy violations. Currently, SLC does not subscribe to this extra service.

Passenger Processing & Services

While the previous terminals had three separate checkpoints, the new SLC has one consolidated checkpoint with 16 screening lanes. Each lane includes four divesting stations and automatic bin returns. "It's a vastly improved experience for passengers," Wyatt reports. "It's going to operate so much more smoothly than the previous facility, which, of course, was never designed to sustain the volume of people or the type of screening that currently has to occur."