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SFO'S TOWERING ACHIEVEMENT

**A new \$70 million air traffic control
tower is set to change the way
control towers look and are built**

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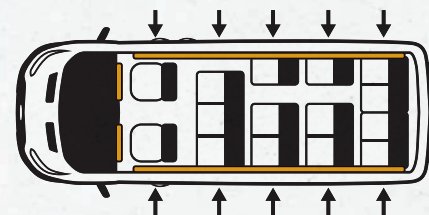
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The 2015 Transit Wagon with the high roof has a **CENTER AISLE THAT'S 6'5" HIGH.**^{††}

^{††}Medium roof shown.



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San Francisco International Airport completes a \$70 million air traffic control tower set to change the way air traffic control towers look and are built forever

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VOL. 30, NO. 2

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Airport Business (USPS 001-614), (ISSN 1072-1797 print; ISSN 2150-4539 online) is published 8 times per year in Feb/Mar, April, May, Jun/Jul, Aug/Sep, October, November and Dec/Jan by SouthComm Business Media, LLC. Periodicals postage paid at Fort Atkinson, WI 53538 and additional mailing offices. POSTMASTER: Send address changes to *Airport Business*, PO Box 3257, Northbrook, IL 60065-3257. Canada Post PM40612608. Return undeliverable Canadian addresses to: *Airport Business*, PO Box 25542, London, ON N6C 6B2.

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INSIDETHEFENCE

Ronnie L. Garrett
Editor



Countdown to 2016

What are your resolutions for the New Year?

The countdown to New Year's Eve and 2016 has already begun for me for many reasons. First, December 31st is my birthday and I'm celebrating it in style, and second, I always begin the New Year with a handful of resolutions I plan to—and normally do—carry out. This year I'm headed out for a very fancy New Year's bash, and when the evening is over I plan to start 2016 off the right way. I will go gluten free as recommended by my doctor a YEAR ago and I will sign up for art classes.

But the new year need not be set aside for personal resolutions. It can also be a time to reflect on professional goals as well. The following is a list of resolutions that might work at your airport or FBO:

Be a Partner: Put Uber/Lfyt on your team by allowing them at your airport. The war rages on between airports and transportation network companies. But here's the thing: Your customers want this service at the airport so it behooves you to find a way.

Get Fit: Offer airport concessions and fitness opportunities for the increasingly health conscious traveler. Add farm-to-table restaurants, include grab-and-go food options such as hummus or salads, and add those yoga rooms or walking paths you've talked about for some time.

Spotlight Security: Travelers are increasingly nervous about security threats at the airport. Assess your security situation from the perimeter to the gates, security

screening to cyber protection. Identify vulnerabilities then do something about them.

Service with a Smile: The passenger experience at the FBO and the airport is important. What can you do to enhance the level of service you provide? Even something as simple as adding more plugs for electronics, installing signage that makes way-finding a breeze, or going out of your way to help customers when they arrive can lessen traveler stress and improve the experience.

Plan for the Future: It's no secret that airport infrastructure is aging. It is predicted that airports will need \$75.7 billion in infrastructure improvements by 2019. Now is the time to revitalize that master plan and engage in those project ideas that are gathering dust on a shelf. LaGuardia International Airport's getting a \$4 billion facelift. What kind of improvements will you target for your airport or FBO in the years to come?

Making resolutions isn't the end however. If I'd didn't stick to my resolutions every year, I'd still be a couch potato and weigh 20 pounds more. I wouldn't be reading a book a month and walking 4 miles a day—I'd be watching television. And I certainly wouldn't finally be writing the novel I have dreamed of writing for more than 10 years.

Make your resolutions today then stick to them! And share them with me. I'd love to hear about your goals for 2016 and cover them in a future issue!



BILL WILL TIGHTEN SCREENING FOR AIRPORT WORKERS

The U.S. Senate Commerce Committee has approved legislation aimed at tightening screening for airport workers. The bill would require the TSA to improve vetting of airport employees with access to secure areas by giving the TSA real-time access to terrorism-related databases and allowing the TSA to conduct real-time, continuous criminal records checks through the FBI; expanding use of transportation security officers and inspectors to conduct random physical inspections of airport workers in secure areas; requiring a review of the insider threat posed by airport employees and reporting back to Congress with recommendations; considering increased fines and direct enforcement requirements related to missing credentials; and developing and implementing metrics to track secure area rule violations and mistakes. The bill will now go to the full Senate for a vote.



The Future of Aviation

Mentoring young professionals is important. What have you done to help newcomers to the industry?

There are moments in life that touch you but even more special are the ones that touch others. Over the past month we at *Airport Business* and the AviationPros Group were blessed to experience both types of moments. We knew from its inception that our 40 Under 40 program was something special and one that would recognize young professionals who are making a difference today and preparing to be the future leaders of aviation. With companies and associations paying increasingly more attention to mentoring young professionals we saw an opportunity to partner with them to create opportunities to promote and educate this special group of people.

Over the past year we have worked with the Airport Consultants Council (ACC) on a collaborative partnership to help pick the winners, promote their young professionals group (they call them YPs) and grow this incredible group of YPs. With well over 300 nominations the process was long and extremely difficult but we are very proud of this year's winners.

With all the action on LinkedIn congratulating our winners, it is evident that our 40 Under 40 program has become a coveted honor in aviation! I was honored to be asked to speak at their annual meeting in Newport Beach about this partnership and am very excited to work with ACC to grow this partnership together. ACC really helped elevate this award to another level and we look forward to continuing this partnership.

A few months ago the National Business Aviation Association (NBAA) reached out and asked us to partner with them on their young professionals (a group of young people they call YoPros) reception at the 2015 Business Aviation Convention & Exhibition in Las Vegas. With more than 400 newcomers registered for the YoPro events, there is no doubt of the need for more of these types of opportunities in aviation.

The opening night YoPro networking event

was an incredible success on many levels. I was in awe of these incredible young people who inspired me. Having a pocket full of free drink tickets to give out, I was met with the same response over and over: "That is not what I am here for." "Thanks but can I get a bottle of water?" "No thanks, I would rather have you introduce me to some possible mentors."

The following morning these inspiring YoPros showed up for a 9 a.m. session (remember this is Las Vegas and the first session of the day). There was a standing room only on the show floor for our joint NBAA/Airport Business-AviationPros session titled: "Elevate to New Heights: Young Professionals and the Future of Aviation." The panel could have kept the interactive session going all day featuring NBAA writer Lowen Baumgarten moderating. *Airport Business* Editor Ronnie Garrett gave the opening remarks on our 40 Under 40 program. The panel featured Jo Damato from NBAA, Sarah Barnes from Paragon Aviation (a 2014 40 Under 40 winner), Brad Thress from Textron Aviation and Rob Mark our new partner for "On the Mark" video series.

Want to see more? We had professional film crew and spent the rest of the day interviewing industry leaders on mentorships, what they look for in young professionals and other forms of priceless advice from industry leaders. With incredible demand and insightful content, we will be releasing a video of the interactive session between the panels and attending YoPros. We are compiling a series of videos from our interviews with industry leaders on mentoring, young professionals and the future of aviation. Look for them on AviationPros.com or sign up to receive the videos at: www.aviationpros.com/video/12139944/who-was-really-in-command-of-malaysian-flight-17

What have you done to help the future of aviation? *Airport Business* and AviationPros.com is committed to the industry's young professionals. We believe if we reach out to educate and support the incredible young people in the industry we can rest assured that aviation will be in good hands when it's time to turn over the reins.

Reach out to a young professional today and offer up some sage advice or support. Trust me! It will touch you and more importantly will touch someone else!

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Enoc Pipeline Begins Fueling Dubai International Airport

Enoc has created a 16-inch jet fuel pipeline capable of pumping 18,000 cubic meters of fuel a day linking Dubai International Airport with Enoc's Horizon Terminals at Jebel Ali Free Zone.

The 58-kilometer Project Falcon pipeline, wholly financed by Enoc at a cost of \$250 million, is capable of supplying the airport's current fuel requirements, reducing the airport's reliance on road tanker deliveries, and 55 percent of the airport's predicted future needs, with the capacity to expand up to 65 percent. The pipeline will eventually be extended to Al Maktoum International Airport.

The pipeline is intended to support the airports through the next phase of growth, which is expected to see the aviation sector increase its contribution to Dubai's GDP to 37.5 percent by 2020, says Paul Griffiths, CEO of Dubai Airports. By that time, the airports' fuel requirements would increase to 3.3 billion U.S. gallons a year, from 2.1 billion gallons this year.

Zaid Al Oufaidi, MD of Enoc Marketing, says Dubai International currently required the equivalent of a 30,000-tonne-cargo ship of fuel every two days. "The impact of this project will be substantial as the Falcon pipeline can on its



own meet the entire airport demand into mid-2030s," he says.

Avfuel Enhances Online Training, Promoting Best Practices for Safe Fuel Handling

Avfuel Corporation will release six new modules for its Online Rampside Training Course by year-end to help FBOs train staff on best fuel-handling practices, promoting higher safety standards at Avfuel-branded locations. The new modules include tips for trainers, de-ice and anti-ice procedures, aircraft marshalling, towing, radio etiquette and record keeping.

Avfuel's training system came in response to an industry-wide push for standardized practices. Knowing not all FBOs could afford the steep price of training programs—an issue exasperated by employee turnover and recurrent training needs—Avfuel developed its

online learning management system to offer its network cost-effective training solutions. With only one subscription needed at each FBO to cover every employee, the course is beneficial for both large and small operations.

Currently, Avfuel's Online Rampside Training Course educates employees on fuel handling and fire safety, aviation fuels and additives, fuel system icing inhibitor (FSII), contaminants and fuel-testing methods, procedures for receiving a load of aviation fuel, aviation fueling components, fuel storage systems, mobile refueling equipment, aircraft fueling and general operations, and paperwork.

Designed to complement hands-on

training, the rampside course offers a learn-at-your-own-pace format ideal for new employees and recurrent training programs with the use of video tutorials,

proficiency tests and supplemental training guides. The new modules will be available by the end of the year for current subscribers and will be included in all future Rampside Training subscriptions. To learn more about Avfuel's training programs, call (734) 663-6466 or visit www.avfueltraining.com.



AECOM ...

Secures a contract to design a new airport in Istanbul that will have a planned annual capacity of 150 million passengers.

American Airlines ...

Announces its agents, members of the CWA/IBT Passenger Service Association, ratified a first contract by a 73 percent "yes" vote. The agreement covers nearly 15,000 airport and

home and office based reservations agents.

APP Jet Center ...

Announces APP Jet Center Fort Pierce, its FBO at St. Lucie County International Airport, has been named a Preferred FBO by the Corporate Aircraft Association.

Association of California Airports ...

Announces Sherry Miller is the newly elected president of the association.

Baltimore/Washington International Thurgood Marshall Airport ...

Reopens Runway 10-28 after months of major construction. The runway was temporarily closed in late August as part of a comprehensive series of airfield improvements.

INDUSTRY NEWS

Charlottesville Albemarle Airport ...

Installs Kaba's one-way exit corridor to accommodate the airport's expansion plans and offer the latest in exit lane breach control technology

Darwin International Airport ...

Renovated all of its signage. The centerpiece of that effort is "The Wave," a sinuous wave-shaped digital canvas created by NanoLumens.

Dallas Fort Worth International Airport ...

Reveals the new DFW brand and its tagline "Travel. Transformed" during a brand launch event at the airport headquarters for employees and community members.

Eastern Aviation Fuels ...

Adds four new Landmark Aviation locations: Atlanta, Georgia; Cedar Rapids, Iowa; Houston, Texas; and Frederick, Maryland.

Landmark Aviation's ...

Sioux Falls, South Dakota facility located at Joe Foss Field Airport has been named a Beechcraft Authorized Service Facility for Bonanza and Baron series aircraft.

Fuel Watch

The following fuel prices were derived from transactions completed with the AVCARD credit card during October. Not all operations sell both jet-A and Avgas. The figures for jet fuel prices will be more representative than those for Avgas, due to the higher number of transactions recorded. Prices reflect all taxes and discounts. Data is supplied from AVCARD in consolidated format; individual transactions are not disclosed.

West Coast

Jet-A: \$3.82

Avgas: \$5.07

South Central

Jet-A: \$2.81

Avgas: \$5.01

Southeast

Jet-A: \$3.44

Avgas: \$4.90

North Central

Jet-A: \$3.81

Avgas: \$5.30

Northeast

Jet-A: \$4.37

Avgas: \$5.47

Mikey has been inventing ways to keep your airfield safe for a long time.

Not a lot has changed. Mikey no longer lights runways with plastic cups. He doesn't fit inside a pedal car. But, as an ADB Airfield Solutions project engineer, Mikey still believes that airfield lighting is mission critical. From fixing lights to working with contractors to educating customers, he makes sure each and every ADB system performs. Mikey treats your airfield as his own because he remembers what it's like to care about one. (Oh, and he goes by Mike now.)

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December 2015/January 2016

airportbusiness

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Gerald R. Ford International Airport ...

Completed a \$20 million stormwater/glycol treatment System to eliminate environmental risks from aircraft deicing operations.

Halifax International Airport Authority ...

Names Ian Arthur as its new Chief Commercial Officer, effective November 2.

Hill Aircraft ...

A Phillips 66 Aviation branded FBO celebrated their 60th anniversary with a block party blowout in October.

Los Angeles Board of Airport Commissioners ...

Announces plans to deliver a world-class transportation system to Los Angeles International Airport through the estimated \$5-billion Landside Access Modernization Program (LAMP).

Mountain West Aviation ...

Selects EPIC as its fuel provider for its new FBO locations in Nevada: one at Carson City Airport and the other at Elko Regional Airport.

National Business Aviation Association ...

Awards aviation visionary Joe Clark, partner in Seattle's Gateway USA LLC, Clay Lacy Aviation LLC, the Meritorious Service to Aviation Award.

Orlando International Airport ...

Upgrades its automated passport control (APC) kiosks to include facial recognition for arriving passengers. Supplied by SITA, the technology is part of a new requirement from the U.S. Customs and Border Protection to authenticate identity by matching people's faces to the biometric record in their e-passport.

Parabit Systems ...

Was selected to design, manufacture, install, and to provide monitoring and content updating services for the new Visitor Welcome Center installed within JFK International Airport's Terminal 4 - B Concourse.

Port of Seattle ...

Launches the runway management solution RunWize, which includes FODetect, automated Foreign Object Debris (FOD) detection and BirdWize, ground level bird hazard management.

Airports Rank Higher on Smart Buildings List

Honeywell and KRC Research surveyed nearly 500 buildings across the United States in seven key cities and created a first-of-its-kind global index--the Honeywell Smart Building Score--that measures a building's IQ and "smartness" across three main indicators: safety, productivity and greenness. The results found that in general the "smartness" of U.S. buildings is low, ranking only 35 on a scale of 1 to 100, and that safety and security in U.S. buildings are higher priorities than going green.

The survey covered eight verticals: education, airports, hospitals, high-rise residential, government offices, hotels, private offices and retail. The buildings that were evaluated are located in Atlanta, Boston, Chicago, Dallas, Los Angeles, New York and Washington, D.C.

Among the key findings of the survey:

- **In general, the "smartness" of buildings in the United States is low.** On a scale of 1-100, the average Smart Building Score among the facilities surveyed is 35.
- **Fifty-one percent of respondents** cite safety as the primary gauge of a smart building,

while 27 percent say green assets and 22 percent say productive assets are the most indicative qualities.

- According to the survey, **the top three scoring assets in U.S. buildings** are fire detection systems, efficient appliances and fixtures, and remote access/wired infrastructure.
- **Eighty-two percent of building managers agree** about the beneficial nature of energy efficiency, while only 53 percent believe their building is "technologically advanced" enough to maximize efficiency.
- **Public buildings universally score higher** on green (40 vs. 35), safe (47 vs. 35), and productive (41 vs. 32) assets than private buildings, leading to an overall score of 43, compared to the overall private building score of 34.

- **Among the eight building types**, airports (50), government offices (46) and hospitals (45) are the smartest buildings and high rise residences (31) and private offices (31) are least smart.

For more information on the Honeywell Smart Building Score and to download the whitepaper, visit www.buildingscore.honeywell.com/US.

Sacramento International Airport ...

Receives top marks from the FAA for passing its annual safety certification inspections with no discrepancies for the second consecutive year.

Skanska USA ...

Hires Jeffrey Fucigna as project director, based in Skanska's Oakland office.

Skypark Airport ...

An Avfuel-branded FBO, reopened with a new runway with LED lighting and PAPI—precision approach path indicators.

TAG Aviation's ...

Flight Centre at Geneva International Airport recently took delivery of a new Mercedes Benz 'Antos' fuel truck.

United Continental Holdings ...

Proposes a contract for its pilots that includes a 13 percent raise next year, as well as smaller raises in following years.

Van Nuys Airport ...

Hosts a grand reopening of grand reopening of its U.S. Customs and Border Protection office. The airport had been without a customs office since 2006.

Westjet Air Center Inc. ...

Hosts a grand opening event to celebrate the completed construction of its \$1 million new FBO facility.

Will Rogers World Airport ...

Announces the Oklahoma City Airport Trust has approved the schematic design plans for the expansion of the airport terminal. The expansion will include a new streamlined security checkpoint, a public observation gallery, more shopping and dining amenities, space for future international air service and other high-tech enhancements.

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SFO's Towering Achievement

*San Francisco International Airport
completes a \$70 million air traffic
tower set to change the way
air traffic control towers look
and are built forever*



An iconic and towering structure rises along the San Francisco Bay area skyline—and it's safe to say it's unlike any other.

The 221-foot air traffic control tower features a graceful flaring base with an offset cab of glass at the top, giving it a distinct look resembling that of a wine glass or Olympic torch. A ribbon of glass stretches up the base, reflecting the sparkling waters of the bay during the day and illuminating the darkness with ribbons of color at night.

And yet, though the new construction at San Francisco International Airport (SFO) provides a distinctive and unique silhouette, it also strikes a harmonious chord with the airport's surroundings.

Construction crews recently completed the impressive \$70 million tower—paid for with FAA funds—to replace the existing control tower atop Terminal 2. The goal for the project—besides constructing a functional air traffic control tower that meets today's seismic codes—was fashioning an aesthetically pleasing structure that blends in

with the airport's existing buildings.

"We were very sensitive to building a tower that not only fit well within our passenger terminals, but we also wanted to it be an iconic landmark at SFO," says Doug Yakel, the airport's public information officer. "Our goal all along was to end up with something that wasn't just utilitarian and functional in nature, but also meshed well with our developing terminal design aesthetic."

The airport also needed the tower to be environmentally friendly. SFO, known for opening the first LEED Gold terminal in the world in 2011, mandates that all new airport structures achieve LEED Gold certification. It is anticipated that this new building—with its extensive water and energy saving features—will be no exception.

"With this airport traffic control tower, SFO is again leading the way with innovative, sustainable design," Airport Director John Martin says. "This facility will provide both a functional

space for our partners at the FAA and an iconic landmark, which will be recognizable to travelers round the world."

NOT A LOLLIPOP ON A STICK

The new air traffic control tower replaces a tower that has been operating since 1983 and was determined to be seismically deficient after the 1989 Loma Prieta earthquake. The airport plans to demolish the old tower and terminal office tower down to Level 3 of the Terminal 2 building after the FAA is confident the new tower is functioning properly and removes its electronics from the facility.

An FAA siting study determined the best location for the new tower was between Terminals 1 and 2, giving air traffic controllers optimal airfield views from the tower cab. To allow for central elevators and stairwells, architects offset the tower's glass cab, positioning it closer to the airfield to improve sightlines and accommodate state-of-the-art electronics. The offset position also gives the structure a uniquely graceful appearance and provides air traffic controllers—up to eight on duty at a time—with a sweeping view of the airfield.

From their perch in the new tower, slated to open for business in July 2016, air traffic controllers will have unobstructed views of planes as they take off from an almost parallel vantage point and head toward the San Bruno Mountains then veer off to the East or the West.

"The original tower was not as tall as this one, and the runways had been extended since it was built, so air traffic control officials didn't have as good a view of the airfield as they once had," Curtis Fentress, principal in charge of design for Fentress Architects, explains.

Airport officials also sought a unique appearance for the tower. Some people describe most towers as a lollipop on a stick.

"If you look at some FAA towers, they're pretty standard and very symmetric," says Mark Costanzo, project manager for the airport. "We didn't want that—they are not very elegant. We wanted something more iconic that

TOP TOWER FEATURES

THE NEW TOWER represents thousands of planning, design and construction hours. The result is a distinctive, iconic structure with a number of special features.

- ▶ **The 221-foot flared tower features** an LED backlit glass waterfall that stretches 147 feet into the air.
- ▶ The tower is designed to **achieve LEED Gold status** from the U.S. Green Building Council.
- ▶ The design offers **seismic fluidity and wind stability**. It can remain operational after a magnitude 8 seismic event.
- ▶ The cab has an **unobstructed 270-degree view** of runways and taxiways.
- ▶ **Non-public rooftop terrace** for FAA controllers that features a rooftop garden of drought-resistant plant species and a picnic area.

gave more of a view of the airfield. By pushing the cab off center on the concrete core, you gain more access of the gates and positions down below the tower."

SHAKE, RATTLE AND ROLL

The old tower also no longer addressed seismic design requirements, states Fentress. The government has significantly upgraded seismic standards for new construction since the Loma Prieta earthquake, when a magnitude 6.9 earthquake severely shook the San Francisco and Monterey Bay regions. The new tower will withstand and continue to operate in a magnitude 8.0 earthquake, according to Yakel.

Designers met seismic requirements by making sure the tower, which rises up through the middle of the airport's Integrated Facility Building, is completely separate from this 44,000-square-foot structure. "If the tower stands independent of this building, it will not damage it if it moves," says Costanzo. "This was challenging from a design perspective. We did models of the structure to make sure everything worked, and they put special buckling resistant beams on the building."

The resulting air traffic control tower uses a vertical post tension concrete structure design, making it the tallest vertical, self-centering post tension concrete structure in the United States. Typically this type of design is used in parking garages where the parking decks are post tensioned. This design employs tension cables in the walls of the cylinder cab which allow it to bend and move during a seismic event "then swing right back to where it was at the end of the seismic event," says Fentress.

Paul Kim, architect for HNTB, the airport master architecture firm and project manager for the tower project, says the design includes two mass dampeners, of approximately 37,000 pounds each, at the upper levels of the control tower. The mass dampers help offset swaying motion in a seismic event or high winds, helping to "stabilize the tower at the top and avoid any kind of motion sickness for the air traffic controllers working inside the tower," according to Kim.

MAKE IT ELEGANT

Airport officials request for a design that harmonized with existing architectural structures led to the selection of a unique, torch-shaped building that flares at the top. "We started look-



SFO AIRPORT DIRECTOR JOHN L. MARTIN TO RETIRE

SAN FRANCISCO

International Airport (SFO) Director John L. Martin has announced that after 20 years leading the nation's 7th busiest airport, he will retire in summer 2016.

A search for SFO's next airport director will be conducted in coming months. Martin will continue in his current role for the foreseeable future, and he will guide the transition to new leadership at SFO.

Martin was first appointed airport director in 1995 by then-San Francisco Mayor Frank Jordan and served as SFO's chief executive under Mayors Willie Brown, Gavin Newsom and current San Francisco Mayor Edwin M. Lee. Prior to his appointment as director, Martin served as SFO's deputy airport director for Business and Finance. In all, he spent 35 years at the airport.

Being a part of iconic construction project such as the new air traffic control tower is nothing new to Martin. During his early years, Martin oversaw the completion of a \$3.5 billion capital plan that included construction of the international terminal, a BART extension to the airport, new parking garages, and the Air Train people mover system.

Some key accomplishments at SFO under Martin's direction include:

- **Opening the first LEED Gold terminal** in the world in 2011—Terminal 2.
- **Operating the first in-line security baggage screening system in the world**; which is now the industry standard.
- **Instituting fair and living wages for all service and security providers at SFO**, beginning in 1999. The current wage standard is \$13.52 per hour.
- **Requiring that all door-to-door vans**, shuttles and many commercial buses serving the airport use green fuels.
- **Reducing greenhouse gas emissions by 34 percent** from 1990 emission levels.
- **Creating a culture of health and wellness among all employees**, leading to SFO being named one of the healthiest places to work by the *San Francisco Business Times*.



Air traffic controllers will have sweeping 360-degree views of the airfield.

ing at Olympic torches and narrowed it down to three options, which were vetted by SFO and the city's art commission. The result was the tapered silhouette that you see now," says Kim.

Kim says designers also spent a lot of time perfecting the facility's skin. They worked with a facade consultant and performed solar reflectivity studies to accentuate the tower's curve linear form. The resulting design rotates the individual panel joints to make them sort of spiral up the tower. These curved metal panels reflect the sky during the day while LED lighting within the glass glows softly at night.

Airport officials also sought to create a visible form that greeted the public upon arrival. This goal led designers to create an LED backlit glass waterfall that stretches 147 feet into the air on the tower's west side. The LED lighting system mimics the system used on the front of the international terminal, which is computer controlled and used to celebrate local events.

"The tower's LED panels can light up and we can change the colors based on whatever mood we are in," says Costanzo. "We've celebrated the Warrior's victory with blue and gold. We celebrated Gay Pride week with rainbow colors. It's a really neat part of the tower and people love it."

DESIGN-BUILD

With major construction complete, the airport now turns equipping the interior over to the

FAA. The FAA is installing radar, servers, receivers, transmitters and other electronic equipment to ready the tower for operation by mid-2016.

This marks a new role in air traffic control construction for the FAA. Typically the FAA handles tower design and construction from A to Z but in this case the FAA turned over these roles to the airport. "This is the first time the FAA has allowed an airport to build a tower for them," says Yakel, who states the situation came about because it was being built near existing terminals and had to be an aesthetically pleasing structure that fit well with its surroundings.

The FAA's new role in this project has other airports looking to do the same, adds Costanzo. He notes an airport in South Florida is contracting with the FAA to construct its own tower to FAA specifications. "It's a lot faster to get things done and a lot cheaper in the long run," he says.

He explains typically the FAA prepares its own design then hires a builder. By doing the project on their own, airports can utilize a design-build construction method to speed the process. Design-build is a project delivery system used in construction in which the designer and the builder are part of the same team.

"Design-build is a lot more efficient than waiting until you're in construction and issuing change orders. The designer and the builder work together upfront to understand the build-ability of the design," he says.

"HNTB was contracted to develop the design and bring the contract documents up to 45 percent, at which point they were handed off to the design-build team," says Kim.

HNTB, did the concept design for the airport's new tower situated between Terminal 1 and 2. They also did design work on a new three-story Integrated Facility building for the FAA and other personnel, two connector walkways, and improvements to the Terminal 1 Boarding Area C Entrance, all of which were also part of the project. Fentress Architects handled detailed design work once construction began with its design partner Hensel Phelps.

Costanzo says with the design-build process "you don't need a complete structure design before you start construction so you can phase the construction process," he says. "You can finish the structural part, which is the foundation of your building, while you're still designing the mechanical and electrical for the facility."

Overall the new airport air traffic control tower is one that has everyone talking, and has left those involved very pleased with the results. "We think it's a dramatic new iconic element on the skyline at the airport," says Fentress. "It's been a lot of hours and a lot of hard work but it's been a really great project for San Francisco."



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Southwest's New Hobby

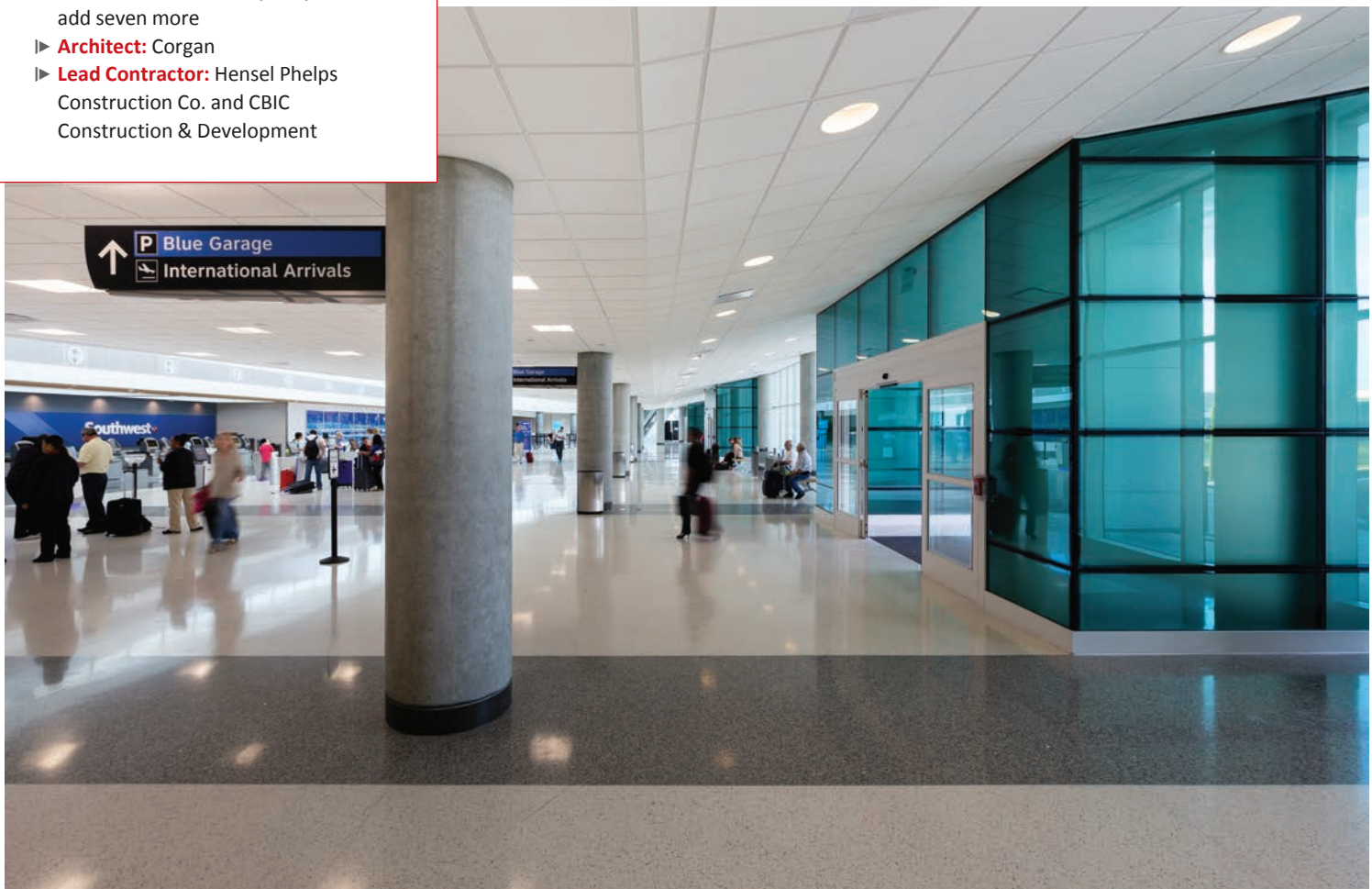
Southwest Airlines begins flying internationally out of a new \$146 million international terminal at Houston's Hobby Airport

JUST THE FACTS

- ▶ **Project:** International Terminal
- ▶ **Airport:** Houston Hobby Airport
- ▶ **Cost:** \$146 million
- ▶ **Size:** 280,000 square feet
- ▶ **Gates:** Five with the capacity to add seven more
- ▶ **Architect:** Corgan
- ▶ **Lead Contractor:** Hensel Phelps Construction Co. and CBIC Construction & Development

A

large art piece called Travessia, by Brazilian artist Henrique Oliveira, greets visitors at the main entrance of the new international concourse at Houston's Hobby Airport.



The acrylic painting on linen fabric, which measures nearly 20 feet by 11 feet, dominates a wall near the escalators, in much the same way that Southwest Airlines hopes to dominate airline service as the international gateway to Latin America from the city's oldest commercial airport.

Southwest Airlines implemented the \$146 million international terminal project with the City of Houston and Houston Airport System in 2012 as part of its plan to begin offering international service from Houston to the Caribbean, Mexico, Central America and northern South America. Southwest launched its first international flights from the airport in October when it began flying seven daily international flights to six destinations—Belize City, Belize; Cancun, Los Cabos, Mexico City and Puerto Vallarta, Mexico; and San Jose, Costa Rica. It added flights to Montego Bay, Jamaica and Liberia in early November.

Hobby Airport officials expect the new international terminal to be a boon to the airport's continued growth. They anticipate the international service will draw nearly 779,000 passengers a year within three years and 1.3 million new travelers a year after 2018. As Houston becomes one of only three U.S. cities with two international airports within its borders, officials also predict the changes will push an anticipated \$1.6 billion in annual revenue into the local economy.

The entire project is something that solidifies Southwest Airlines' commitment to building a presence in Houston, according to Teresa Laraba, senior vice president of customers for the airline. She told the *Houston Business Journal* that the project gives the airline the opportunity to have "more growth domestically and internationally."

WHAT'S NEW?

"The main impetus for the project was Southwest Airlines' corporate decision to begin flying internationally again. They selected several airports in the United States for international service and Hobby Airport was one of them," says Jonathan Massey, principal of the Aviation Studio at Corgan, lead architect for the new terminal. The low-cost carrier was responsible for the design, construction procurement and communication for the terminal, while the Houston Airport System shouldered the burden of designing and constructing a new parking facility and upgrading roadways to support the terminal.

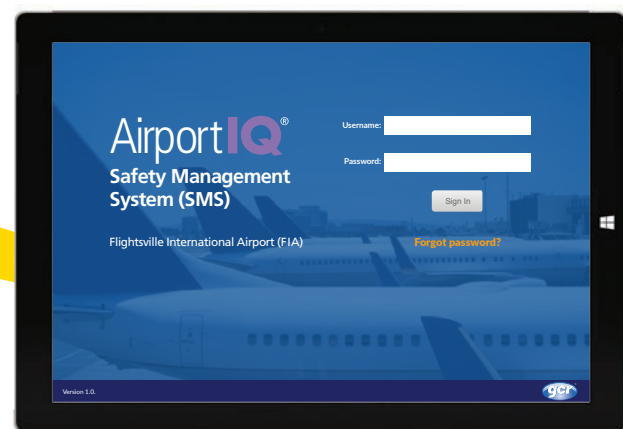
"The main impetus for the project was Southwest Airlines' corporate decision to begin flying internationally again. They selected several airports in the United States for international service and Houston's Hobby Airport was one of them."

JONATHAN MASSEY, PRINCIPAL, CORGAN

Massey notes the other projects, such as the new 3,000-space parking garage, were demand driven. "They needed a new garage anyway, so they coordinated the projects so they could be done at the same time," he says. As a result the new terminal, built to the west of the existing terminal, and the new parking garage, were constructed at the same time.

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TERMINAL DESIGN

The \$55 million multi-level parking garage recently opened toward the northwest corner of the existing parking facility. It features a smart parking space locator system and a pedestrian bridge to the terminal. The modified roadway features additional spots for curbside drop off and an access point to the main check in hall.

"There were also several related projects like a new central utility plant and the relocation of several facilities that were part of the project," says Massey.

The two-story, 280,000-square-foot, terminal building features five international gates capable of handling narrow-body aircraft, such as the Boeing 737 and the A318-320. Southwest Airlines is staking a claim to four of the five gates, leaving one for other carriers to use.

The first level of the terminal houses baggage claim, U.S. Customs & Border Protection and Federal Inspection Services (FIS), while the second level offers an expansive new Southwest Airlines ticket counter, gate hold rooms, and passenger amenities such as restrooms and 16,000 square-feet of concessions and retail space. The new FIS facility features 16 primary/passport inspection

stations and three baggage claim areas.

"The CBP facility is sized to handle up to 800 to 1,000 passengers per hour while the terminal can be built out to 12 gates in the future if necessary," says Massey.

The new concessions area within the international terminal is home to several well-known vendors. There are two Peet's Coffee Shops, a Chick-fil-A, a Pappasito's Cantina restaurant and bar, and a Yia Yia Mary's. A duty-free shop also resides in this area. In addition to these amenities, travelers are treated to seats with electrical connections. In fact, every other seat has an electrical connection.

MOVING THROUGH

While the majority of the project represents new construction (90 percent), portions of the space came from an existing security checkpoint and ticket hall in the middle of the existing terminal. According to Massey a new ticketing hall was built to allow crews to completely reconfigure and expand the existing space into a security checkpoint.

"The existing checkpoint at Hobby Airport was notorious for having very long wait times,"

Massey says. "They had eight lines of security but it was in a very cramped space, and the queuing for the security checkpoint was circuitous and not nearly adequate in size."

He notes that the existing floor plan was inefficient and restricted throughput. "There was an old stair tower in the way that was no longer being used, and some columns were holding up a floor above that was not being used," he says. "We took out the old parts of the building that were not used anymore to create more queue for the passengers, which allowed flow through the security lanes to increase in speed."

These changes allowed the airport to offer eight security lanes within the same building footprint. Massey points out there are currently three lanes in operation but the space offers enough room for five more.

FIND YOUR WAY

The layout within the facility needed to be intuitive as well, adds Massey. "We wanted to make sure people coming into the new portion of the check-in all were able to intuitively flow toward the security check point, so the architectural



design was done in a way to tell people which direction to go," he says.

The concourse is wide and very streamlined but within the commons area, designers used an architectural feature called a clerestory, which provided a high volume of space that runs across the ticketing hall. This area has a band of glass at the top that lets in light. Visitors' eyes are automatically drawn to that feature because it is tall and lets in a lot of light, and it's angled toward the security check point.

"As you stand in the space and look up, you see this band of glass and light shooting through the space and you intuitively want to follow this path," Massey says. "That path leads you to the security checkpoint, so we are using volume and light to direct people to where they need to go next."

The check in hall also uses Southwest's latest technology to further enhance the customer experience. "They have self-bagging devices so that passengers can print their own bag tags and put them on their bags themselves," says Massey. "This project represents the latest and greatest in processing technology as well as a simple and efficient architectural solution."

BUILT WITH SPEED

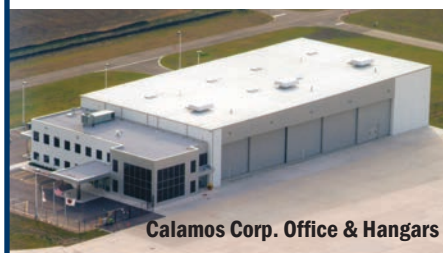
The project took a mere 34 months from start to finish—a very aggressive timetable for a project like this. Massey attributes successfully getting this project from A to Z this quickly toward a well integrated team. "Southwest used the same process they used at Love Field, which is to bring in a contractor very early in the design process," he says. "What this allows for is for the construction and design teams to work hand in hand, which allows construction to begin as early as possible and the design team to get things into the hands of contractors exactly when they need it to stay on schedule. Working hand in hand and side by side is critical to achieve timelines like this."

Massey adds a project like this isn't complicated to design and build. "The complication comes into the timing and how

it's put together," he says. "A lot of times it's not about designing a roof so that water stays out—that's fairly simple. It's about getting the right stakeholders together and putting the information in front of them so that decisions can be made."

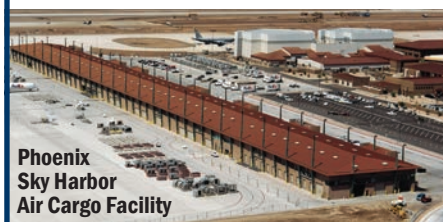


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3 Steps to a Cleaner Airport

What airport facility managers need to be doing in order to hire the right cleaning contractor for the job

An airport building is a vast facility. A single terminal may span 300,000 square feet while its ceilings may rise up to two stories high and the walls may consist primarily of glass. While all of these things add up to a spacious open facility that keeps the thousands of travelers passing through feeling comfortable, it also totals up to a massive space to maintain and keep clean.

"There are a number of factors that pose challenges when trying to keep an airport clean. One is the simple fact that airports can be extremely busy ... and schedules change a lot. Cleaning crews are tasked to work around large volumes of people," says Steve Ashkin, president of The Ashkin Group, a national consulting group formed to help green the cleaning industry.

While traditionally airports hire a cleaning contractor rather than maintain an in-house cleaning staff, they still play a role in keeping such a spacious and crowded space clean. It is the airport facility manager's responsibility to hire the right cleaning contractor for the job, and this is where Ashkin offers some key advice.

"I recommend a three-step bidding process," he says. "This way only the most qualified vendors are considered for the job. The last thing you want is to award a cleaning contract and find out after the fact that the contractor is unable to complete the job to your specifications."

STEP ONE: REQUEST SPECIFIC INFO

"Airports will attract plenty of interest for their cleaning needs," says Ashkin. "Who wouldn't want to get into an airport? These are lucrative contracts."

Because it's true that a multi-year, high-dollar contract will attract volumes of bidders—both good and bad, qualified and under-qualified, Ashkin recommends airports take steps to sift out the wheat from the chaff. He recommends asking vendors to answer key questions during the Request for Information (RFI) process, which will enable airports to prequalify potential vendors.

He says airport facility managers should ask potential bidders to supply information about their experience cleaning airports, their management systems, their hiring and training programs, their green cleaning experience and certifications, and their work with waste collection and recycling. They also should acquire



information on how long they've been in business, their experience complying with federal and state regulations, insurance coverage, and a list of references. "These are all things that need to be in place in order to meet the cleaning needs of an airport," he says.

"Generally when you get very specific, small contractors who are not already doing these things will deselect from the process," Ashkin adds. "The whole purpose of this step is that instead of getting 100 bids, you will get 10. If you get 100 bids and only 10 are qualified, you'll waste a lot of time evaluating each one."

"The last thing you want is to award a cleaning contract and find out after the fact that the contractor is unable to complete the job to your specifications."

**STEVE ASHKIN, PRESIDENT,
THE ASHKIN GROUP**



STEP TWO: THE PREBID MEETING

Once the airport facility manager has evaluated each vendor's RFI against set criteria, the next step is to invite qualified vendors to a prebid meeting at the airport.

"It is important at that meeting to discuss your expectations in as great of detail as possible," Ashkin says. "Airports operate 24 hours a day. Do you want cleaners on the floor cleaning throughout the day or only at specific times? Do restrooms get cleaned in the morning and at night, or at periodic intervals throughout the day? How often do floors need to be washed and vacuumed? Will the vendor be required to clean the windows as well? The airport facilities manager needs to clearly detail what they expect."

Because this is also an opportunity for vendors to evaluate the airport as a potential client, it is important to take the time to provide them with detailed information about the facility. What is the cleanable square footage? How much traffic moves through the airport in a single day? How many restrooms need to be cleaned? What types of flooring must be cared for?

Finally, most airports strive to embrace green cleaning, not because it's better for occupant health per se, but rather because they are

LEED EB O&M V.4 GREEN CLEANING REQUIREMENTS



- ▶ **Purchase sustainable cleaning** and hard floor and carpet care products meeting the sustainability criteria outlined in IEQ Credit 3.3: Green Cleaning—Purchase of Sustainable Cleaning Products and Materials.
- ▶ **Purchase cleaning equipment meeting the sustainability criteria** outlined in IEQ Credit 3.4: Green Cleaning—Sustainable Cleaning Equipment.
- ▶ **Establish standard operating procedures** addressing how an effective cleaning and hard floor and carpet maintenance system will be consistently utilized, managed and audited.
- ▶ **Develop strategies for promoting and improving hand hygiene**, including both handwashing and the use of alcohol-based waterless hand sanitizers.
- ▶ **Develop guidelines addressing the safe handling and storage of cleaning chemicals** used in the building, including a plan for managing hazardous spills or mishandling incidents.
- ▶ **Develop requirements for staffing and training** of maintenance personnel appropriate to the needs of the building. Specifically address the training of maintenance personnel in the hazards of use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging.
- ▶ **Provide for collecting occupant feedback** and continuous improvement to evaluate new technologies, procedures and processes.
- ▶ **Provide** an appropriate staffing plan.
- ▶ **Implement a training of maintenance personnel** in the hazards, use, maintenance, disposal and recycling of cleaning chemicals, dispensing equipment and packaging.
- ▶ **Use chemical concentrates** with appropriate dilution systems to minimize chemical use wherever possible.
- ▶ **Use sustainable cleaning materials**, products, equipment, janitorial paper products and trash bags (including microfiber tools and wipes).
- ▶ **Use sustainable cleaning and hard floor and carpet care products** meeting the sustainability criteria outlined in IEQ Credits 3.3: Green Cleaning—Purchase of Sustainable Cleaning Products and Materials.
- ▶ **Use cleaning equipment** meeting the sustainability criteria outlined in IEQ Credit 3.4: Green Cleaning—Sustainable Cleaning Equipment.

large consumers of cleaning products and as a government entity they have a responsibility to reduce environmental impacts to the community and to save money. Thus Ashkin says it's also important to specifically detail what the airport's requirements are for green cleaning. He adds it's not necessary to reinvent the wheel, and recommends pulling language found in LEED v4 for Building Operations and Maintenance (EB O&M) to describe the airport's green cleaning requirements.

"You can't just say you want a green cleaning program. You need to be specific," Ashkin says. "Use LEED EB O&M as a reference and ask that the vendor have specific certifications, such as Green Seal 42 or ISSA's CIMS certification. If a

contractor has these certifications, they will meet green cleaning needs. Both programs are built around the requirements of LEED EB O&M."

Finally provide information on how the airport plans to measure the results of their cleaning efforts. Will the evaluation be based on passenger complaints or quality inspections? "The better job the airport articulates this, the easier it is to get everyone on the same page," Ashkin says.

STEP 3: REQUEST FOR PROPOSAL

"By the time you get to the selection process, all of your vendors will be prequalified," says Ashkin. "They've all attended a prebid meeting and everyone has had an opportunity to size each other up."

FACILITY MAINTENANCE

At this point, the airport puts their needs out to bid and the vendors who've participated in this process thus far submit their proposals. "Out of 10 prebid meetings, don't be surprised if you only receive five proposals," says Ashkin. "This is OK. All bidders are equal at this point, and you are now selecting from the best of the best."

Before making a final selection, Ashkin recommends asking a few more

questions. It's important to know if the vendor has a site manager with airport experience in place. "This is extremely valuable," he says. "Even if a vendor has all the right things in place in terms of cleaning systems and training, if they don't have an experienced site manager, they may still be unable to carry out the work. A strong seasoned person with experience working in airports is a must."

He also recommends gathering specifics about the vendor's training program for workers. This program should cover the specifics of cleaning and working in an airport environment as well as be provided in a language cleaners will understand. "An all-English training program won't work well if the majority of the workers speak Spanish," Ashkin explains. "The training materials need to be specific to airports as well. Airports are different than office buildings."

Knowing whether the company is committed to ongoing innovation is also important, he adds. "The cleaning industry is constantly changing," he says. "Airports are big facilities and can use new equipment designed to make the job more effective and efficient. You want to be sure the contractor is constantly looking at new developments and considering them for use in your facility," he says.

"Cleaning is cleaning, but a bidder needs to understand what it takes to clean an airport," says Ashkin. "Following these three steps helps airports get the level of clean that they need. If you accept the low bid without doing your due diligence, and you are unhappy afterward, I hate to say it but you get what you pay for. Hire a consultant before bidding begins to know exactly what's needed to keep the facility clean. Know what level of appearance passengers expect and exactly what it will cost per square foot to get you there."



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I've Got A Secret!

Airport managers, did you know that Forbes—page 96—actually suggests tax-free airport revenue bonds for “high-net-worth” people?

Listen carefully. I have a big secret to tell you.

Every city and town in this country has a secret building, hidden away in plain site. Obviously, most people are unaware of this. The secret building is called the library!

More people used the library decades ago, before Google came along. I still use it today. Why? Well, where else can I read my favorite magazines absolutely free? Or, borrow every best seller at no charge (OK, OK, if you bring it back a day late they may charge you a quarter). In the last week I spent at least four hours in the library. One magazine, *Forbes*, November 23, gave me the material for this column.

Airport managers, did you know that *Forbes*—page 96—actually suggests tax-free airport revenue bonds for “high-net-worth” people? There are caveats, of course, but this article should be read by every airport manager/staff, and probably shown to potential investors. If you give a speech to the local Rotary why not take this article with you and brag about it? Perhaps your local media would be interested in mentioning this.

On Page 78 of the same issue is a fascinating article on the “Subscription Economy.” It claims that selling by subscription is a great way to create regular income. So what can be sold by subscription? Evidently, almost everything, and the article lists many examples that you probably never thought of—I surely hadn't.

OTOH, chances are that you currently sell hangar space by subscription. Should you consider selling parking for cars the same way? I dunno, but it might be a good idea to read this article, too. It would be worth it just to get the story of how one of the richest people in Asia saved his company by subscription selling.

What about that business jet that drops in on a regular basis? Would he buy fuel by subscription? If that company paid so much a month for fuel you could probably count on it buying at your place on a regular basis. How 'bout catering? There are problems to figure out on in all new ideas, but it might be worth it. In some cases you might

want to encourage your FBOs to sell by subscription.

Another pleasant tidbit—this *Forbes* included a big ad for the Gulfstream G650 jet! Hey, they say that jet cost \$65 million! It's just nice to know that business aviation is being advertised at such a high level at no cost to us. (BTW, the current *Fortune* magazine also advertises the G650.)

Fortune, Forbes, The Economist, Inc, The Wall Street Journal and other publications provide great business information/ideas. Yes, you can subscribe to all of them, but I find it easier and more productive to read them away from the interruptions at the office.

One more little jewel I picked up at the library. “Disrupters” may be the buzz words of the future. I'm not gonna bet on that, but those words surely seem to be creeping into the business language. If I'm wrong, I'll never mention it again. If right, I'll proclaim it loudly and often!



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Spotlight on Safety

American Aero's Robert Agostino shares his views on safety at the FBO and stresses IS-BAO and IS-BAH certification is a must for safety-conscious FBOs

Robert Agostino started flying jets when he was 22 years old and has been flying globally for more than four decades. Safety quickly became a major focus for him because, as a young aviator, he encountered several aviation accidents that left him with a lasting impression.

Later, as the head of flight operations for Bombardier Learjet, Agostino was part of a team studying how jet accidents took place. In the team's review of approximately 400 different accidents, involving of all types of airplanes, Agostino started to draw some parallels. After consulting with experts with the National Transportation Safety Board, the team determined there were only five or six different types of aviation accidents that just keep reoccurring.

Agostino suggested employing something the military already used called a safety stand-down. In this situation, if a certain type of aircraft has an accident and it is followed by another one, the military grounds that fleet of airplanes. "They stand them down, so they can understand the most probable cause," Agostino explains.

This suggestion was instrumental in creating a program, called the Learjet Safety Standdown, which is still being used by Bombardier today.

"The idea was to present unvarnished and essential information to the flying public, and it was free of charge, because safety should not have a cost to it," he says.

Later Agostino joined American Aero FTW as its vice president. Here at this impressive FBO located at Meacham International Airport, Agostino has had an opportunity to bring his extensive safety background to the FBO. Under his helm, all of American Aero FTW's line personnel have completed intensive training through the Safety First program conducted by the National Air Transportation Association. And, in 2015, American Aero FTW became the first FBO in the Western Hemisphere to achieve the International Standard For Business Aircraft Handling (IS-BAH), a rigorous safety and ground handling accreditation from the International Business Aviation Council.

Airport Business recently spoke with Agostino about aviation safety and IS-BAH and IS-BAO's role in improving safety at the FBO.



CAN YOU DEFINE WHAT IS MEANT BY SAFETY IN AVIATION?

Safety in and of itself does not exist. A lot of people say, 'You really believe in safety.' No. I believe in competency. Safety is a resultant of competency. Safety in and of itself is not an entity. Competency is an entity. The resultant of that competency is safety. The question then becomes, 'how do you make people more competent?'

WHAT ARE THE PRIMARY TYPES OF AVIATION ACCIDENTS? AND WHAT CAN BE DONE ABOUT THEM?

There are accidents that are related to weather. There are accidents related to mechanical failure. There are accidents related to air traffic control error.

The major contributor to accidents is human error. It is often referred to as pilot error. But that's way too narrow of a focus. Many times an error occurs because of communication differences among the pilot, the copilot and the flight engineer.

Understanding how to prevent an accident requires us to fully understand human factors. How do we map out our own weaknesses? How do we track our own error patterns? What things can we put in place to help prevent those types of errors? What can be done to improve safety?

We have things called standard operating procedures. Standard operating procedures, in

the aviation business as in the medical field, are absolutely essential. They are critically essential and they need to be developed and executed properly. But that's only part of the formula.

The other part of the formula is understanding yourself and the people around you, so that communication can be more easily understood and anticipated.

WHERE IS SAFETY AT IN THE FBO BUSINESS?

We've been studying human error as it relates to cockpits for a very, very long time. To a lesser degree, we've been studying human error as it relates to the surgical operating room, but it's almost unknown in the FBO business.

What aviation does very well is put structure around organization, process and planning. You have a flight crew that meticulously plans a flight from point A to point B. They know when they're going to arrive, plus or minus three or four minutes. They should know how much fuel they're going to land with, within just a few percent.

But when the airplane lands, we turn the airplane over to operators, FBOs, which move the aircraft, tow the aircraft, intermingle it among other aircraft, fuel the aircraft, provide services that require the opening and closing of various doors and access points on the airplane, and the risk processes aren't there.

For this reason, there is a far greater proba-

ON SAFETY VS. COMPETENCY...

Safety in itself does not exist. ... Safety in itself is not an entity. Competency is an entity. The resultant of that competency is safety.

ON SAFETY AT THE AVERAGE FBO ...

When the airplane lands, we turn the airplane over to ... FBOs, which move the aircraft, tow the aircraft, intermingle it among other aircraft, fuel the aircraft ... and the risk processes aren't there.

ON THE BENEFITS OF IS-BAH CERTIFICATION ...

In my mind's eye, it is definitely a delineator. It distinguishes an FBO as one that is truly interested in the safety of passengers and aircraft.

ON WHY MORE FBOS ARE NOT IS-BAH CERTIFIED ...

I think some FBO operators view this as just another expense. But I assure you, that for the amount of expense that is incurred, the benefits far outweigh the cost.

ALL ABOUT AGOSTINO

- **Aviation's Draw.** I think I wanted to fly before I was born. It's just something that was always there. I don't know what drew me to it, but I know that I'm very fortunate to have been able to spend so many years doing what I love. We've had rather long days, but I don't think I've ever worked a day in my life.
- **Favorite Aviation Book.** "The Wright Brothers" by David McCullough. It really ties things together. Everybody knows who the Wright brothers are, but no one ever remembers the name of Charlie Taylor. Charlie Taylor was the mechanic who built the engine. Without Charlie Taylor, there wouldn't have been a first flight. There book covers a lot of things that are lost in history.
- **Favorite Aircraft.** I've had the privilege in flight tests to fly the first of a kind. When I graduated from college, I bought a little airplane, and it's called an AA-1A, a Grumman American Aviation Yankee. I've had that airplane for 43 years. I don't know that I have a favorite, but I will tell you that the 20 Series Learjets and Gulfstreams have to be among my favorites
- **Spare Time Flight.** Aviation, for me, is a lifestyle. It's part of who I am, and so if I'm not flying, I'm reading about it. Or, I'll fly my little airplane, and go visit friends. I'm not a man of many parts.

bility of a line operator backing my airplane into a hanger, or into another airplane, than I do of hitting another airplane in flight.

WHY AREN'T MORE FBOS IS-BAH CERTIFIED?

The IS-BAH program is fairly new. American Aero was the first FBO in the Western Hemisphere to achieve IS-BAH Level I. The parent organization for American Aero has been IS-BAO Level III, which is the highest rating you can achieve, for nine years or so. We were one of the very first to reach Level III.

We had developed policies and programs prior to the inception of IS-BAH, so our transition to the new international standard was reasonably easy.

Other FBOs have been slower to adopt IS-BAO and now IS-BAH. Remember, an FBO is a commercial enterprise, so anything that's viewed by some organizations as increasing

overhead is generally not embraced very rapidly.

At American Aero, we believe that the cost of training, policy development and policy adherence is more than offset by the potential for damage to aircraft, insurance claims or injury to personnel.

I think some FBO operators view this as just another expense. But I assure you, that for the amount of expense that is incurred, the benefits far outweigh the cost.

Consider this: In the industry, the standard is to have three people—two wing walkers and somebody on the tug—to move an airplane. But FBOs do not always adhere to that. I've seen \$50 million airplanes being towed with one person, and they drove the wing into the side of a building. Then there's \$6-7 million damage because they had one guy doing the work of three.

We have serious things happening at FBOs—fueling, deicing, servicing—but there seems to be a lack of intellectual awareness

in the aviation business that says, "Look, if all of these strategies designed to protect aircraft passengers and crew are effective, why do they stop when the airplane parks at an FBO? We have very serious things taking place at FBOs: Fueling, deicing, servicing.

WHY DID AMERICAN AERO PURSUE IS-BAH CERTIFICATION?

IS-BAH seemed like a natural fit from the start. Our parent company has been IS-BAO Level III for nearly nine years so it just seemed like a logical progression. We have a bright young general manager in Riggs Brown, who leads a team of customer-oriented staff members eager to embrace this accreditation and worked diligently to make it happen.

I also believe it gives our FBO a competitive edge. If pilots are landing at an airport with multiple FBOs, and one is IS-BAH certified, and the others aren't, I can tell you where they are going

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to park their airplane.

The whole idea of IS-BAH is to expose people to ideas and concepts and then develop processes around those. Our people, more often than not, were shaking their heads saying, 'Boy, that makes sense. I never thought of that.'

When we talk about human factors and how processes take place, IS-BAH breaks it down to an operational, usable, practical level.

WHAT CAN FBOS EXPECT IN THE IS-BAH CERTIFICATION PROCESS?

They are going to learn a lot about themselves. They're going to learn about processes they currently have in place that are well positioned and well thought out, and they may learn some things about themselves that they don't like. Those are going to be trying to some organizations where the boss wants to do something one way, but it goes against everything that makes sense.

If you have people who have a propensity to want to work together as a team they will find IS-BAH certification to be an incredibly useful process that actually pulls people closer together. If you have an organization where that's not the case, they may find it less attractive.

But if somebody told you, 'Look, by adopting these principles--that you yourself are going to develop--you can reduce your risk of harm to yourself and coworkers, and the risk of liability

exposure to your employer,' why wouldn't you do it?

WHAT ARE SOME OTHER BENEFITS TO IS-BAH CERTIFICATION?

In my mind's eye, it is definitely a delineator. It distinguishes an FBO as one that is truly interested in the safety of passengers and aircraft. You can't find an FBO, or any other organization, that doesn't say exactly the same thing. But how do you prove their claims as fact? How are your words congruent with your actions? How does a consumer determine that congruency?

One of the ways is IS-BAH. Potential customers can say, 'Oh, this FBO is IS-BAH. I know that means they put more effort into training and process planning than an FBO that isn't.' That seems to indicate that there might be some congruency between what the FBO says they do and what the consumer will see.

AFTER IS-BAH, HOW DO YOU ENSURE SAFETY IS A WAY OF LIFE?

Anybody can say they've got great safety procedures, but with IS-BAH, each level becomes progressively more difficult. Level I essentially says, 'Look, we've developed policies and practices

that are consistent with the highest international standards.' But as you move up, and as these levels become more complicated, as they will with IS-BAH, the question becomes are you living those policies?

How do we do that? Many times people are afraid to report error because of consequence. In many instances, when people are given the choice between doing the right thing or looking out after their own self-interests, the latter wins.

IS-BAH is based on a non-punitive environment. That doesn't mean there are not penalties for criminal activity, incompetency or negligence. The whole concept of IS-BAO and IS-BAH is to say, 'Look, we want you to report non-compliance. We want to understand non-compliance. You're not going to lose your job if you're non-compliant.' We want to understand why these things are occurring. Do we need more training? Do we need a different kind of training? Are we putting the wrong people in the wrong assignments?



THE PORT AUTHORITY OF NY & NJ REQUEST FOR PRE-QUALIFICATIONS FOR AIRPORT IDENTITY MANAGEMENT AND CREDENTIALING ISSUANCE SYSTEM

Sealed Pre-Qualification responses for the following contract will be accepted at the address indicated below until **2:00 PM** on the due date indicated. Send Bids To: The Port Authority of NY & NJ, Attn: BID/RFP CUSTODIAN, Procurement Department, 4 World Trade Center, 150 Greenwich Street, 21st Floor, New York, NY 10007.

The Port Authority of New York and New Jersey wishes to prequalify firms to receive a Request for Proposals (RFP) for the provision, installation and maintenance of an Identity Management and Credentialing System at LaGuardia Airport, John F. Kennedy Airport, Newark Liberty International Airport, and Stewart International Airport. It is anticipated, but not guaranteed, that the RFP will be issued to prequalified firms in the first quarter of 2016.

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FBO Best Practices

The first step in solid FBO management is assembling a dream team.

As the years go by, it's common to look back at a specific point in one's career and reflect on the fact that they were once part of a team of coworkers that constituted a "dream team" of sorts. Perhaps it was just a moment in time where everyone complemented each other's strengths; where a group of people truly worked so well together that their actions seemed as one. Even if not altogether perfect at the time, it sure makes for great memories in later years.

Yet, as fans of professional sports teams can attest, a group of all-stars does not necessarily coalesce into a great team. That is to say, a team is not simply the sum of its parts. A winning team is created by putting those with complementary skill sets together in an environment where their unique contributions are valued. In the FBO field there exists just such a formula, at least for line service.

THE RULE OF THIRDS

Few in the aviation field make a career of line service. Weather, whirling propellers and whining engines create a cacophony that for most would result in miserable working conditions. It is a gritty, yet rewarding, endeavor for those who choose it. For others line service is a rite of passage; their destination is nothing short of the cockpit itself. And, for a different group altogether, it is a post-career landing pad, another deployment of sorts.

Yet, it is these seemingly disparate groups of employees that can complement each other and make up a successful line service team. Achieving the perfect balance within that formula is best achieved using a rule of thirds.

The first third, and arguably the most important group in building a successful line service team, are career line service employees, or "lifers." While perhaps not the most HR-friendly term, it is in fact one of the highest compliments that can be made of a career line service employee. Lifers are the familiar faces on the ramp to pilots and passengers, those who have worked line for years, day in and day out. They will be the same faces on the ramp when the other two groups come and go, and are, in a word, invaluable.

The lifer's contribution to line service is far beyond just an expression of seniority. They actively mentor newer line service employees, greet passengers by name because they have known them for years, and seldom make a mistake. They not only know what a Hansa Jet is, but



Photo credit: Elliott Aviation

can recall the last time they fueled one. These are employees that seldom take vacation, but when they do, it is to Oshkosh or Reno. And, they are who a savvy FBO manager wants the most when the chips are down. In short, lifers have a ramp presence to rival a Gulfstream.

The next third in the line service dream team formula is straightforward: former or current military personnel. Whether reservists, recently retired or in transition, those with a military background bring something uniquely special to line service. Unsurprisingly, they're easy to pick out at an FBO. They are always on time, in uniform, and, it would appear, having the time of their life. This is a group who knows how to follow the rules and have fun at the same time. Their punctuality is a model for the other employees within line service, their story telling is second-to-none, and they can parallel park a Piaggio with their eyes closed. While anecdotal, former naval flight deck personnel sometimes gravitate to line service, and their inherent spatial awareness is unrivaled. "Sure, it will fit in the hangar," they'll say, and it always does.

Finally, the last third are those for whom line service is a stepping stone. Future pilots, mechanics or those merely interested in aviation but unsure where to start make up this category.

It is also this group of employees that has the highest rate of turnover at the FBO level. It is this turnover that gives them the moniker "newbie."

To dispel a commonly held myth turnover isn't bad, especially if it means the employee leaving is moving toward a long-held career goal. Said another way, line service is aviation's front door. Without turnover that door would remain closed. Still, FBO managers or HR personnel may be reluctant to hire a pilot-in-training because they realize that within a year or two that employee will inevitably move on. However, what the hiring manager misses in doing so is hiring the most engaged employee possible; one who when they leave the FBO as an employee will become the FBO's customer.

For those presently working line service and on the path to becoming a pilot or a mechanic, every customer visiting the FBO represents a potential future employer. For this reason alone, no one working the ramp has more of a vested interest in doing well than this group of employees. Yet, because this group by definition has higher turnover among their ranks, they need the mentoring and watchful eyes of the lifers. Newbies learn the importance of a strong work ethos from the middle third—the former military. And yes, newbies contribute

something even the grizzled veterans of line service occasionally need: inspiration.

Bright eyes and constant questions aside, newer employees of line service are excited to be there, for they are at the start of their aviation careers looking ahead. That wonderment can provide a renewing energy to a line service department. Plus, of course, sending a newbie on ridiculous errands such as searching "for 50 feet of flight line" never gets old for lifers.

These varied groups of employees each contribute in a complementary way to line service, and to each other. Expressed as a formula, represented in even thirds, lifers, those with a military background and newbies may be the most perfect assemblage of a dream team ever to grace an FBO's ramp. Respectively, they are the glue that holds the FBO together, the esprit de corps, and a constant source of renewable energy.



ABOUT THE AUTHOR

Douglas Wilson, President & Founder, FBO Partners LLC

Douglas Wilson is the president and founder of FBO Partners LLC, an aviation consulting firm that provides asset management of hangar facilities for FBOs, and offers specialized consulting in due diligence, contract life-cycle management, and other FBO disciplines. Wilson can be reached at douglas.wilson@fbopartners.com.

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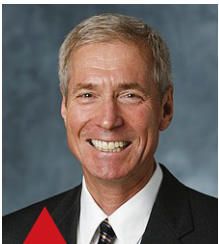


GARY/CHICAGO AIRPORT EXPANDS FUEL FARM

Gary/Chicago International Airport completes an expansion of its fuel farm, which resolves a controversy that forced the airport's newest FBO, B. Coleman Aviation, to order and store fuel by the truckload. The fuel farm is part of an agreement between the airport authority and B. Coleman, which authorized spending up to \$650,000 to increase fuel farm capacity by 40,000 gallons. As part of the agreement, B. Coleman was to finance the cost of the project then get a discount on fuel flowage fees normally paid to the airport to essentially pay themselves back. The agreement stated the airport would retain ownership of the entire fuel farm. When all was said and done, the actual cost of the project came to \$547,568. Gary Jet Center, the airport's other FBO, sued over the fuel farm issue in late 2013, citing its own lease, which guaranteed it sufficient fuel farm capacity to serve Boeing Corp. and other customers. That lease provision basically shut B. Coleman out of the fuel farm it had paid for. The airport authority eventually settled with Gary Jet Center, promising to respect that lease provision and to work with B. Coleman to expand the fuel farm.



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26
The varieties of plants found growing in JetBlue's farm at JFK International Airport.

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