

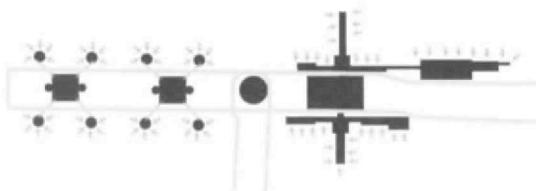
# FLIGHTMARE

AIR TRAVEL CHANGES FAST. AIRPORT BUILDINGS DON'T.



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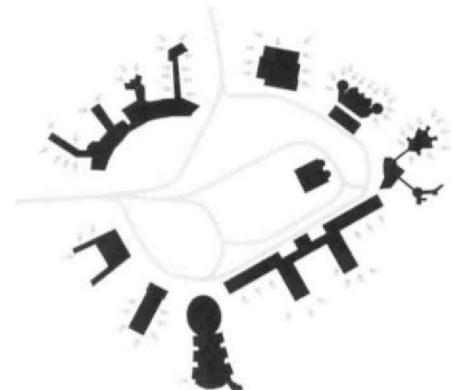
**IAH** as of 1996



**HOU** as of 1995



**JFK** as of 1994



BY JOEL WARREN BARNA

**"DISMAL" AND "AWFUL":** That is the impression that Houston's two major airports gave travelers over most of the last decade, according to the head of the Houston Airport System.

Since 1998, Richard Vacar has been director of the Houston Airport System (HAS), which administers the city's two passenger facilities, George Bush Intercontinental Airport and Hobby Airport, as well as Ellington Field, the former military base now used for civilian general aviation. Says Vacar, "I started with HAS in 1995 and became director in 1998. It struck me then that the appearance of both Hobby and Bush Intercontinental both was dismal. The buildings weren't clean, and there was a general beige look from all that exposed concrete. The interiors were worse than the exteriors, with all the brown terrazzo from the 1960s. The lighting was poor, and things were generally dark. Compare to other, more modern airports, they were awful."

Vacar, armed with a 1998-2004 capital-expenditures budget that tops \$3 billion — compared with only about \$60 million per year on average from 1988 to 1997 — is working to change the way travelers perceive Houston's airports. And it's a good thing, because there are so many travelers. Without a lot of public fanfare, passenger traffic at Bush Intercontinental Airport has been growing by seven percent per year for the last ten years — twice the national average, according to Vacar. More than 41 million passengers passed through the airport in 2000, compared with just over 21 million in 1991. (The numbers were down for 2001 and

2002, as they were worldwide in the wake of the terrorist attacks of September 11, 2001.)

Bush Intercontinental has become the eleventh busiest airport in the country in overall passenger count. In addition, it grew more than 10 percent per year in international travel over the last decade — from two million passengers in 1990 to more than six million in 2000. Now Bush Intercontinental ranks as the nation's eighth largest international airport, with more international travel than Dallas/Forth Worth (which has nearly twice the overall boardings of Houston). And those passenger numbers, combined with a similar boom in cargo operations, represent big business.

Using economic models from the Federal Aviation Administration, HAS claims \$7.8 billion in annual economic impact in the Houston area, with an amazing 90,000 jobs deriving from airlines, rental cars, airport services, construction, cargo operations, tourism that the airports stimulate, and other related functions.

The airports themselves bring in more than \$183 million each year from rents and fees paid by airlines and concessionaires; they cost on the order of \$103 million to operate (or so say figures from HAS's 1998 economic development study). The excess goes to fund bonds for capital improvements, of which a prodigious number are underway or planned. Houston's climate, its location on the Gulf of Mexico, and its connections to the oil and gas and petrochemical industries all factor into the growth of air travel to and from and through the area. Along with airline deregulation and changing travel habits around the coun-

try, these factors promise considerable stimulus to growth as well.

The earliest commercial air service to Houston started in the 1920s at a private airport owned by the W.T. Carter Lumber company. The site was acquired in 1937 by the City of Houston. A moderne terminal building with what was at the time an imposing octagonal central tower was built in 1940 (it's still visible on the airport grounds), facing onto crossing runways that are still in use.

In 1955, that building was replaced by the current airport terminal, a V-shaped building faced in pink marble, folded around a central parking lot on the passenger side and flaring out to accommodate airline gates on the runway side. There was considerable period charm: A sweeping curved glass wall looked out onto the runways from the central restaurant and bar, and visitors were welcome to go up on the terminal's roof to wave to arriving and departing passengers. In 1967, the city renamed the airport in honor of William P. Hobby, former lieutenant governor (1914-1917) and governor (1917-1920) of Texas and owner of the *Houston Post*.

More than a decade before this name change, the area around the intersections of Telephone Road, Old Spanish Trail, and Airport Boulevard had been filled in by residential development, and Hobby Airport had no way to expand to handle the larger and faster airplanes that were then coming into use.

The city began construction of Houston Intercontinental Airport in the mid-1960s. It opened in June 1969; Hobby Airport closed the same day.

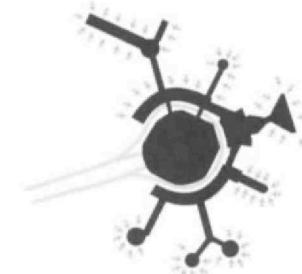
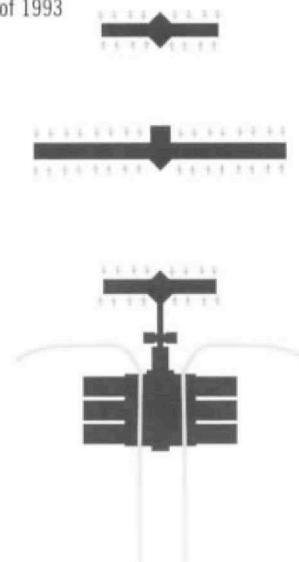
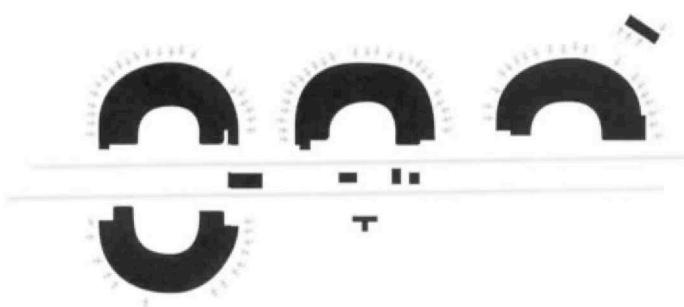
Intercontinental's huge site — nearly 10,000 acres of oak and pine forest were cleared — was planned for jet airliners and plenty of growth. Gone was Hobby Airport's friendly scale and relaxed relationship to the airline operations side. The first two buildings to go up, Terminals A and B, were enormous — 250,000 square feet each, with cavernous spaces and a closed-in, futuristic feeling. Passengers could park on surface lots or drive up ramps and park atop the terminals themselves, something perfect for a city in love with automobiles. At the same time, little plastic robot trains ran between the buildings — an innovation at the time. Exposed concrete provided the frame, the walls' surfaces, and the coffered ceilings, which glimmered with a distant, chilly fluorescent light. The airplanes were reached by pods at the buildings' corners, which were themselves reached through futuristic, windowless corridors thrusting out into a scaleless space. The passenger-screening system mandated in 1973 following the hijacking of several flights to Cuba (one of which had originated in Houston) fit right in with the spaces.

This was an airport for the new jet age, when the future seemed to promise nothing but non-stop, long-haul flights linking all the major cities in the world. According to architect Richard Maxwell, head of the aviation division of Gensler's Houston office, other airports built in the 1960s used different strategies to handle passengers. At Dulles Airport, outside Washington, D.C., passengers boarded mobile lounges to get to their planes, which could be parked anywhere on the broad service area. At New York's JFK

DFW as of 1995

DEN as of 1993

SFO as of 1993





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Airport, says Maxwell, the emphasis was on small buildings for each carrier, with short walkways in between. At Dallas/Forth Worth Airport, each terminal was built as an arc, with parking spots in the curve of the arc making it possible to leave one's car right outside the departure gate. "The emphasis was on customer convenience, which meant the shortest walking distance possible," says Maxwell. "Then came deregulation, and the air carriers turned to 'hubbing,' and none of those terminal plans worked particularly well anymore."

At Houston Intercontinental, a third terminal, designated as C and topping 500,000 square feet, opened in 1981. In the continuing evolution of airport design, it had become clear that the corner "service connector" pods could not be easily reconfigured either for larger airplanes or for smaller, and more numerous, ones. Terminal C had broad, T-shaped concourses. A smaller Terminal D, for international travel, opened in 1990. Really just one long concourse, it was named for the late Houston congressman Mickey Leland.

An economic slump hit Houston in the late 1980s and lasted for almost ten years. At the same time, the airline industry was feeling the effects of the 1978 federal airline deregulation act. Eastern, Braniff, National, Texas International, People Express, Pan American, and Western airlines all went out of business or were absorbed by competitors. Among the survivors, Continental Airlines reshaped itself into one of the hub-and-spoke carriers that were coming to dominate the industry. And Houston became Continental's hub.

"Continental went through two bankruptcies," says Vacar. "Their inability to contribute had a lot to do with keeping the old look of [Intercontinental]. In 1994, a new team started turning Continental around, and the airline's growth set off the big expansion."

The 1980s and early 1990s had seen a number of splashy airport expansions and renovations, from Chicago's O'Hare to Atlanta's Hartsfield International Airport, the world's busiest with more than 80 million annual passengers. Hub-and-spoke system designs meant that most passengers were taking connecting flights, and the airports where these passengers waited for their connections were shaped to place greater and greater emphasis on passenger amenities such as bookstores, restaurants, and other services. Intercontinental's isolated terminals were suddenly outdated. In the original terminals only half a dozen gates lay behind each security checkpoint, meaning that changing planes usually required going through security, and often required schlepping your carry-on bags to another terminal. "The airport complex reduces neatly to a flow diagram that operates both laterally and vertically to minimize the distance travelers must walk within a terminal or between terminals," Stephen Fox notes in his *Houston Architecture Guide*. The old direct-flight model was built into Intercontinental's master plan, just as the hub-and-spoke model was built into the design of more modern airports such as Denver's Stapleton Airport.

By the late 1990s, new terminals in Pittsburgh, San Francisco, Washington, D.C., and Denver had essentially become retail malls, destinations in themselves. Gensler's Maxwell notes that following the 9/11 attacks, and the subsequent tightening of airport security, these airport malls have become expensive albatrosses, sealed off from the unticketed masses that were supposed to make them profitable.

The improvements to George Bush Intercontinental (as it has been known since 1997) started in 1998, in what was to have been a \$1.9 billion capital improvement program. New concourses were built on the south side of Terminal A, replacing the connector pods. New

wall coverings and new lighting were installed. A new, 5,600-car parking garage, replacing the surface lot, was built between Terminals A and B.

Terminal B was renovated; its corner pods were left in place, since they work for well for the small "regional jets" operated by Continental for flights to medium-sized cities.

Terminals C and D will be renovated in the next three years — and none too soon, as the boxy, crowded, poorly lit and poorly ventilated spaces of Terminal C are among the most unpleasant in the country. A new consolidated rental-car terminal is under construction. Federal funds will pay for a new international inspections building (for customs and freight inspections). And Continental will spend \$800 million for a new 500,000-square-foot Terminal E. The new international building and Terminal E are to open by the end of 2004.

More changes are happening on the airline operations side of the airport. Currently, three runways serve Bush Intercontinental; two more are being added. And massive changes now underway will address the new federal security requirements. In September 2002, HAS announced that its two airports were among those requesting that the government delay its December 31, 2002, deadline for 100 percent screening of passenger luggage. With some 429 airports in the U.S., there were widespread doubts that needed equipment and personnel could be put in place in time. Earlier in 2002, managers of the nation's 100 largest airports jointly petitioned the government to delay the deadline.

Finally, Intercontinental's cargo facilities are expanding significantly on a 120-acre site to the northeast of the terminal complex (the expansion also replaces some facilities demolished for runway expansion). Three private companies — Trammell Crow, Aeroterm, and Lynx Holdings — are investing \$40 million to

build ramp space for 20 wide-body aircraft; three new warehouses will provide 550,000 square feet of space for air-cargo processing and distribution.

Hobby Airport, which shut down in 1969 and was supposed to have withered away, reopened in 1971 when Southwest Airlines set up shop there. Southwest has been the most consistently profitable carrier of the deregulation era, focusing from the start on short routes, low fares, and few frills, and Hobby Airport has become its single biggest hub. Though traffic at Hobby, limited by the difficulties of expanding the airport's operations, grew only 1 percent per year during the last decade, the airport nonetheless served 8.6 million passengers in 2001, making it the country's 41st busiest airport.

Several improvements have taken place and are planned at Hobby. An expanded parking garage opened in the late 1990s, dwarfing and all but blocking out the pink marble façade of the terminal building. New concourses under construction will greatly expand the terminal's capacity. Southwest Airlines now operates 13 gates in Concourses A and C; a new concourse, currently under construction will provide 24 gates for Southwest, while renovations to Concourse A will provide 12 gates for the seven other airlines operating from Hobby.

All in all, more than \$3 billion is being spent at Bush Intercontinental and Hobby airports, with the goal of changing what Richard Vacar has condemned as the "dismal" and "awful" visitor experiences of the past into something more positive. At the same time, passenger numbers are expected to grow 4 percent per year, doubling today's passenger count by 2017. Piling on the numbers while absorbing the effects of more stringent security measures will certainly test the capacity of new wall coverings, lighting, and art work to make travel through Houston a pleasant experience. ■



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