



The West Loop: One of the most impressive instances of an “edge city” has risen along the West Loop. This view looks north along the West Loop with the Southwest Freeway interchange in the foreground. (Photo: September 2002)

The Loops

In his 1992 book, *Edge City: Life on the New Frontier*, Joel Garreau documents the rise of new urban centers on the fringes of the nation's cities. These edge cities included not only the traditional elements of suburbia—homes and shopping malls—but also the means of creating wealth—jobs. Garreau identifies 123 edge cities around the nation but makes no effort to rate or rank them by any criteria. After all, the edge city is a somewhat amorphous entity, evolving to meet the needs of the new information economy. But Garreau leaves us with a few hints that perhaps there is one edge city that towers over all the rest, both literally and figuratively, an edge city that stuns the sense of sight by the immense scale of its signature structure. That edge city is the Uptown Houston district located on the West Loop. Just off the West Loop is the 64-floor, 899-foot-tall (274 m) Williams Tower, an architecturally distinctive structure that is made even more striking by its dominating presence over an otherwise impressive landscape of mid-rise office towers. It was the loop freeway, of course, that propelled Uptown Houston to become one of the most impressive edge cities in the United States.

The circumferential freeway bypass has become a standard fixture in the freeway systems of many cities, both in the United States and Europe. But Houston wouldn't settle for just one loop, or even two. By 1965 plans were in the works for three major circumferential loops around Houston, and if the freeway miniloop enclosing downtown is included, there are actually four. Houston is the ultimate implementation of the loop and radial freeway system, with a nearly complete second loop in 2003 and the wheels in motion for the construction of the third loop. Perhaps only two other major cities in the United States, Dallas and San Antonio, hold out any hope of fully completing second freeway loops around their cities. If in fact Houston's third loop, the Grand Parkway, is completed as planned, Houston will be in a class by itself. Almost surely, no other city will ever be able to achieve Houston's loop freeway accomplishment.



The West Loop parking lot: The West Loop is one of Houston's most congested freeways. This view looks north toward Memorial Park. (Photo: James Lyle, TTI, June 2001)

The Loop, Interstate 610

Loop 610 is more than just a freeway. It has come to define a lifestyle and state of mind, not just a geographic section of the city. The “inner loop” is more of an urban person, someone who likes to be close to the arts, universities, events, parks, and entertainment. Many inner loopers seek out the variety, disorder, and nonconformity of Houston’s older neighborhoods. Others seek out some of Houston’s most affluent and exclusive neighborhoods. The inner loop often lives close-in as a means of avoiding freeways. More than any other geographic group in Houston, the inner loop is likely to be anti-freeway.

While it serves as an informal boundary between central Houston and the rest of the city, Loop 610 is also a vital transportation artery—the most important freeway in the functioning of Houston’s loop and radial system. As the focus point for much of the congestion on Houston’s freeway system, the West Loop is also the biggest source of dysfunction. The loop ties together many seemingly disparate sections of Houston: edge cities, neighborhoods from the exclusive to the decayed, parks, stadiums, and industry. Along its path, the loop offers an abundance of interchanges, the ship channel bridge, and some impressive freeway sections.

Origins

The need for a bypass loop around Houston was first identified as early as 1931, when Harris County officials were proposing bypass routes to divert traffic from the city center. The early concept proposed using existing streets for the bypass. No progress was made during the 1930s, but efforts to build a loop came back to life in September 1940 when the Houston Chamber of Commerce Highway Committee formed a special subcommittee to study potential bypass alignments. Various benefits were cited, including reduction of traffic inside the city, reduction of accidents, and diversion of trucks, but the possible need for national defense deployments would quickly become the driving factor in moving plans for the loop forward.¹

In March 1941 the first report recommending a bypass loop around Houston was issued. *Preliminary Study for a Primary Defense Need of Houston and Vicinity—A Bypass or Loop Thoroughfare*, published by the Houston City Planning Commission, explained how military officials had contemplated the logistics of large troop movements through Houston to protect the Houston Ship Channel and its associated industries. Initially authorities had planned to block off city streets to move military convoys through the heart of the city. However, it quickly became clear that this would be very disruptive, and by April 1941 the *Houston Chronicle* was reporting that “military authorities have all but demanded the construction of a belt highway.” The study also included a map that indicated the key “war industries” around Houston, such as Dow Chemical in Freeport, Houston Ship Building Corporation along the ship channel, and Consolidated Steel in Beaumont. The contemplated route followed existing and planned arterial streets around the city and was envisioned as a highway or large urban street rather than a freeway. The alignment of the northern half of the proposed loop ultimately became the Loop 610 freeway. The southern half of the proposed loop followed the arterial streets Bellaire Boulevard, Old

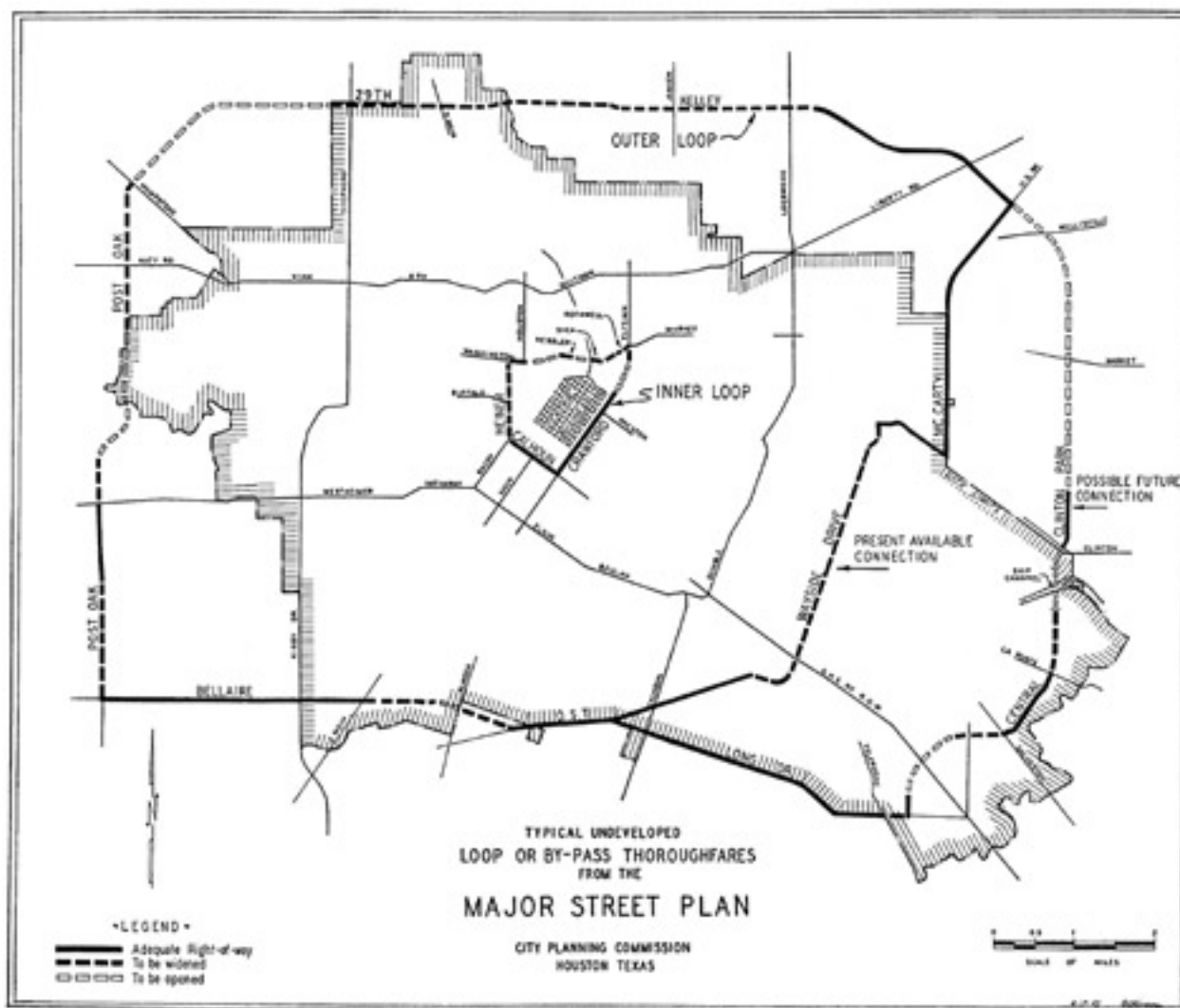
Loop 610	
Previous designation	Loop 137
Designated as freeway	1954 (north, west, south) 1960 (east)
First freeway section open	1952 (La Porte cutoff) 1960 (Loop 610)
Freeway complete	September 22, 1975
Reconstruction	Intermittent since 1975
Max traffic volume, 2001	290,000 vehicles per day
Future construction	Reconstruction of West Loop (underway in 2003)

Spanish Trail, and Wayside. On May 3, 1941, a \$5.4 million Harris County bond issue allocating \$1,028,354 for the Defense Loop was approved by Harris County voters with 71% of the vote.²

The bombing of Pearl Harbor on December 7, 1941, increased the urgency of constructing the Defense Loop. On June 23, 1942, the Texas Transportation Commission formally adopted the north section of the Loop from IH 10 West (then US 90) on the west side of Houston to IH 10 East (then SH 73) on the east side Houston, calling it the “Loop on US 90.” An agreement approved on November 16, 1943, called for the city of Houston to provide a 150-foot (46 m) corridor for the highway. The loop was designated as Loop 137. However, real progress on a true freeway loop would have to wait until after the war.³

Putting the Freeway Loop on the Map

As progress on the loop highway crept along in the early 1950s, authorities were formulating a master plan for Houston’s freeway system which included a full freeway loop. In July 1953 a Houston delegation appeared before the Texas Transportation Commission in Austin

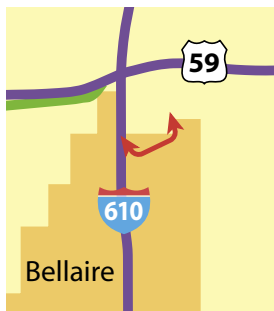


Original loop plan: Although the idea of a loop for Houston had been around since the early 1930s, the first real progress toward the actual designation of a loop occurred in 1941 when the Houston Planning Commission released a report titled *Preliminary Study for a Primary Defense Need of Houston and Vicinity—A Bypass or Loop Thoroughfare*. The above map from the city of Houston's 1942 *Major Street Plan* shows the proposed alignment of the bypass loop. The loop was envisioned as a highway or major arterial street, and for most of its alignment it followed existing routes. The first new construction for the loop would not be completed until 1950.

East Loop corridor, citing a “critical situation with respect to planning and protecting the right-of-way.” The alignment of the East Loop had already been shifted twice because of plant expansions in the proposed freeway path. When the Federal-Aid Highway Act of 1956 authorized and funded the construction of the Interstate Highway System, the previously approved C-shaped Loop 137 bypass route was adopted into the interstate system, but the East Loop and ship channel bridge were once again passed over. On April 24, 1958, the Texas Transportation Commission agreed to continue to perform surveys and studies for the corridor and to continue to seek acceptance of the route into the interstate system. The commission did not, however, fully adopt the section into the state highway system.

Texas had a limited amount of mileage it could designate into the federal Interstate Highway System, and

there was not enough available mileage to meet all needs in Texas. Dewitt Greer left missing links in Houston and other Texas cities, thinking that the U.S. Bureau of Roads would automatically add the missing sections out of obvious necessity. However, Greer's plan backfired when the Bureau of Roads specified that IH 37 between San Antonio and Corpus Christi would receive the additional interstate mileage available in Texas. In 1960 the Houston City Planning Commission led a new effort to get the East Loop adopted into the state highway system, where its cost would be shared by TxDOT and Harris County. A delegation from Houston appeared before the Texas Transportation Commission August 22, 1960, to make the request. Two days later, the East Loop was finally adopted into the state highway system, allowing local officials to protect and acquire the needed right-of-way. Loop 610 would now truly be a loop.⁷



From countryside to freeway-side: This view shows the Pin Oak Stables with its annual charity horse show in progress in the late 1940s. Post Oak Road runs along the upper part of the photograph, and the future alignment of the West Loop freeway is indicated by the dashed lines. At the upper left corner, the alignment of the future Southwest Freeway is shown. The Pin Oak Charity Horse Show was held from 1945 through 1992. In its prime years, from the late 1940s to the 1960s, it was one of the leading horse shows in the United States and one of the most prestigious social events in Houston. Its parties were attended by Houston's elite as well as film stars and wealthy riding enthusiasts from around the country. The horse show was promoted by James Abercrombie, founder of Cameron Iron Works, and Leopold Meyer, whose family owned the now-defunct Meyer Brothers apparel retail chain in Houston. The land was developed for retail use starting in the late 1980s. The site of the horse show stadium became a parking lot for a large retail store which was later converted to educational use.⁸ (Photo: HMRC MSS 67-1074)

Adoption into the Interstate Highway System was still pursued by local officials since interstate status would provide 90% federal funding for the freeway and costly bridge. Finally, during the week of September 10, 1962, the United States Bureau of Roads approved the East Loop as part of the Interstate Highway System.⁹

Building the Freeway

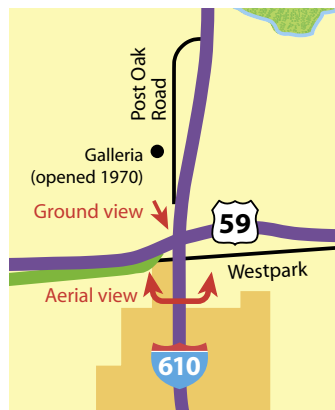
The early work on the loop highway, called Loop 137 at the time, focused on the northeast section between the Eastex Freeway and the East Freeway. The first section, from the East Freeway to Lockwood, was completed in

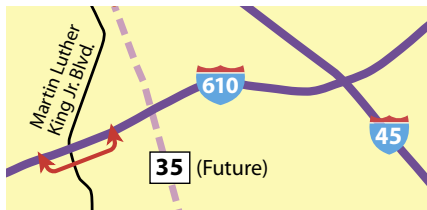
1950, and the rest of the section to the Eastex Freeway opened on February 26, 1954. The loop highway was generally constructed on a 150-foot-wide (46 m) right-of-way with four highway lanes.

In 1954 the north, west, and south sections of the loop were officially designated as freeways. The 150-foot-wide highway corridor on the North Loop was expanded to a minimum of 300 feet (91 m), and in 1956 a new alignment was approved for a section of the North Loop at the Eastex Freeway interchange. The first full freeway section of Loop 610 had actually opened in December 1952 as the La Porte cutoff on the Gulf Freeway. That section of the



Southwest Freeway interchange construction: These views show the West Loop main lanes under construction at the Southwest Freeway interchange in May 1961. Post Oak Road snaked its way through the construction zone, as shown in the aerial view at right, which looks north. Soon after these photos were taken, this section of Post Oak Road was permanently closed and replaced by the West Loop. (Photo: upper, HMRC RGD6-952; right: TxDOT)





South Loop corridor: Aerial photographs from the 1950s and 1960s show an abundance of drive-in cinemas on the Houston landscape. The 1959 Houston telephone directory listed 18 drive-in cinemas, including the King Center Twin Drive-In shown in the 1960 photo above. No drive-in cinemas in Houston were displaced by freeways, but the South Loop just missed the King Center Twin Drive-In, skirting its edge. The South Loop at this location, indicated by the dashed lines, opened in January 1969. (Photo: The Positive Image)

La Porte Freeway was absorbed into the loop. The initial section to be constructed as part of the loop itself was a 1.3-mile (2.1 km) segment of the North Loop east of the North Freeway. That section opened in 1960. Over the next 15 years the loop would open section by section. The final ribbon for Loop 610 was cut on September 22, 1975, when a 3.3-mile (5.3 km) segment in northeast Houston was opened.¹⁰

Building the Freeway through Bellaire

The history of Bellaire began in 1908 when a 9,449-acre tract known as the William Marsh Rice Ranch was purchased for development. The developer subdivided the eastern section of the property into small tracts and called it Westmoreland Farms. In a 1909 brochure, Westmoreland Farms was promoted as a “suburban agricultural opportunity” where the country life could be enjoyed within easy reach of the city. A streetcar line operated by the Houston Electric Company began service by the beginning of 1910 to connect the community to Houston. The community was incorporated as a city on June 24, 1918, and it grew slowly prior to World War II. Bellaire had about 330 homes and 1,124 residents in 1940.¹¹

After World War II, Bellaire became a classic postwar suburban boom town. In 1950 Bellaire had 3,186 homes. The housing construction boom continued with 600 to 700 homes being constructed each year in 1950, 1951, and 1952. By 1955 Bellaire had been largely built out, and less than 100 homes were constructed. In August 1955 Bellaire had 5,897 homes. Since Houston had annexed all the land around the city, Bellaire became an island city and further growth was not possible. But construction in Bellaire was definitely not over. Transportation officials were working on plans for the West Loop freeway.

In 1941 Houston’s loop was designated to pass through Bellaire on South Post Oak Road. But it was planned as a major arterial street, not a freeway. In 1953 local officials revealed plans to turn the loop into a full freeway, and TxDOT officially adopted the loop into the Houston freeway system in October 1954. The freeway would follow Post Oak Road through Bellaire, splitting the city almost exactly in half. By December 1954 a group of Bellaire residents began an effort to stop the freeway.

Trying to Stop a Freeway in the 1950s

Trying to stop a freeway in the 1950s was a daunting and perhaps impossible task. The legal tools for opposing freeways were not available at that time. As an added difficulty for those opposing the freeway, highway engineers sought the most direct, efficient, and least costly routes for freeways. The possibility of curving the freeway around Bellaire to minimize impacts was not considered an acceptable practice at the time since it would have caused an awkward, curving alignment.

The anti-freeway group first protested against the West Loop at a Bellaire City Council meeting on December 6, 1954. At the time, the freeway was informally called the Post Oak Freeway. The *Bellaire Texan* newspaper reported that “city council hid behind the ‘need for more facts and figures,’ giving nothing more than a ‘don’t worry about it’ brush off to 50 anti-Post Oak Freeway citizens who petitioned the council for a definite stand against any such construction through Bellaire.” The mayor tried to assure a skeptical audience that “the entire council is on the side of Bellaire, not Houston.” When the protest was reported in the local Houston news, the manager of Houston’s Public Works Department wrote a letter to the Harris County Judge, stating, “It looks to me like this is a



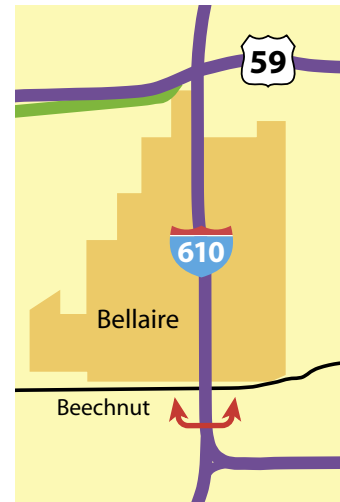
Clearing the way: Right-of-way clearance through Bellaire occurred from 1959 to 1961. Completed in March 1968, the freeway main lanes were built in the foreground of this photo. The blurred vehicle in the background is travelling on Post Oak Road, which was a two-lane road. (Photo: *Houston Chronicle*, January 11, 1960)

very dangerous situation.”¹²

The opposition then started a petition campaign to force the Bellaire City Council to enact an ordinance that would prevent the expenditure of any city of Bellaire funds for the purchase of right-of-way. Under the terms of TxDOT’s adoption of the West Loop freeway route, Bellaire was expected to pay for the freeway right-of-way through the city. The Bellaire City Council complied with the petitioners’ request without officially tabulating the petition results by formally notifying the Texas Transportation Commission on April 4, 1955, that the city of Bellaire “respectfully and officially” declined to provide right-of-way for the project. In its letter, Bellaire cited its island status within the city of Houston and its inability to increase its tax base via annexation. The council felt it had complied with the request of the petitioners. However, the petitioners then realized that the city council action would not preclude another entity from purchasing the right-of-way through Bellaire, and they asked city council to take a definite stand against any freeway construction. Harris County would step forward to take responsibility for acquiring the right-of-way, and Bellaire City Council would not actively oppose the freeway.¹³

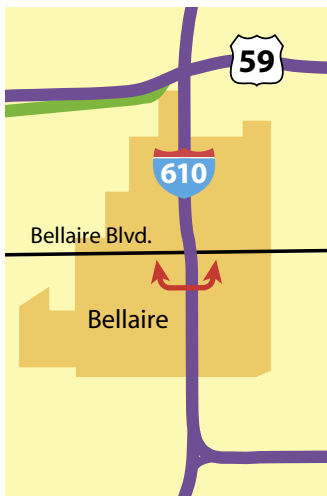
In November 1955 the proposed right-of-way map for the freeway corridor was released. In the initial plan, right-of-way was to be acquired almost entirely on the east side of Post Oak Road. An article in the November 16, 1955, *Bellaire Texan* presented numerous citizen comments on the freeway, including those of supporters and others who accepted the new freeway as inevitable. Former mayor and prominent resident Abe Zindler, whose estate was immediately adjacent to the freeway route, stated, “If they need it, and that’s the best route, then we can’t stop progress.” In early February 1956, Harris County Commissioners Court adjusted the freeway corridor to lie to the west of Post Oak Road in the northern part of Bellaire, mainly to avoid a Catholic high school. Commissioners Court then proceeded to approve the alignment. The new alignment would displace 190 homes in Bellaire, a clearance corridor that was generally four houses wide along South Post Oak Road.¹⁴

Only one formality remained: a public hearing on March 29, 1956. About 75 citizens of Bellaire attended the hearing at Harris County Commissioners Court. However, the opponents realized that the hearing was largely a formality. “The freeway is a foregone conclusion. We’re



Pre-freeway Bellaire:

This view looks north over Bellaire in 1960, just after right-of-way clearance for the West Loop had begun. The West Loop is aligned along Post Oak Road, the two-lane road running through the center of the photograph. The freeway alignment is indicated by the dashed lines. The clearance corridor was approximately four houses wide along Post Oak Road. (Photo: The Positive Image)



This view, also from 1960, looks north over the north section of Bellaire. At the top of the photo, construction is just beginning on the Southwest Freeway interchange. (Photo: The Positive Image)





Why is this man smiling? In 1957 he was included in *Fortune Magazine's* list of the 76 wealthiest persons in the United States. Freeways also made him smile. He owned a lot of land along Houston's freeways, including about 90% of the land along the West Loop between Westheimer and Memorial Park. Land along Houston's freeways is particularly valuable because the freeway frontage roads enable commercial development. Who is he? R. E. "Bob" Smith (1894-1973), oilman, rancher, and land speculator.¹⁵ (Photo: HMRC RG-D5-4983)

here only to get the gripes off our chest," remarked one protester. The commissioners unanimously approved the freeway alignment. The West Loop through Bellaire was now a done deal, and the opposition dispersed. When the highway department held a public hearing for the freeway design in September 1957, Houston Urban Project Office head A. C. Kyser reported, "No opposition to the route was voiced and we spent about an hour briefing the people and answering questions that applied to their specific property." At the meeting the freeway corridor was widened to 350 feet (106 m). Right-of-way clearance began in 1959 and was complete by 1961.¹⁶

Although the freeway opponents may not have realized it, there was a very powerful person who had a strong interest in the Post Oak alignment, probably making it a near certainty: oilman, rancher, and millionaire R. E. "Bob" Smith. Not only was Smith wealthy and well connected, but he was also a strong political backer of Houston Mayor Roy Hofheinz. Smith owned a large amount of land along the Post Oak Road corridor north of Bellaire. In fact, he and his associates owned about 90% of the land along the freeway corridor between Westheimer and Me-

morial Park, so he stood to reap a huge financial gain from the construction of the West Loop. This did not go unnoticed by Houston City Council. In December 1954, Houston City Council was informed of a new plan to move the alignment of the West Loop slightly east of Post Oak Road for a section between the Southwest and Katy Freeways. The realignment shifted the freeway to vacant land, saving approximately \$400,000 in right-of-way costs, approximately 2.28 million in 2003 dollars. The realignment would cause the West Loop to bisect Smith's property, so his land holdings would have freeway frontage on both sides of the freeway. *The Houston Chronicle* reported that "a majority [of council members] indicated opposition on the argument that the routing would increase vacant land owned by Robert E. Smith, political backer of the mayor." The alignment through Smith's property would be adopted, and Smith would reap a financial windfall when the West Loop commercial boom subsequently took place.¹⁷

The West Loop story has a happy ending for the residents of Bellaire. If ever there is a need for evidence that freeways do not destroy neighborhoods, one needs to look no further than Bellaire. In spite of the West Loop, or perhaps because of it, Bellaire has become one of the most desirable residential areas of Houston. Starting in the 1980s, Bellaire became known as a "tear-down" area, where older homes were torn down and replaced with large and expensive custom homes. Many of the new homes were constructed immediately alongside the West Loop. In 2001, the median home price in Bellaire was \$143 per square foot (\$1,539 per square meter), far above the Houston average of \$66 per square foot (\$710 per square meter) and the Harris County average of \$60 per square foot (\$646 per square meter). New homes in Bellaire typically sell for \$500,000 to more than \$1 million. Some Bellaire residents may feel that their city would be even better without the freeway, but the convenience and transportation access provided by the West Loop is certainly something that should not be discounted.¹⁸

In 1997, 43 years after the original controversy over the routing of Loop 610 through Bellaire, TxDOT called for a new series of public hearings to discuss improvements to the West Loop, including the section through Bellaire. The project was a "no capacity added" project, and proposed improvements were very modest, consisting mostly of improvements at entrance and exit ramps. Nevertheless, substantial opposition developed, especially over a plan to extend the West Loop frontage roads underneath the Southwest Freeway just north of Bellaire. It was almost as if the clock had been turned back, and TxDOT officials once again felt the fury that had been released in 1954 when the freeway was originally planned. Some in Bellaire were demanding that the freeway be depressed below grade, but flooding concerns quickly scuttled that idea. The reconstruction of Loop 610 in Bellaire was underway by 1999 with only a few modifications from the original plan. The lack of added capacity, however, would ensure that the freeway would not be able to meet future demand.



Freeway disaster: A cloud of ammonia gas engulfs the West Loop-Southwest Freeway interchange on May 11, 1976, moments after a speeding tanker truck fully loaded with ammonia crashed through the guardrail on a connector ramp and fell to the Southwest Freeway below. Five people were killed, about 50 were hospitalized, and about 150 received treatment. This photo was taken by photographer Carroll Grevemberg about one minute after the accident from the thirteenth floor of an office tower in the Galleria complex. Grevemberg, an audio-video designer at the Transco Company, heard the explosion and then heard someone say, “I wish I had a camera.” Grevemberg grabbed his camera, loaded some film, and was able to capture the gas cloud as it expanded over the interchange and then dissipated during the next five minutes. (Photo: Carroll Grevemberg, Grevy Photography, New Orleans)



Disaster

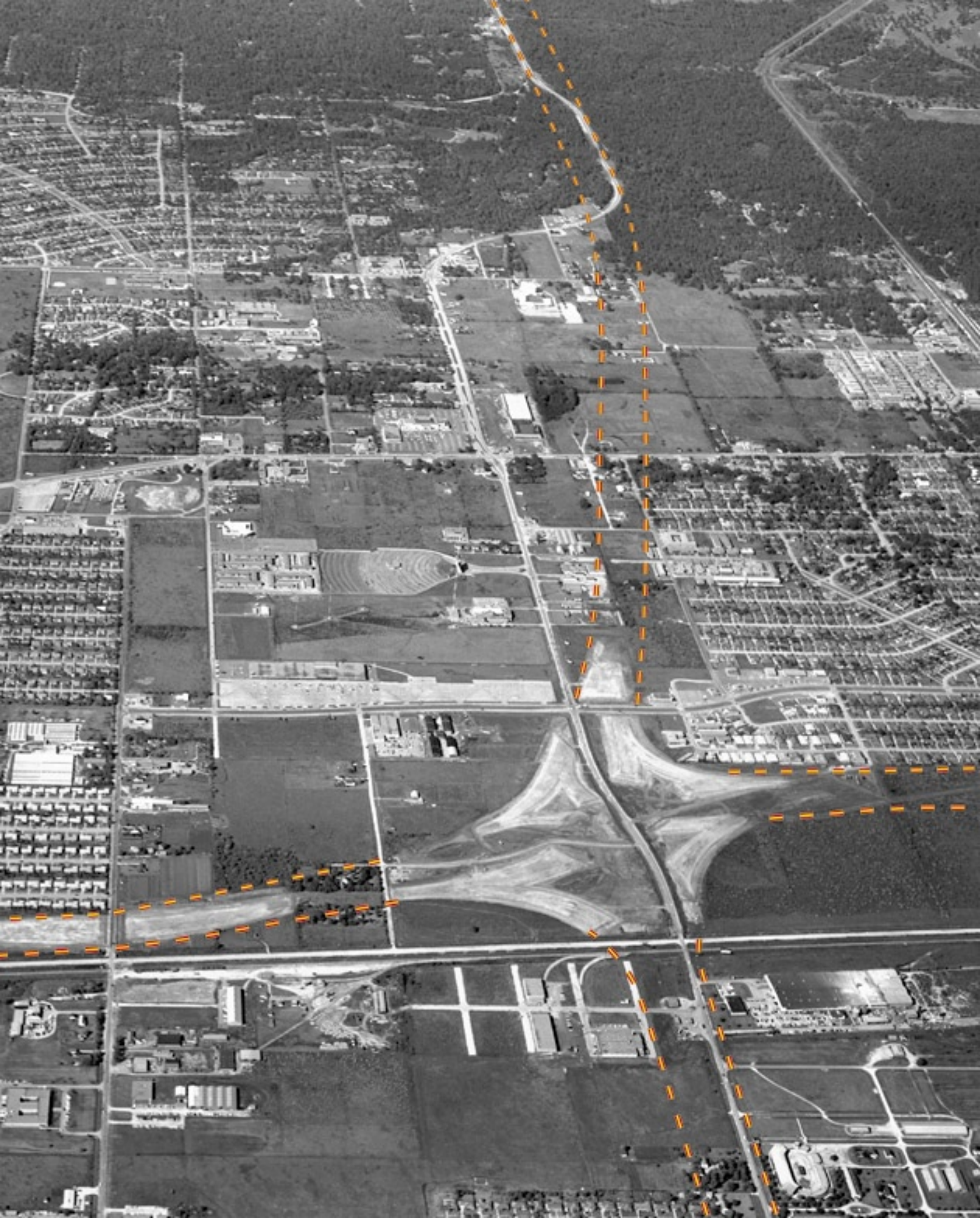
May 11, 1976, 11:18 A.M.: A tanker truck loaded with ammonia speeds northward through Bellaire on the West Loop toward the Southwest Freeway interchange and exits to make the connection to the southbound Southwest Freeway. As the truck rounds the curve, its speed is too great and it cannot stay on the roadway. The truck crashes through the guardrail and falls to the Southwest Freeway main lanes one level below. The resulting explosion unleashes a cloud of ammonia gas, engulfing the interchange. Four people are killed immediately, three by asphyxiation. Others attempting to flee the scene by foot collapse before they can escape the gas cloud. Fifty people are hospitalized, and another 150 are treated and released. The death toll reaches five in the following days.

In terms of loss of life, it ranks as a tragic accident, although certainly not as deadly as other highway accidents over the years, particularly those involving buses.

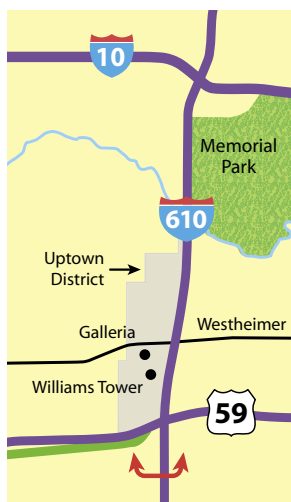
But in terms of extraordinary events and sheer drama, it is the most horrific and memorable accident in the history of Houston’s freeway system. Survivors told stories of fleeing the gas cloud and barely making it out alive. Others who had collapsed in the gas cloud were dragged out by good samaritans. In an adjacent neighborhood, foliage looked like it had been hit with a hard freeze—even though it was May. The freeway interchange structure was badly damaged, necessitating the closure of freeway lanes for the rest of May to rebuild a pier structure for the West Loop overpass.¹⁹

Edge City Extraordinaire

Large business centers generally come in two varieties: those that existed before the freeway era, and those that arose as a result of freeways. The Uptown Houston district along the West Loop provides one of the most dramatic transformations of suburban, freeway-side acreage



(Opposite page) **Transformation:** This view shows the West Loop/Uptown Houston corridor in 1960 just as the first freeway construction is beginning. In the lower part of the photo, land preparation is underway for the West Loop-Southwest Freeway interchange. The dashed lines from top to bottom indicate the route of the West Loop.



The dashed lines from left to right indicate the route of the Southwest Freeway. The West Loop main lanes between the Southwest Freeway (US 59) and the Katy Freeway (IH 10) were complete in November 1966, and the opening of the Galleria shopping mall in November 1970 launched the West Loop commercial construction boom. For a modern view from the same perspective, see the chapter introductory photo on page 272. (Photo: The Positive Image)

into a major business center. In 1960, the area that would become Uptown Houston was mostly vacant land with a scattering of strip shopping centers, some residential development, a drive-in cinema and a television station. But change was coming. Work was just beginning on the interchange at the West Loop and Southwest Freeway, and by 1961 work was underway on the West Loop frontage roads and main lanes. The first section of freeway main lanes in the Uptown Houston district opened in June 1964, and the entire West Loop was complete in 1968.

The seeds for the West Loop commercial boom were sown by developer Gerald Hines, who began work on the Galleria shopping center in the late 1960s at the corner of Post Oak and Westheimer, just west of the West Loop. The Galleria was a new concept for Houston, featuring a three-level shopping mall with a central ice rink and a glass canopy roof. Office buildings and hotels were integrated into the Galleria complex. The mall opened on November 16, 1970, and became influential in the development of high-end, mixed-use malls across

A calm, quiet intersection: This view, looking northeast at the Westheimer intersection, shows the first section of the West Loop main lanes to open in the present-day Uptown Houston district. At the time of the photo in December 1964, the freeway main lanes stopped north of Westheimer and the land along the frontage roads was vacant. Within a few years, large-scale commercial development of the land along the West Loop would begin and the Westheimer-West Loop intersection would go on to become one of the most chronically congested in Houston. (Photo: TxDOT)

the United States.²⁰

The Uptown Houston district boomed along with Houston during the 1970s and early 1980s. An impressive collection of mid-rise office buildings rose along the West Loop. It became one of the most impressive instances of the edge city, a term popularized by author Joel Garreau in his 1992 book, *Edge City: Life on the New Frontier*. The crowning achievement of Uptown Houston was the construction of the landmark 899-foot-tall (274 m) Williams Tower (known as the Transco Tower until 1999) by Gerald Hines Interests in 1983. At the time, it was believed to be the world's tallest skyscraper outside of a central business district. The Williams Tower has a dominating presence on the landscape and dwarfs the nearby structures which are generally in the 20- to 40-floor range. The Williams Tower was the product of a unique era in Houston, a period when energy companies were flush with cash and sought impressive, monumental structures to project their power. Large-scale office construction in Uptown Houston came to an end with the collapse of energy prices and the meltdown of Houston's economy in the mid-to-late 1980s. In 2001 the West Loop commercial district had 23.8 million square feet of office space. Downtown Houston, in comparison, had 39.3 million square feet. In the late 1990s a mini-boom of mid-rise residential tower construction, typically 30 floors tall, got underway. Uptown Houston has accumulated a surprisingly large concentration of high-rise residential structures for a low-density city such as Houston. Many of those high-rise residents are looking to avoid the traffic congestion on the West Loop, no doubt.²¹





Uptown Houston: The mid-rise office towers of the Uptown Houston district are dwarfed by the 64-floor, 899-foot (274 m) Williams Tower. Reconstruction of this section of the West Loop began in 2003. Although it is a “no capacity added” project, the reconstruction will substantially improve merging operations and interchange performance. (Photo: May 2002)

The Traffic Boom and the Planning Bust

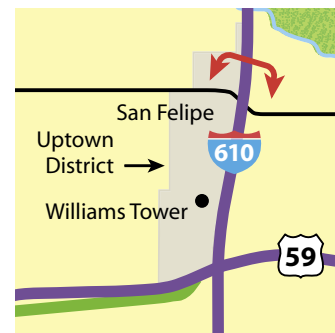
The commercial boom along the West Loop brought dramatic increases in traffic. In 1968, the year the main lanes of the West Loop were completed, the peak traffic volume was 90,600 vehicles per day. In 1971, just one year after the opening of the Galleria shopping center, peak traffic volume had grown to 146,200 vehicles per day, making the West Loop Houston’s busiest freeway. Traffic would continue to grow dramatically through the 1970s and the West Loop would hold the title of Houston’s busiest freeway until 1991, when it was eclipsed by the North Freeway. More than any other freeway in Houston, the West Loop sustains severe traffic congestion in both directions during rush hour.

Houston’s freeway expansion program became very active in the 1980s. In 1989 work was underway to widen

the section of the West Loop between the Katy and Northwest Freeways to 12 and 14 main lanes. The project was complete by the end of 1992.

In 1991 the time had finally arrived to formulate a plan to relieve the chronically congested section of the West Loop between the Southwest and Katy Freeways. Big problems required big solutions. The plans for the West Loop proposed a major expansion of the freeway to meet the transportation needs of the area. TxDOT called a public meeting in November 1991 to present the developing plans to the public.

Several options were presented, but attention focused on the leading proposal, the “collector-distributor” option.



It retained the 8-lane freeway in the center, adding 4-lane collector facilities on each side of the freeway to provide 8 more freeway lanes. Frontage roads were generally increased to 4 lanes in each direction. Overall, the proposal generally had 16 freeway and 24 traffic lanes, with exact lane counts varying from point to point. Right-of-way acquisition was minimal since high-rise structures lined both sides of the corridor. The proposal did not include elevated structures and kept all lanes at ground level.

As soon as the meeting started, however, it became clear that this would not be a typical freeway hearing. It became more like an anti-freeway rally. Before public comment even began, one public official after another stepped up to the podium to bash the proposed collector-distributor plan. Most vocal were Houston council members Jim Greenwood, an architect and mass transit advocate, and Sheila Jackson-Lee, who promoted inner-city and minority interests. Greenwood, Jackson-Lee, and others called for a greater emphasis on mass transit. The large crowd at the hearing was unusually receptive to the anti-freeway speakers.

Possibly the most lethal opposition came from the Park People, an organization which worked to improve park resources in Houston. The West Loop cuts through the western edge of Memorial Park, a wooded area with approximately 1,500 acres of parkland. Three and a half acres of Memorial Park were needed to accommodate the widened freeway. The Park People were not willing to accept the loss of a single square foot of parkland for the freeway, and Jackson-Lee summed up the Park People's sentiment when she stated, "In this city, any loss of park space cannot be tolerated." Realistically, users of the 1,500-acre Memorial Park would never notice the loss of 3.5 acres along the western edge of the park, and many park users would have benefited from the improved access to the park. But in situations such as highway project development, reason often does not prevail and emotions can take over.²²

Also in November 1991, Houston elected Bob Lanier to become mayor of Houston. If anyone could save plans to expand the West Loop, it was Bob Lanier. As chairman of the Texas Transportation Commission during the 1980s, Lanier was a strong advocate for highway construction and had been instrumental in dramatically increasing TxDOT funding. But Lanier was no longer just a highway advocate. He was now a politician. He had to balance the various issues facing him as he entered office, and highway construction was just one issue among many. Lanier gave lip service to the expansion plan, but he was not willing to use up valuable political capital to save it. And it would have taken a lot of capital to keep the expansion plans alive.²³

How could this happen in Houston? Several factors had converged to cause the anti-freeway outburst. Vocal anti-freeway activists were on Houston City Council. The Houston business community, so often a key supporter of freeways, was remarkably silent. The West Loop business community seemed to be missing in action. Bob Lanier

stood by, unable or unwilling keep the plans on track. The press depicted the expansion as a "24-lane" freeway when in fact the freeway section was much smaller, and the potential benefits of the project were not adequately reported.

Was Houston going to succumb to the forces that have devastated transportation planning in other cities? Was this the end of Houston as a forward-looking freeway metropolis? Fortunately for Houston's freeways, the answer was no. It was, in effect, more like a certain alignment of planets had occurred at that particular moment in time in Houston freeway planning. Everything that could have gone wrong in the process did go wrong, so the West Loop expansion died.

By the late 1990s the pavement on the West Loop was crumbling and action was needed. In 1997 and 1998 meetings were held to reach a compromise plan to rebuild the freeway as a "no-capacity-added" project. The final plan included the addition of new merging lanes at entrance and exit points, better lane balance, major modifications to the interchange with the Southwest Freeway, and total reconstruction of the interchange at the Katy Freeway in conjunction with the Katy Freeway expansion. Work began on the southernmost section of the West Loop in 1999, and the final contract valued at \$262 million for the work near the Katy Freeway was awarded in July 2003.

The failure of plans to expand the West Loop will have a long-term negative impact on the performance of Houston's freeway system. The importance of the West Loop as a critical link in Houston's freeway system will increase in the future as other freeway projects move forward. In the near future, the Katy Freeway expansion, the Fort Bend Parkway, and the Westpark Tollway will all feed more traffic onto the West Loop. Longer term, a planned expansion of the Northwest Freeway and a potential future tollway along Hempstead Road will bring even more traffic. A long-term planning map published by the Harris County Toll Road Authority in 2001 shows a potential toll road corridor along the Union Pacific railroad which parallels the West Loop about half a mile (0.8 km) to the east. However, the railroad passes through Memorial Park and near high-income neighborhoods, and any effort to construct the route is certain to be highly controversial. The proposal appeared to be dead on arrival when it first received wide publicity in June 2003. But it doesn't take a prophet to conclude that transportation demand will overwhelm the West Loop. At some point, the toll road proposal or an alternative plan—perhaps elevated lanes—will need to be given consideration. Houston motorists can only hope for a more favorable alignment of the planets the next time traffic relief plans are put on the table.²⁴

Home for the Dome

The alignment of the South Loop was officially approved by the Texas Transportation Commission in October 1954. At the time, the prairies south of Houston were a quiet area. There was little residential or commercial development in progress, and the area was semirural.





(Above) **The replacement:** This view looks northwest over the Astrodome and its replacement, the \$449 million, retractable-roof Reliant Stadium. The Houston Texans football team played its first game in the stadium on August 24, 2002. (Photo: The Positive Image)

(Opposite page) **Building the Dome:** The Astrodome was the world's first fully enclosed and air-conditioned stadium when it opened on April 9, 1965. The upper photo, looking north, shows the beginnings of the Astrodome in 1962. Excavation for the Dome was nearing completion and construction of the South Loop frontage roads had just begun in the lower part of the photo. The frontage roads opened in June 1963. The lower photo, looking southeast, shows the structural shell of the Dome substantially complete in 1964. The Astrodome was renovated and its seating capacity increased in 1989, but the stadium could not meet modern standards. The Houston Oilers football team played its last game in the Astrodome on December 15, 1996, before moving to Nashville, Tennessee. The Houston Astros baseball team played its last game in the Astrodome on October 9, 1999, before moving to the new downtown baseball stadium. When the NFL awarded Houston a new football franchise on October 6, 1999, plans moved forward to build a state-of-the-art, retractable-roof football stadium that would also be used by the Houston Livestock Show and Rodeo, the Astrodome's only remaining major tenant. (Photos: upper, The Positive Image; lower, Houston Photographic and Architectural Foundation Trust)

However, Harris County Judge Roy Hofheinz would soon start contemplating about the future of professional sports in Houston, and his vision would find a home on the South Loop.

In the late 1950s local authorities began discussions for a new sports center for the Houston area. In 1958 a stadium location study was completed. Various locations throughout Houston were considered, and a site on the South Loop was rated as number one by both the city of Houston and TxDOT. The accessibility provided by the planned South Loop Freeway and nearby South Freeway was the principal strength of the site, and the land was readily available for sale by millionaire oilman R. E. "Bob" Smith and others.²⁵

The construction of a stadium along a freeway was nothing unusual. But this stadium would be different. Judge Hofheinz wanted a futuristic facility to gain worldwide recognition for Houston. His new stadium would be the world's first fully air-conditioned domed stadium. The otherwise nondescript segment of the South Loop would be distinguished by this first-of-its-kind structure.

Harris County voters approved \$20 million in revenue bonds on July 26, 1958, for the domed stadium. However, the revenue bonds depended on future revenue to be generated by the facility, and the lack of history of revenue from stadiums made it difficult for Harris County to sell the bonds. The domed stadium moved beyond the talking stage on January 31, 1961, when voters agreed to replace the revenue bonds with \$22 million in general obligation bonds, which were backed by general tax revenue. When the lowest bid for the construction of the dome came in at \$19,440,000 (excluding excavation, which had previously been completed for \$738,000), it became necessary

Key dates in the history of Loop 610	
Early 1930s	Loop or bypass routes are first proposed.
1941	The first formal study for a bypass loop is completed.
1942	The North Loop is adopted into the state highway system as a highway.
1954	The West and South Loops are officially adopted into the state highway system as freeways. The North Loop is upgraded to freeway status.
1960	The first freeway section of the Loop opens. The East Loop is adopted into the state highway system.
1962	Houston's first four-level interchange is completed at the West Loop-Southwest Freeway intersection.
1965	The Astrodome is opened on the South Loop on April 9.
1970	The Galleria shopping center opens near the West Loop on November 16, launching the construction boom along the West Loop.
1973	The ship channel bridge opens on March 2.
1975	The loop is completed on September 22.
1983	The 899-foot-tall (274 m) Williams Tower is completed near the West Loop.
1992	Plans to expand the West Loop are cancelled due to opposition.
2007	Scheduled completion of reconstruction of the West Loop, including a full rebuild of the Katy Freeway interchange.

to raise more funds with a supplementary bond issue of \$9.6 million to pay for all project costs and site work. The bonds were approved by Harris County voters on December 22, 1962, bringing the total bond funds to \$31.6 million. For comparison, the \$31.6 million translates to approximately 154 million in 2003 dollars. Still, that seems like a bargain by modern standards. The replacement for the Astrodome, the retractable-roof Reliant Stadium completed in 2002, cost \$449 million.²⁶

Ground was broken for the domed stadium on January 3, 1962. The new stadium was officially dedicated on April 9, 1965, when the Houston Astros baseball team played an exhibition game against the New York Yankees.

Even before the first game, a problem had arisen. The first time the Houston Astros ventured onto the new field for practice on April 7, they discovered that the glare from the roof, with its clear plastic panels, made it extremely difficult to catch fly balls. Sunglasses didn't help since the area of glare coming from the roof was so large. A quick solution was needed to make daytime baseball possible in the Astrodome. The week of April 19, crews began painting the clear roof panels with off-white paint to make the panels opaque rather than transparent. The grass in the stadium was already struggling before the roof was painted, and paint further reduced available sunlight by 25-40%. Artificial turf had recently been developed and success-

fully installed at a private school in Providence, Rhode Island, in 1964. The solution was obvious: the Astrodome would become the first major sports venue in the United States to use artificial turf. The first major league baseball game played on Astroturf took place on April 8, 1966. Astroturf would soon become widely used in sports stadiums across the United States.²⁷

The South Loop was still a work in progress when the Astrodome was completed in 1965. Frontage roads for the freeway were in place near the Astrodome, but to the east and west, the South Loop didn't exist at all. On May 16, 1969, a 2.5-mile (4.0 km) section of the South Loop main lanes at the Astrodome was opened, completing all of the South Loop except for a short segment west of the Gulf Freeway interchange. Aside from the Astrodome, the South Loop didn't get any glamorous or distinctive development. During the 1970s the South Loop became a favorite location for the large, boxy warehouses of furniture retailers. The furniture retailers would frequently go out of business or change names, leaving vacant warehouses along the freeway. By the end of the 1970s the furniture warehouse era had largely come and gone.

On March 2, 2002, the Houston Livestock Show and Rodeo ended its 37-year run in the Astrodome with a farewell concert attended by former President George H. W. Bush and featuring a star-studded list of country music performers. A record-setting crowd estimated at 70,200 packed the Dome for what was expected to be its final major event. It was a bittersweet night for Houston. The Dome, once touted as the "Eighth Wonder of the World," had propelled Houston to international prominence and had been a source of civic pride. Now, it was just another passé relic of the 1960s. The Dome faced an uncertain future in 2003 as Harris County officials searched for an economic use for the facility. Local preservationists expressed hope that the Dome could be spared from demolition.²⁸

The South Loop has a more certain future than the Astrodome. The section of the South Loop serving the Astrodome and its replacement, Reliant Stadium, was expanded to 10 main lanes in 1994, providing ample traffic-carrying capacity. In the long term, there is the possibility of a large new stack interchange at the intersection with the proposed Alvin Freeway. The future of the Alvin Freeway will be determined by a study expected to be underway by 2004.

The Future of the Loop

The reconstruction of the West Loop will continue until approximately 2007. As of 2003, there are no major studies planned for the north, east, and south sections of Loop 610. For the intermediate future Loop 610 will likely not see major changes. Increasing traffic congestion on the North Loop may eventually prompt some work on that segment, however.



South Freeway interchange: This wide-angle view looks east along the South Loop at the sprawling South Freeway interchange. This interchange was completed in 1978 and opened to traffic in 1981. (Photo: September 2002)



East Freeway interchange: This view looks north along the East Loop at the East Freeway interchange. This interchange was completed in 1976. (Photo: November 2002)



Sam Houston Parkway/Tollway, Beltway 8

Even before the alignment of Loop 610 had been finalized, the city of Houston was formulating plans for a second loop. It was a remarkable act of vision and foresight to recognize the future importance of loop highways in today’s predominant suburb-to-suburb transportation patterns. However, the first wave of freeway construction in Houston from the 1950s to the 1970s came and went with very little progress on the Beltway.

The age of the Houston Beltway arrived with the second wave of Houston freeway construction, which started in the 1980s. By 1996 the entire loop had been constructed in some form—freeway, tollway, or frontage road. Completion of the South Belt main lanes in 1997 left only one segment without main lanes. The phenomenal success of the Sam Houston Tollway, the toll main lanes of Beltway 8, even brought traffic congestion to the western and northern sections of the tollway.

Although the main lanes of Beltway 8 are, for the most part, not very interesting, the Beltway has one of the nation’s most impressive collections of modern four- and five-level freeway-to-freeway stack interchanges. The Beltway is also unusual in that its tollway sections have continuous toll-free frontage roads.

Origins

Beltway 8 had its origins in a 1952 report by the City of Houston Planning Department, *Proposed Location for An Outer Belt Drive for Metropolitan Houston*. The report was prepared as a basis for fixing a location for a minimum 120-foot-wide (37 m) thoroughfare located four to five miles (6 to 8 km) beyond the city limits, which were generally located near Loop 610 at the time. The 1952 annual report of the City of Houston Planning Commission went on to explain, “This report was prepared in view of the imminent development of much of the area through which the thoroughfare would need to pass and because there will be a great need for such a thoroughfare in the future as the population of the urban area spreads.” At the time the report did not envision the Outer Belt as a freeway. Ralph Ellifrit, city of Houston planning director, was the individual most responsible for the birth of the Outer Belt.

In September 1954, based on the recommendation of Ellifrit, the corridor width was increased to 150 feet (46 m) to accommodate a larger arterial highway. Also in 1954, the City of Houston Planning Department performed detailed studies to fix the location of the Outer Belt. Nearly all of the alignment defined in that period would become the ultimate route of today’s Beltway 8.²⁹

In 1960 Harris County stepped forward and took the leading role in the development of the Outer Belt. Harris County Judge Roy Hofheinz appeared before the Houston Planning Commission in March to discuss the merits of changing the Outer Belt to a full freeway on a minimum 300-foot-wide (91 m) right-of-way. On July 11, 1960,

Beltway 8 (Sam Houston Parkway/Tollway)

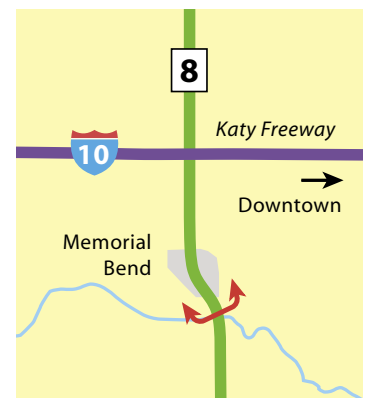
Designated as freeway	1960
First freeway section open	1970 (overpasses only) 1982 (toll bridge)
Freeway/tollway complete	Scheduled 2007
Reconstruction	Intermittent pavement repair only
Max traffic volume, 2001	233,000 vehicles per day
Future construction	Main toll lanes of northeast segment; expansion of west and north tollways

Harris County Commissioner’s Court voted to increase the corridor right-of-way width to 300 feet and grant it full freeway status. Harris County would now be in charge of building the 87-mile (139 km) freeway loop. Getting into the freeway-building business was a big undertaking for Harris County and would ultimately be more than it could manage on its own. As of April 1960, a 300-foot-wide right-of-way corridor had been obtained for only 8 miles (13 km). Seven miles (11 km) had 150–250 feet (46–76 m) set aside, and 15 miles (24 km) had 120 feet (36 m) or less set aside. For the remaining 57 miles (91 km), no right-of-way had been acquired. However, only 1 mile (1.6 km) was listed as passing through a built-up area with “damage to buildings.” The projected cost of the Beltway was \$150 million, still a relatively low cost after adjusting to 750 million in 2003 dollars.³⁰

(Opposite page) **The Southwest Freeway interchange:** Beltway 8 gently curves through the interchange, completed in 1997. The Beltway 8/Sam Houston Tollway has an impressive collection of modern, multilevel stack interchanges. (Photo: May 2003)



Controversy: Beltway 8 West through the Memorial Bend subdivision was one of the two controversial sections of the Beltway. In 1962 residents of Memorial Bend attempted to have the Beltway realigned three miles west to follow the present-day Dairy Ashford Road, but the increased cost of the longer alignment resulted in its rejection by the Houston Planning Commission on June 19, 1962. The map at left, from the original Outer Belt location studies conducted circa 1954, shows the approximate alignment (in red) that was requested by Memorial Bend residents. As part of the preparation of the environmental impact statement for the West Belt in 1975, a study to determine the feasibility of alternative routes was completed. The only possible alternative route for the West Belt was determined to be SH 6, six miles to the west. The SH 6 route was infeasible due to cost and other impacts. This section of the Beltway, which opened in 1988, has a highly unusual short section of a two-way frontage road, visible on the right side of the photo. (Photo: May 2002; map, city of Houston records)



early development of the Outer Belt occurred in 1962 when residents of the Memorial Bend subdivision in west Houston objected to plans to align the Outer Belt through their neighborhood. The neighborhood requested a realignment of the freeway at a meeting of the City Planning Commission on June 5, 1962. The proposed realignment would have shifted the Outer Belt three miles (5 km) west to Dairy Ashford Road. The request was denied on June 19, 1962, primarily because of the substantially increased cost of routing the freeway westward. The West Belt remained on its originally planned route.³³

The first section of the Outer Belt to be constructed as anything resembling a freeway was the North Belt near Bush Intercontinental Airport. The original plan for the airport was described in an October 1961 engineering report titled *Plan of Development, Jetero Intercontinental Airport*. In its section about roadway access, the report stated, “It is recommended strongly that the North Belt Drive between US 59 and Interstate 45 and its connecting link to the airport be constructed as soon as possible.” Progress on this section was delayed due to voter rejection of a county bond referendum in 1963, but a successful bond referendum in January 1966 authorized \$14.8 million in funding for the Outer Belt. The North Belt frontage roads were completed in February 1970, shortly after the opening of the airport on June 8, 1969.

The construction of the North Belt made Harris County realize it had bitten off more than it could chew with the full Outer Belt. In June 1967 Harris County was already requesting assistance from TxDOT for the construction of the North Belt-North Freeway interchange. The cost of just the right-of-way for the 87.5-mile (140 km) Outer Belt would probably be more than the county could bear. Responding to requests from local officials, the Texas Transportation Commission officially adopted the Outer Belt into the state highway system on March 7, 1969. In July 1969, the Outer Belt was officially designated as Beltway 8.³⁴

Starting in 1972, TxDOT began engineering and environmental studies for Beltway 8. Numerous public hearings for all sections of the Beltway were held in 1975 as part of the preparation of the environmental impact statement. The schematics presented at the 1975 meetings showed a minimum of eight freeway main lanes with a 28-foot-wide (8.5 m) central median and a right-of-way corridor that had a minimum width of 420 feet (128 m). The corridor width would later be downsized to a typical width of about 300 feet (91 m) due to funding shortfalls, a decision which may ultimately come back to haunt Houston’s highway planners. For the western segment that included the Memorial Bend subdivision, a special study titled *Investigation of a Possible Relocation of West Beltway 8* was undertaken by an interdisciplinary team. It con-

sidered ways to avoid the Memorial Bend subdivision, but because west Houston had become so heavily urbanized by that time, the only other possible alignment was six miles (10 km) to the west on SH 6. The SH 6 route was ruled infeasible due to greatly increased cost, as well as legal and administrative issues. Although opposition in Memorial Bend lingered, the route of the freeway through the neighborhood was effectively finalized in 1975. Another community affected by the Beltway, Jersey Village, would continue to be a flash point of controversy through the 1970s.³⁵

Dark Days

The adoption of Beltway 8 into the state highway system in 1969 seemed to be good news for the freeway, but it came at a time when TxDOT was about to descend into a financial crisis that drastically curtailed its ability to construct new freeways and made large, costly projects like Beltway 8 impossible. Starting in the early 1970s, high-

way construction inflation spiraled out of control and transportation funding was stagnant or shrinking. Houston’s boom was driving up property values, making right-of-way acqui-

sition costly. In September 1975, referring to Beltway 8, the chairman of the Texas Transportation Commission Reagan Houston III stated, “Our funds have diminished and our expenses are escalating which leaves little left for new construction.”³⁶

As TxDOT was backing away from new projects and seemed willing to let Beltway 8 die from neglect, responsibility for saving the Beltway shifted back to Harris County. TxDOT couldn’t afford to build it. Harris County couldn’t afford to build it. The only remaining option was a toll road. In May 1975 Harris County asked the Texas Turnpike Authority to study the west and northwest sections of the Beltway as a potential tollway. The Turnpike Authority concluded that the route was financially infeasible as a tollway. Harris County Judge Jon Lindsay was starting to doubt that the Beltway would ever be built, and was considering reallocating funds set aside for right-of-way acquisition.³⁷

Plans for Beltway 8 reached a low point in August 1976 when a comprehensive study of TxDOT’s highway construction program conducted by the McKinsey consulting firm developed two possible scenarios for the future of Houston’s freeways, one with expected funding levels and one with an increased level of funding. The Beltway was not included in either plan. Based on the results of this study, the head of the Houston district of TxDOT, Omer Poorman, conveyed the following grim message to Houston Mayor Fred Hofheinz in a letter dated November 12, 1976, “We do not anticipate any improvements by the State on Beltway 8 in the next 20-year period.”³⁸

But Houston was not going to let the Beltway die. As

“We do not anticipate any improvements by the State on Beltway 8 in the next 20-year period.”

TxDOT Houston district head Omer Poorman to Houston mayor Fred Hofheinz, November 12, 1976



The West Belt: This view looks north along the West Belt at the Westchase commercial district. This section of tollway opened in 1988. (Photo: May 2002)

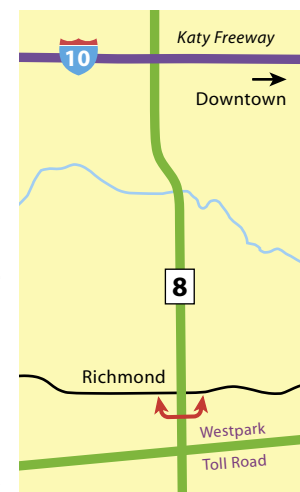
with many freeway projects in Houston's history, the real estate and land development community stepped forward to lobby for the Beltway, forming an organization called the Transportation Development Group which focused on getting the Beltway built. At the urging of the Transportation Development Group, Harris County authorized another tollway study in 1976. In 1977 there was more bad news. The Texas Turnpike Authority once again concluded that the west and northwest sections of the Beltway were infeasible as a tollway but kept the project within its consideration for future study.³⁹

The Tide Turns

The prospects for Beltway 8 began to improve by late 1977. TxDOT received additional funding from the Texas Legislature in 1977, allowing it to formulate a new plan of highway priorities. The new plan released in December 1977 restored frontage roads for a key section of Beltway 8 West between the Northwest and Southwest Freeways. Harris County realized that the key task at hand to save the Beltway was to preserve right-of-way in rapidly urbanizing sections of the city, especially west Houston. In 1978 Harris County authorized the use of bond funds for purchasing right-of-way for Beltway 8 West. Also in the summer of 1978, the Texas Turnpike Authority concluded

that the Houston Ship Channel Bridge on Beltway 8 East was feasible and issued \$102 million in bonds (approximately 234 million in 2003 dollars) to build the bridge and adjacent sections of tollway. In June 1979 TxDOT began to take a more active role in moving the Beltway 8 frontage roads forward to construction, authorizing its staff to prepare plans and acquire right-of-way in the controversial section through the Memorial Bend neighborhood in west Houston. At a May 20, 1980, public hearing about the Memorial Bend plans, the *Houston Post* reported "unexpected strong public support for construction of the long-delayed Memorial Bend section." TxDOT also began working on plans for frontage roads on other sections of Beltway 8 around Houston.⁴⁰

By 1980 the controversy surrounding the alignment of the Beltway through Jersey Village had been resolved, allowing the Beltway to move forward. Opposition first became vocal in 1973 when the Village Council held hearings where it stated its opposition to plans. As TxDOT continued with the environmental process in



1975, the plans showed the freeway on its original route, right through the middle of Jersey Village on an elevated structure. Two years later in 1977, key players including TxDOT, the city of Houston, and landowners outside of Jersey Village were sticking to plans to build the freeway through Jersey Village. But opposition in Jersey Village continued to build, and in 1977 a bill was introduced in the Texas Legislature to require TxDOT to route the freeway around Jersey Village. The bill did not become law, but TxDOT was forced to respond to the opposition and realigned the Beltway to avoid Jersey Village. Plans to align the Beltway on the east side of Jersey Village didn't make everyone happy. At a public hearing on January 8, 1980, several hundred residents, a "loud delegation" mostly from the subdivision to the east of Jersey Village, turned out to oppose the new alignment. In spite of the opposition, the eastern alignment was adopted. It would be the only major shift in the original planned alignment of the Beltway, but it would be a substantial shift as the Beltway snaked its way around Jersey Village.⁴¹

Momentum was now on the side of Beltway 8. It would still take the dedicated efforts of a project champion to get the main lanes built. Now that the Beltway had been saved, County Judge Jon Lindsay would take the lead in getting it built.⁴²

As early as 1977 Lindsay had begun to realize that Harris County would need to take matters into its own hands if it wanted to see a tollway constructed in the foreseeable future. At the time, he stated that Harris County should be responsible for the Beltway toll road rather than the Texas Turnpike Authority (TTA). However, real progress toward the formation of the Harris County Toll Road Authority would not occur until 1982. By mid-1982 controversy surrounding the proposed Hardy Toll Road had caused the TTA to back away from its plans to build the tollway. Previously the TTA's feasibility studies had rejected the West Belt as a tollway candidate. It appeared that the TTA's Beltway 8 ship channel bridge would be its only project in the Houston area. In August 1982 Lindsay instructed the county attorney to investigate if the county could create its own toll road authority. It turned out that special legislation would be needed. The legal authority for Harris County to form a toll road authority came with Texas Legislature Bill SB970, signed by Governor Mark White in June 1983. Harris County then set a \$900 million bond election for September 13, 1983, to launch the Harris County Toll Road Authority (HCTRA). The bonds were passed with 69.7% of the vote. The west and north Beltway 8 main lanes would be built as a tollway.

The Biggest Challenge

As the nation's highway building program built momentum in the 1950s and large-scale construction of the Interstate Highway System was launched in 1956, the people who would build the highways joined the national effort. One such person was Carol Letz, who served in various roles in right-of-way acquisition in the Houston TxDOT office starting in 1957. Letz was involved in

nearly all the major right-of-way acquisition events in the history of Houston's freeway system and remains active in her position in 2003.

When Letz was asked to name the most difficult or challenging right-of-way acquisition in her career, without hesitation she responded, "Beltway 8 in west Houston." Really? This section of Beltway 8 included the short controversial section through the Memorial Bend subdivision, but the rest of it was through undeveloped, vacant property. What could be so difficult about buying up vacant land?

It was all a matter of timing. Efforts to acquire right-of-way were underway at the peak of Houston's oil boom in the late 1970s and early 1980s. Land values were increasing at a rate of about 30% per year, so quickly that it was nearly impossible to acquire property using the normal procedures. Typically there was a 60- to 90-day cycle for property appraisal, offer preparation, and obtaining approval from TxDOT headquarters in Austin. In that time period the appraisal would become obsolete due to the rapid escalation in property values. It was a losing battle, and the cost of right-of-way for the freeway went up as every month passed. Another complication was the administrative procedure for acquiring land. Harris County was responsible for acquiring all property and would then be reimbursed by TxDOT for 90% of the cost. Harris County simply did not have the cash on hand to expedite the process. It would make a purchase, wait for the 90% reimbursement to restore its bank account, and then proceed to the next purchase.

Landowners along the western section of the Beltway were seeing their hopes for real estate riches evaporate with the endless delays to the freeway. Just as land developer Frank Sharp had organized a group of landowners in 1957 to donate land for the Southwest Freeway to expedite its construction, landowners along Beltway 8 West formed an organization called the Beltway 8 Group and submitted a proposal to TxDOT in June 1982. The landowners would lock in their property values at existing appraisals that were between 1 and 2.5 years old. In return, TxDOT would agree to begin construction on the frontage roads as soon as all the land could be acquired, which was originally contemplated to be as short as five months. There were 23 parcels of property on the five-mile (8 km) segment of Beltway 8 that needed to be acquired, and the selling price was locked in at \$36.8 million. The landowners' concession was estimated to save TxDOT about \$17 million.⁴³

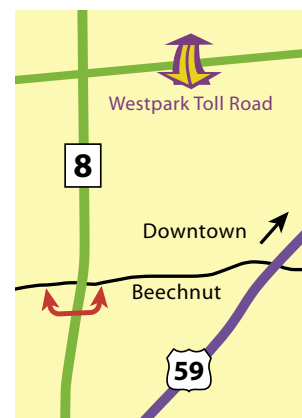
It was a deal TxDOT couldn't refuse, so it was quickly approved. But there was a problem. Harris County was still responsible for the actual land purchase, and the county didn't have the money to finance the purchases. An overhaul of the land acquisition process was needed. By February 1983 the "re-engineered" process was in place. Harris County would pay its 10% share of the right-of-way cost, then TxDOT would do all the acquisition. As soon as the agreement was finalized, TxDOT's right-of-way acquisition machine went into high gear, acquiring



The most difficult right-of-way to acquire in the history of Houston's freeway system:

This vacant land in the path of the West Belt between Westheimer and the Southwest Freeway (US 59) looks deceptively easy to acquire, but in fact it was the most challenging right-of-way to obtain in the history of Houston's freeway system. Efforts to acquire this right-of-way were underway at the peak of Houston's energy boom in the late 1970s and early 1980s. Land values were increasing at the rate of about 30% per year, so quickly that standard right-of-way acquisition procedures did not work. Approval of property appraisals typically required 60 to 90 days, but during that time the appraisals would become obsolete. It was a losing battle, and property values were escalating every month.

Landowners who wanted to see the project move forward struck a deal with TxDOT to lock in property values, allowing TxDOT to complete land acquisition. As part of the deal, TxDOT agreed to begin construction of the frontage roads as soon as the right-of-way was acquired. Construction began in 1983 and was completed in December 1985. This project launched the wave of construction that would build nearly the entire beltway by 1996. (Photo: Texas State Library & Archives Commission, June 1982)





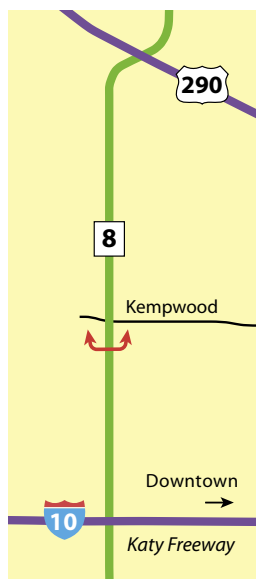


Transformation: These views looking east along the North Belt at the North Freeway show the progression of development along the freeway in the Greenspoint area. The upper view on the opposite page shows the construction of the North Belt frontage roads in 1968. The frontage roads were constructed to provide access to Bush Intercontinental Airport, which opened on June 8, 1969. The lower photo on the opposite page was taken circa 1978. Greenspoint Mall opened in 1976 and development of offices, apartments, and retail centers was gaining momentum. The development boom of the Greenspoint area was largely complete by the mid-1980s. The Beltway 8 main lanes east of IH 45 in the Greenspoint area were completed in 1984, and the Sam Houston Tollway connection west of IH 45 was completed in 1990. The Greenspoint area matured in the 1990s and started to succumb to suburban decay. Local business groups worked hard to maintain the area and succeeded in stabilizing it. The suburban development story of Greenspoint culminated with the construction of the stack interchange. The first phase of the North Freeway interchange opened in 1997, and the full interchange was completed in early 2003. The above photo was taken in September 2002 as construction of the interchange was nearing completion. (Photos: opposite upper, The Positive Image; opposite lower, HMRC MSS 287 HH-935-B; above, September 2002)





Success: By the late 1990s traffic congestion was a daily occurrence on the West Belt. This view looks north near Kempwood during the afternoon rush hour. The heavy traffic on the Beltway has been a financial windfall for the Harris County Toll Road Authority, enabling it to expand the toll road system. Projects to expand the West and North sections of the Sam Houston Tollway, from the Southwest Freeway to the North Freeway, to eight lanes began in 2002 and are scheduled to be complete by 2005. Expansion work in progress can be seen in the distance in this photo (the light-colored concrete). (Photo: September 2002)



\$25 million in property within the next few weeks. It was still a challenging task, and one day before a decision had to be made about whether the first contract could be awarded on the agreed-to date, the right-of-way acquisition job was not complete. On the decision day at 8:15 A.M., Letz received the final right-of-access needed for the project.

The job would go to bid, and the construction of Beltway 8 West was soon underway.⁴⁴

The contract award for the short length of frontage roads in west Houston in 1983 marked the beginning of the wave of construction that would build Beltway 8. For 30 years the Beltway had moved forward one inch at a time, and often stood still. But now, TxDOT support

and the newly created Harris County Toll Road Authority would push the Beltway into reality over the next 13 years. TxDOT constructed the frontage roads and sections of main lanes on the North Belt and East Belt, as well as most of the interchanges at intersecting freeways. The section of frontage roads included in the Beltway 8 Group funding agreement was opened in December 1985. After that, frontage road sections opened regularly around the Beltway, culminating with the opening of the final section to complete the circular loop in southeast Houston near Hobby Airport in 1996. HCTRA took on the job of building the main lanes as a tollway, with initial work focusing on the West Belt and North Belt.

Sam Houston Tollway, Cash Cow

Proceeding with construction of the Beltway 8 Toll Road was somewhat of a leap of faith for Harris County Judge Jon Lindsay. Revenue studies had rated it as a mar-

ginal, risky project and indicated a strong chance the project would lose money. The same study predicted that the Hardy Toll Road would be profitable. But Lindsay pushed forward with the Beltway Toll Road. In July 1985 a groundbreaking ceremony was held for the construction of the first segment of the tollway from the Southwest Freeway to the Katy Freeway. In 1986 the Beltway was named the Sam Houston Parkway and was designated as a scenic district to prevent the proliferation of billboards along the frontage roads. The tolled main lanes were designated as the Sam Houston Tollway. The Beltway became the first and only limited-access facility within the city of Houston to be named after an individual—the first president of the Republic of Texas and namesake of the city of Houston. The first segment of the Sam Houston Tollway opened on June 29, 1988. The second section, from the Katy Freeway to the Northwest Freeway, opened in June 1989, and the third section, from the Northwest Freeway to the North Freeway, opened in July 1990. The Sam Houston Tollway was unusual for a tollway in that it had continuous, toll-free frontage roads for its full length.⁴⁵

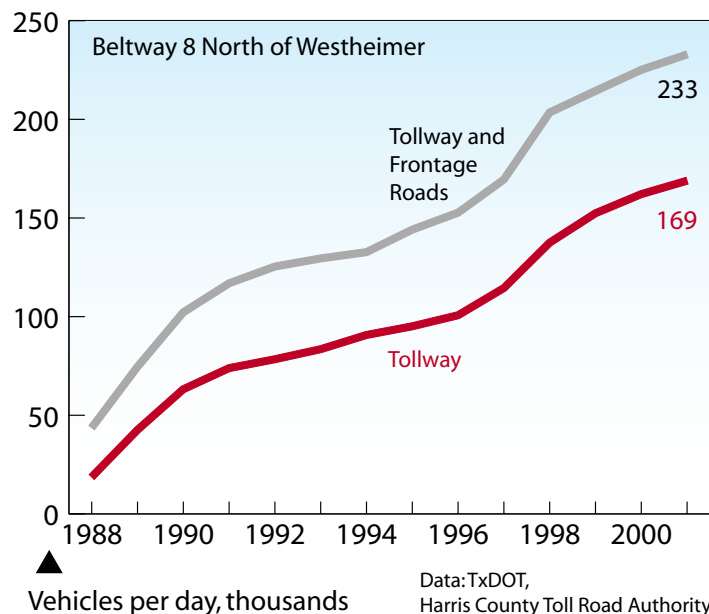
Even before the first section of the Sam Houston Tollway opened, Harris County officials had substantially lowered traffic and revenue projections. The collapse of Houston's economy in the mid-1980s and the extended recession through the late 1980s had made the project's original traffic projections obsolete. By mid-1989, one year after the opening of the first section of the Sam Houston Tollway and the completion of the Hardy Toll Road, toll revenue was less than 50% of original projections. A revised projection predicted that long-term revenue would be 40% less than the original estimates. During 1989 there was frequent talk of the possible need for a subsidy from Harris County's general tax revenue to meet toll road bond payments. By July 1990, Lindsay was warning that a \$20 million annual subsidy from general tax revenue would be needed within two years.⁴⁶

The third section of the Sam Houston Tollway, from the Northwest Freeway to the North Freeway, opened just as Lindsay delivered the financial bad news. Soon, however, the financial picture began to change. The complete, continuous tollway from Southwest Houston to Bush Intercontinental Airport caused a surge in traffic. Just three months after section three opened, Harris County officials were stating that a sharp increase in traffic resulting from the completion of section three had postponed the need for a subsidy for at least five years.⁴⁷

The Sam Houston Tollway traffic boom had begun. Traffic and revenue surged ahead of projections during the 1990s, making the Sam Houston Tollway a cash cow for HCTRA. In the meantime, traffic and revenue on the Hardy Toll Road still lagged behind projections. It turned out that the original traffic projections in 1984, which predicted a successful Hardy Toll Road and a marginal Sam Houston Tollway, had missed the mark on both facilities. But the success of the Sam Houston Tollway allowed HCTRA to easily cover the Hardy Toll Road revenue shortfall.

Key dates in the history of Beltway 8-Sam Houston Tollway

1952	The Outer Belt is first proposed, originally as a major arterial street.
1957	The first roads built on the Outer Belt alignment open.
1960	The Outer Belt is designated as a freeway. Harris County takes ownership of the project.
1969	The Outer Belt is adopted into the state highway system and officially named Beltway 8.
1970	The first substantial section of the Beltway, a section of frontage roads, is completed in conjunction with the 1969 opening of Houston Intercontinental Airport.
1976	The Beltway is near death as the 1970s highway funding crisis makes new freeway construction impossible.
1977	The Beltway is restored to long-term plans.
1982	The Houston Ship Channel toll bridge is opened on May 6.
1983	Harris county voters approve the creation of the Harris County Toll Road Authority (HCTRA).
1985	In December a section of frontage roads opens in southwest Houston, launching the wave of construction that would build the Beltway.
1988	The first main lanes built by HCTRA open.
1989	Houston's first five-level stack interchange is completed at the Katy Freeway.
1994	HCTRA takes ownership of the ship channel bridge from the Texas Turnpike Authority on May 5.
1996	The full Beltway is complete, either as a freeway, tollway, or frontage road.
2005	Scheduled completion of expansion to 8 main lanes on the west and north Sam Houston Tollway.
2007	Scheduled completion of the last remaining section of main lanes in northeast Houston.



Cash cow: This plot shows traffic volume at the busiest point of the Sam Houston Tollway near Westheimer in west Houston.



Northwest Freeway interchange: This view looks along the southbound Sam Houston Tollway main lanes. This interchange was completed in 1990. (Photo: May 2003)



Construction: This view looks east along the South Belt at the construction zone for the Gulf Freeway interchange in late 1996. (Photo: Williams Brothers Construction Company)

In the early 1990s HCTRA Executive Director Wesley Freise and Lindsay were negotiating with the Texas Turnpike Authority to take over the financially beleaguered Beltway 8 Houston Ship Channel Bridge, which was facing an inevitable default on its bonds in 1996. The bridge transfer to HCTRA occurred on May 5, 1994. As part of the deal, HCTRA received \$90 million from TxDOT for the construction of the Sam Houston Tollway between the La Porte Freeway (SH 225) and the Southwest Freeway (US 59), as well as TxDOT's commitment to build interchanges at the Southwest and Gulf Freeways estimated to cost \$120 million. The southeast section opened in July 1996, the south section opened in March 1997, and the southwest section opened in May 1997. With those openings and additional progress on freeway sections of Beltway 8 in north and northeast Houston, only one section of Beltway 8 did not have its main lanes in place. That section in northeast Houston, from the Crosby Freeway (US 90) to the Eastex Freeway (US 59), is expected to begin construction in 2005 and be completed in 2007 as a tollway. Traffic congestion on the west and north Sam Houston Tollway prompted HCTRA to move forward with plans to widen the Sam Houston Tollway to eight main lanes from the Southwest Freeway to the North Freeway. The widening projects began in 2002 and are scheduled to be completed in 2005.

The Airport and the Beltway

The 1950s was a decade for big infrastructure dreams to take root. Houston's freeway system was put on the map in the early 1950s, and the Beltway was first proposed in 1952. Another important part of Houston's transportation infrastructure, its major airport, also was taking shape in the 1950s. As initial planning for a major airport took place, one thing became clear: the airport and the Beltway would go hand-in-hand. All potential airport locations were located immediately adjacent to the Beltway, and a site along the North Belt was purchased in 1957 and officially designated for the airport in 1960. The new airport provided the impetus for the construction of the first significant section of Beltway 8 in 1970—the only substantial section in existence for 12 years until the opening of the Beltway 8 ship channel toll bridge in 1982.

The story of Houston's major airport is in many ways a contrast to the story of the development of Houston's freeway network. While local authorities aggressively developed plans for the first-class freeway network in the early 1950s and worked hard to make it happen, the issue of Houston's airport was plagued by indecision and miscues. With the help of local business interests, the wheels were belatedly set into motion in 1957, and after numerous delays the airport finally opened in 1969. Construction and expansion of roads and freeways around the airport played out slowly after the opening of the airport, with significant momentum finally getting underway in the 1980s and major area-wide construction taking place in the 1990s.

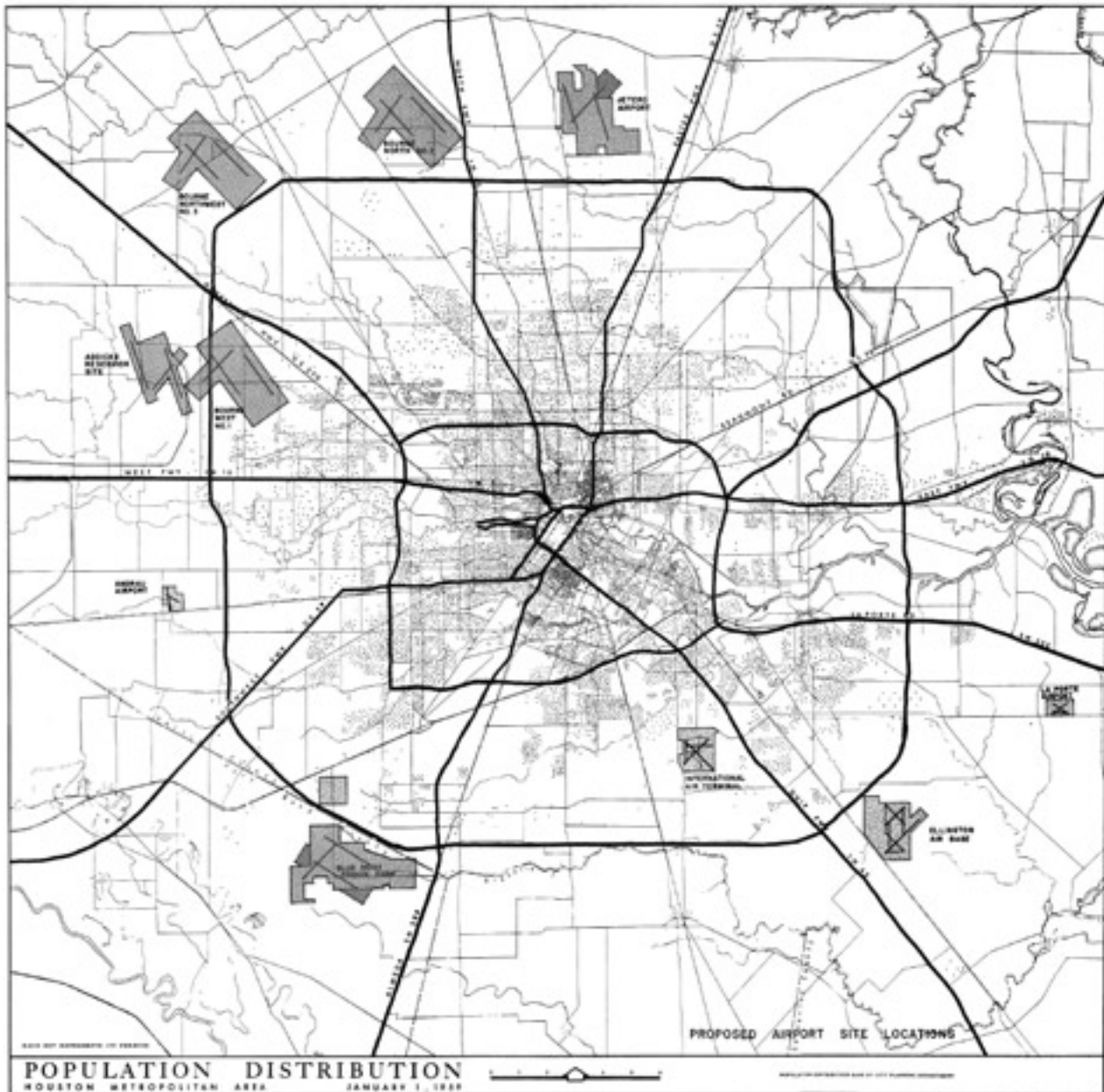
History of Bush Intercontinental Airport

Today's William P. Hobby Airport was the city of Houston's first airport, opening in 1937 as Houston Municipal Airport on the site of a private airfield. By the early 1950s it became evident that the airport would not be able to meet Houston's expanding aviation needs. In 1951 the city of Houston contracted for the first study of a second major airport for Houston. The study—known as the Bourne Study—identified three potential airport sites along the present-day Beltway in northwest Houston. However, no action was taken after the release of the report. In the early 1950s the second major airport was still largely in the discussion stage and officials were not ready to commit to the new airport. In the meantime, officials moved forward with the construction of a new terminal at Houston Municipal Airport. The terminal design was declared to be inadequate by Houston Mayor Roy Hofheinz during construction, necessitating changes to correct glaring problems. Unfortunately, the planning errors in the terminal proved to be somewhat prophetic about the future of aviation planning in Houston. In October 1954 the new terminal opened and the airport was renamed Houston International Airport.⁴⁸

Through the mid-1950s the need for a new airport became increasingly urgent, but city officials were slow to take action. In 1957 several events converged to finally move Houston's second airport forward. While the coming of the "jet age" of commercial air service had been anticipated since before 1950, it finally arrived in Houston on May 20, 1957, when a French-built Caravelle jet arrived from Miami while on a demonstration tour through the United States. The medium-range, twin-engine Caravelle had no difficulty with the short 6,565-foot (2,001 m) runway at Houston International, but aviation authorities knew that the runway length would not be adequate for the imminent wave of new jets that would soon arrive from U.S. manufacturers: the Boeing 707, the Douglas DC-8, and the Convair 880. A planned runway extension to 7,300 feet (2,225 m) would be enough to accommodate the new jet aircraft for departures to domestic destinations, but still would not be adequate for a jet departing on an overseas flight. It slowly became clear that Houston had underinvested in its aviation facilities and was falling behind the nation's other major cities in its aviation infrastructure. The *Houston Chronicle* published a series of articles comparing Houston's aviation efforts to those of Dallas. The *Chronicle* concluded that Houston had "stood still" in the preceding years while Dallas had a well-planned program of promoting its aviation activities. Word that Houston is losing ground to its rival Dallas is often enough to spur action.⁴⁹

The Jet Era Arrives and Becomes the Jetero

The most significant event of 1957, however, was the action of a group of Houston businessmen who effectively took matters into their own hands to move the second airport forward while local authorities dawdled. The group of businessmen formed an entity called the



The Beltway and the airport—together from the beginning: This 1959 map from the Houston City Planning Department shows the potential airport sites that were considered. All potential sites were located along the Beltway. The first study for the location for a new airport was conducted in 1951 and identified the three Bourne sites. In 1960 a study delivered the final site recommendation. The “Bourne West #1” location, the preferred site in 1951, was rejected because of high land cost and flight patterns over newly urbanized areas. The “Bourne North #2” site offered no advantages over the Jetero site but would have been more difficult to acquire. The “Bourne Northwest #3” was rejected because of development, including a power plant and high voltage lines. The Addicks Reservoir location was rejected due to the high cost to raise the site above flood level, potential compromise of flood control capability, and flight patterns over urbanized areas. The Blue Ridge prison farm site southwest of Houston was determined to be unsuitable for an airport. The winner: the Jetero site.⁵⁰

Jet Era Ranch Corporation, which purchased a 3,126-acre tract of land 15 miles (24 km) north of downtown Houston for \$1,860,938.27. The group held the property for resale to the city of Houston at the original purchase price for use as the site of Houston’s new airport. The intended name of the land-holding entity—the Jet Era Ranch Corporation—turned out to be short-lived. A secretary’s

typographical error transformed the words “Jet Era” into the single word “Jetero” in an early planning document. From that point on, the airport site became known as the Jetero airport site. The name Jetero would persist until 1983 when it was retired as the name of one of the main entrances to the airport.⁵¹

While the land was now in hand, several formalities

had to be taken care of. In July 1959 Houston voters approved a \$50 million bond issue that included \$6 million in airport development funds. In April 1960, in response to Mayor Lewis Cutrer's request for a comprehensive evaluation of all potential airport sites, a report was issued titled *Review and Evaluation of Proposed Major Airport Sites to Serve the Houston Area*. This report enumerated the known deficiencies of the existing Houston International Airport and identified the Jetero airport site as the only suitable candidate for the new airport. The legal agreements to officially accept the Jetero airport site and make final payment of principal and interest were completed in June 1960.

Planning for the Airport and its Freeways

The first engineering report for the new airport, *Plan of Development, Jetero Intercontinental Airport*, was issued in October 1961. The name of the airport site—"Jetero"—was transferred directly into the new airport name. The 1961 document envisioned a single circular-shaped terminal with several concourses extending from it. In terms of roadways, the document specified access roads that would be required. Most significant was the call for immediate action to construct the nearby section of the Outer Belt, the present-day Beltway 8.

The second major airport planning document was issued in July 1963 and was titled *Volume II, Plan of Development, Terminal Area, Houston Intercontinental Airport*. The "Jetero" designation for the airport was gone, but it would find a second life as the name for one of the main entrance roadways to the airport. This second planning document detailed the comprehensive study that had been undertaken in order to determine the best terminal configuration for the new airport. Planning officials visited all the major U.S. airports and had extensive consultations with airport authorities. Four terminal concepts were selected for detailed study: the mobile lounge, pier, satellite, and unit terminal. The mobile lounge concept, which was in use at Dulles airport near Washington, D.C., featured bus-type vehicles that shuttled passengers between the main terminal and aircraft. The pier concept most closely resembled the original design and featured a central unit for all airline operations with pier structures housing gates radiating from the central unit. The satellite concept also featured a single central unit, but aircraft would be grouped around individual satellite buildings that were connected to the main terminal. The unit terminal concept featured a series of relatively small, stand-alone terminals constructed along a central mall.

The engineers and architects unanimously recommended the unit terminal design, mainly because it best met the requirements of flexibility and expandability. In addition, it would distribute traffic among several terminals rather than one terminal, and it would avoid the sprawl and long passenger walking distances that would eventually occur in a single-terminal design. Although the unit terminal appeared to be the best design at the time, it would prove to be less than optimal for the airline hub and

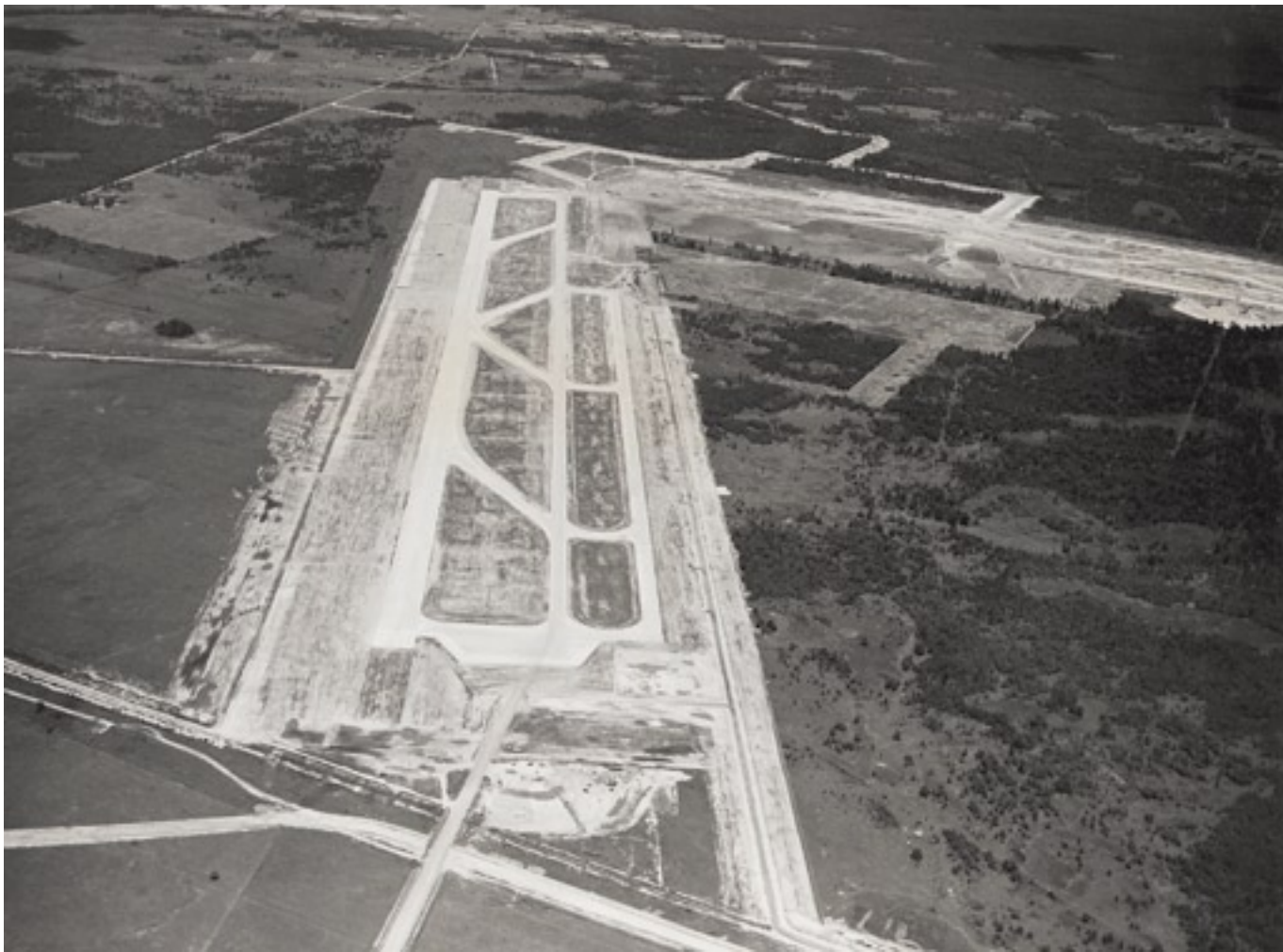


The jet era becomes Jetero: The site for Bush Intercontinental Airport was originally purchased by a group of civic-minded Houston businessmen in 1957 to preserve the site until the city of Houston could formulate a plan for a second airport. The holding company for the land was named the Jet Era Ranch Corporation, but a typographical error transformed the words "Jet Era" into "Jetero" and the airport site subsequently became known as the Jetero airport site. Although the name Jetero was no longer used in official planning documents after 1961, the eastern entrance to the airport was named Jetero Boulevard. In 1983, on the recommendation of Houston City Council member Eleanor Tinsley, Jetero Boulevard was renamed Will Clayton Parkway in honor of the cofounder of the Anderson, Clayton & Co. cotton trading firm and undersecretary of state for economic affairs from 1940 to 1948. Tinsley and other political officials felt that the 1950s-sounding name Jetero was not good for Houston's image. However, nostalgia buffs may have been disappointed. The name Jetero recalled an era when jet travel promised to revolutionize travel opportunities—a time when the roar of a jet engine or a condensation trail in the sky inspired awe. (Photo: Houston Airport System)

spoke operations that would later dictate airport design. The city of Houston adopted the unit terminal design on September 9, 1963.

The next major engineering report, *Volume III, Plan of Development, Land Use, Houston Intercontinental Airport*, was issued in December 1964. This was the first document to provide details on the two planned entrance roadways, John F. Kennedy Boulevard from the south and Jetero Boulevard on the east. The document specified a 400-foot (122 m) right-of-way to accommodate eventual construction of limited-access main lanes, frontage roads, and mass transit service. Initially, Kennedy Boulevard would be constructed as a four-lane divided roadway and Jetero Boulevard would be constructed as a four-lane divided roadway within the airport property and a two-lane roadway between the airport and the Eastex Freeway.

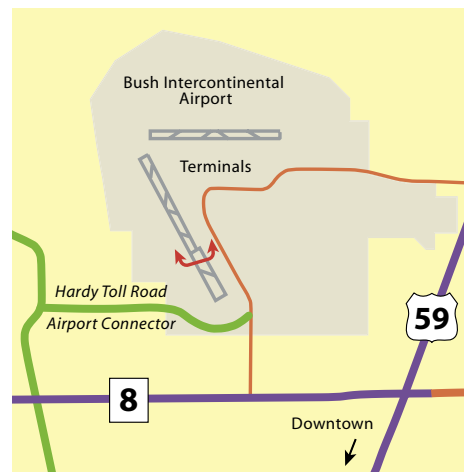
At this point, all the plans were in place to build the airport. In fact, the initial north-south runway was completed in 1964 before any terminal construction. Terminal construction dragged on two years after the scheduled completion date in 1967 because of labor problems that



Airport construction, August 1964: This view looks north-northwest at the construction site for the airport. The north-south runway was already complete and work was underway on the east-west runway in the upper right of the photo. Land for the terminal complex between the two runways had been cleared. Due to labor problems and project management difficulties experienced by the contractor responsible for the terminal, completion of the airport was delayed two years. Houston Intercontinental Airport began operations on June 8, 1969. (Photo: Houston Airport System)

plagued the prime contractor, R. F. Ball Construction. Finally, on Sunday, June 1, 1969, Houston Intercontinental Airport was officially dedicated in a large ceremony featuring an air show, an open house of the entire airport, and the usual political ceremonies. The first regular-service commercial flight landed one week later on June 8 when the airport officially opened for business.

Unfortunately, the pattern of aviation miscues in Houston soon reared its head again. It turned out that the longest runway at Houston Intercontinental, the 9,400-foot-long (2,865 m) east-west runway, was not long enough to allow a fully-loaded wide-body aircraft to take off for long-range flights during warm weather conditions. Air France's nonstop service to Europe incurred a 10,000-pound (4,535 kg) weight penalty due to the short runway. In addition, the runways were not thick enough to handle the weight of newly introduced wide-body aircraft, and the paved area of the taxiways did not extend far enough



from taxiway edges to prevent ground erosion due to jet blast. The new "jet era" airport wasn't even capable of handling all jets. To add further insult to injury, Houston's rival 250 miles (400 km) to the north had just begun work on the massive Dallas-Fort Worth International Airport. Dallas-Fort Worth International Airport would become the world's largest airport and would be served by a sprawling freeway network.

The next engineering report, *Volume IV—Plan of Development, Second Stage*, was released in April 1971 and



Original JFK Boulevard connection ramps, 1970-1992: This August 1978 view looks west along the North Belt frontage road at the original connection ramps at John F. Kennedy Boulevard. The ramps were dismantled and replaced in 1992 during the construction of the Beltway main lanes. (Photo: Texas Transportation Institute)



North Belt at JFK Boulevard: This photo shows the same view as the above photo in May 2003.

Key dates in the history of Bush Intercontinental Airport	
1951	The first study of potential airport sites is completed.
1957	Local business leaders purchase the airport site with a land holding-entity called the Jet Era Ranch Corporation.
1960	Voters approve bonds for the airport.
1969	The airport opens on June 8, 1969, after a long delay in completing the terminal.
1981	Terminal C opens, and Continental Airlines begins building its Houston hub operation.
1990	The International Airlines Terminal opens.
1997	The airport is renamed George Bush Intercontinental Airport/Houston, in honor of nation's 41st president who served from 1989 to 1993.
2002	For passenger traffic, the airport is the 8th busiest in the United States and 13th busiest in the world.
2003	The new \$225 million Terminal E opens, with 23 gates.

focused on correcting the airport’s runway shortcomings as quickly as possible. The 8,000-foot (2,438 m) north-south runway was slated to be lengthened to 12,000 feet (3,657 m). Runways and taxiways would be thickened where necessary. In terms of roadways, the 1971 plan reaffirmed previous plans. The cross section view of the entrance roadways, Kennedy and Jetero Boulevards, now showed a 450-foot-wide (137 m) corridor. The document also included an expanded discussion of mass transit service to the airport in recognition of the increasingly freeway-hostile climate of the early 1970s and greater interest in mass transit. However, it was recognized that a mass transit system was at least 10 to 15 years in the future.

Perhaps the lowest point in the history of Houston Intercontinental Airport—at least psychologically—occurred in the 1970s when Houston was not a hub airport and many travelers were forced to make connections at Dallas-Fort Worth International Airport. For Houstonians, having to connect through Dallas was perhaps the ultimate slap in the face. Attracting a large airline to call Houston its home became a top priority of local officials. The completion of Terminal C in 1981 provided a terminal facility capable of handling a hub operation, and in 1982 Continental Airlines moved its headquarters to Houston. Starting around that time, Continental began building its Houston hub. Finally, Houston Intercontinental Airport had overcome its growing pains and was now positioned to propel itself into the upper tier of U.S. airports.⁵²

The 1990s and 2000s saw ongoing improvements to the airport. In 1990, the International Airlines Terminal Building opened. Later in the 1990s, the circular gate facilities at Terminal A, which had a distinctive 1960s feel and seemed to be reminiscent of the 1950s-sounding term “Jetero,” were demolished and replaced with linear gate facilities. The circular facilities at Terminal B were retained, however, even as Continental’s hub operation expanded into Terminal B. In May 2002, a 6,000 foot (1,829 m) runway was lengthened to 10,000 feet (3048 m) for

full jet service, and in 2003 an all-new, 9,400-foot (2,865 m) runway opened. With the addition of the new runway, the airport’s land area exceeded 10,000 acres. The first phase of the new Terminal E was dedicated in June 2003.

In 2002, Houston’s Bush Intercontinental Airport ranked as the 8th busiest airport in the United States and the 13th busiest airport in the world as measured by total passengers. It was a remarkable level of success for an airport that had been plagued with so many problems during its development and was not ideally situated for airline hub operations. To complement its world-class freeway system, Houston also had an airport that reached world-class status.⁵³

The Roads and Freeways

Improvements to the roads and freeways serving Bush Intercontinental Airport were completed around the time of the airport opening in June 1969. The Eastex Freeway from downtown to the airport entrance was upgraded to full freeway status by 1970. The Beltway 8 frontage roads between the North and Eastex Freeways were opened in February 1970. The North Freeway had been completed in 1963. The southern entrance to the airport, John F. Kennedy Boulevard, was a four-lane divided highway, and the eastern entrance to the airport, Will Clayton Parkway, was a four-lane divided highway inside the airport and a two-lane roadway outside the airport. During the 1970s there were almost no freeway or roadway improvements in the vicinity of the airport.

Freeway construction resumed in the mid-1980s. In 1983 work was underway to construct the Beltway 8 main lanes near the airport. The Hardy Toll Road opened in 1987. The 1990s brought a construction boom to airport-area freeways. The Beltway 8 main lanes between the North and Eastex Freeways were completed in bits and pieces, with the final section at the Eastex Freeway opening in December 2002. A four-level interchange at Kennedy Boulevard with two direct connectors was completed in 1992. Major expansion of the North Freeway west of the airport was completed in 1998. Expansion of the Eastex Freeway was completed in 1999. The Hardy Toll Road airport connector opened in January 2000. The five-level stack interchange at Beltway 8 and the North Freeway saw its first phase open in 1997 and was fully completed in early 2003. The first connector ramp at the interchange of the North Belt and Eastex Freeway opened in December 2002, and the second phase, in progress in 2003, will add three more direct connector ramps.

But what about the entrance roadways to the airport? Will they ever become freeways? In the long run, the answer to that question is probably yes, but in the short and intermediate planning horizons neither John F. Kennedy Boulevard nor Will Clayton Parkway will become a freeway. John F. Kennedy Boulevard will be the first to become a full freeway since only one traffic light needs to be eliminated. The lightly-travelled Will Clayton Parkway will probably have to wait a very long time for freeway status.



Will it ever be a freeway? This view looks west along Will Clayton Parkway, the former Jetero Boulevard and one of two entrances to Bush Intercontinental Airport. The roadway is in a frontage road configuration and has a wide right-of-way for its ultimate planned freeway status. However, traffic volumes entering the airport on Will Clayton Parkway are low, so construction of freeway main lanes is in the distant future. (Photo: May 2002)





Trying to stay one step ahead of suburbia: This view shows subdivisions encroaching on the only complete section of the Grand Parkway in west Houston. Rapid development along the Grand Parkway corridor particularly northwest of Houston prompted officials to move forward with alignment studies in the late 1990s, defining most of the parkway route around Houston by 2002. This view looks north along the Grand Parkway with the Fry Road intersection in the foreground. (Photo: The Positive Image, April 2000)

The Grand Parkway, SH 99

The name alone is enough to inspire awe. The great railway era had its Grand Central Terminal in New York City. The American West has its Grand Canyon and Grand Tetons. Baseball, tennis, and golf have their grand slams. And as the crowning achievement of its freeway system, Houston would get its Grand Parkway.

It was a freeway befitting of its name: as originally planned, a 130-mile (208 km) mega-loop around Houston that lassoed the two inner loops and the web of spoke freeways. But bringing grand dreams to reality is another matter. The big freeway plans of most major cities died in the 1970s, including Houston's Grand Parkway. Even today, cities that urgently need second outer loops, such as Atlanta and Washington, D.C., have no hope of actually seeing proposed wide outer loops become reality.

But what really makes something grand? In the case of the Grand Parkway, its grandness is its mere existence. The Grand Parkway came back to life in the early 1980s, and its first section was opened in 1994. As of 2003, it appears that most, and probably all, of the Grand Parkway will ultimately be constructed. Building a wide outer loop will be a grand achievement—perhaps something that no other major city will be able to do. If and when the day comes that the Grand Parkway is complete, Houston will be in a class of its own.

Origins

The first discussions of a third loop around Houston began in April 1961 with talk of the “inter-county loop.” The Houston City Planning Commission conceived the route and began discussions with surrounding counties. The inter-county loop was contemplated to be a highway or major arterial street about 17 miles from downtown Houston and about 5-6 miles outside the Outer Belt (now Beltway 8). It would have followed existing routes, including Highway 6 and FM 1960 around west and north Houston, and Battleground Road in east Houston. Some new roadways would have been required south of Houston in Galveston and Brazoria Counties.⁵⁴

Serious consideration of a larger freeway loop that evolved into the Grand Parkway began in 1964. In October 1965, plans for the Grand Parkway became public. The Houston City Planning Commission released a draft version of the 1966 *Major Thoroughfare and Freeway Plan* showing the new third loop on the official planning map. The proposed 130-mile (208 km) belt would be 20 to 25 miles (32 to 40 km) away from downtown and would actually be about seven-eighths of a complete loop since it did not include the southeast section from IH 10 East to the southeast terminus at Galveston Bay south of Kemah. The City Planning Commission approved the route and scheduled a public hearing for February 17, 1966. The *Houston Chronicle* enthusiastically endorsed the new route, saying, “No sensible citizen can doubt that this freeway will be needed eventually.” The route was adopted into the region's official long-range plan.⁵⁵

As of early 1966, the third loop did not have a name. Since Houston already had a loop and an outer belt, there was no obvious name. Houston Mayor Louie Welch referred to it as the “way out loop” and some news reports called it the “extreme outer belt.” The City Planning Commission had more plans for the corridor than just a

freeway, however. By October 1966 the full vision of the corridor was made public by the City of Houston Planning Department. The corridor would connect a series of large parks and lakes around the perimeter of Houston. The freeway corridor itself would be very wide, up to thousands of feet wide, to promote its parklike qualities. The freeway and accompanying parks would be a refuge for city dwellers in the future Houston of 1990, which was projected to have a population of 3.1 million. The new freeway loop would be the centerpiece of a plan to provide the growing city with adequate recreation opportunities. The freeway corridor was named the Grand Parkway.⁵⁶

In 1968 the Planning Commission published a map titled *Houston Preliminary General Study Plan for 1990*, showing the Grand Parkway as a park belt around the city of Houston. The concept of the Grand Parkway as a park corridor was short-lived. The lakes proved to be unpopular with landowners and were not seriously considered. A similar map published in 1972 did not include the Grand Parkway or any of its associated parks and lakes. The Grand Parkway freeway was not affected by the demise of plans for parks and preserves, and remained on the official long-range transportation planning maps for the Houston region. The 1970s, however, would not be kind to freeways, especially costly long-range projects such as the Grand Parkway.⁵⁷

Grand Dreams and Harsh Reality

As the financial problems at TxDOT developed into a full-blown crisis in the mid-1970s, local officials were forced to drastically curtail plans for new freeways. The downsizing of freeway plans was detailed in a comprehensive 1976 report which provided a blueprint for sustaining TxDOT in its new era of diminished resources. The report gutted Houston's planned freeway system and



effectively called for the cancellation of Houston's second loop, the Beltway 8, by not recommending any future work on the facility. While Beltway 8 was struggling for its life, the chances of ever building the Grand Parkway diminished.⁵⁸

The Grand Parkway had not been adopted into the state highway system by the Texas Transportation Commission. It was still just a line on the map of the regional long-range transportation plan and was officially under the jurisdiction of the city of Houston. In 1976, just 10 years after it was officially added, the regional planning agency deleted the Grand Parkway from its long-range transportation plan. Only a small section southeast of Houston from SH 146 to near Alvin still remained on the long-range planning map.⁵⁹

Resurrection

In early 1982 two men decided to bring the Grand Parkway back to life. One was a prominent real estate agent in west Houston; the other, an engineer for the consulting firm Turner, Collie & Braden, Inc. It was the beginning of a new era in Houston—an era in which those who benefited the most from new freeways would take the lead in getting the new freeways built. The engineer, Al Knipe, envisioned a lucrative pot of engineering and consulting contracts if the Parkway were built. The real estate agent, Jack Hooper, handled real estate transactions for a prominent family that co-owned the 5,416-acre Cinco Ranch, a planned real estate development which was in the path of the Grand Parkway. Hooper realized the potential to substantially increase property values by constructing the Grand Parkway, so he began to seek donations of land for the freeway. Soon Knipe and Hooper had obtained written



Grand dreams, but only the freeway remains: Plans for the Grand Parkway were first made public in October 1965. The planned freeway was included in the 1966 official regional transportation plan. Also in 1966, the City of Houston Planning Department unveiled plans to transform the parkway into a wide belt of parks and lakes around the periphery of Houston, as shown in this 1968 planning map which depicted the parkway alignment as a wide park strip. The idea of building parks and lakes in association with the Grand Parkway quickly faded, but the Grand Parkway transportation corridor remained.

commitments for land donations for eight miles (13 km) of 300-foot-wide (91 m) freeway right-of-way, verbal commitments for another eight miles, and a list of other landowners who were potentially interested.⁶⁰

Knipe and Hooper soon wondered: Why not build the entire Grand Parkway on donated right-of-way? Based on the favorable response from landowners and with unanimous support from local political officials, it seemed as if it could be done. In addition to the efforts of Knipe and Hooper, county officials in Fort Bend County southwest of Houston and Montgomery County north of Houston

were working very successfully to secure right-of-way donations. Knipe and Hooper's efforts received further support from a November 1982 TxDOT study on the future transportation needs of Texas. The report concluded that a third highway loop in Houston would be needed as early as 2002, especially in far west Houston.⁶¹

By early 1984 local politicians, real estate developers, business organizations, and transportation interests were pushing hard to move the project forward and get the Grand Parkway reinstated to official long-range planning documents. By May 1984 the Grand Parkway

was restored to the long-range plan, and in 1985 it was back on the official transportation planning map.⁶²

At a special session of the Texas Legislature in June 1984 to address education and transportation, a new state law was passed authorizing the formation of nonprofit transportation corporations. Transportation corporations would accept donations of land and money to be used in developing highway projects. The idea was for the transportation corporation to perform all needed work up to the point of construction, including right-of-way acquisition, environmental studies, and engineering. TxDOT would then pay for the actual construction. The Texas Transportation Commission authorized the formation of the Grand Parkway Association as a transportation corporation on October 25, 1984. In 1985 the commission approved several sections of the Grand Parkway for state-funded construction—if and when the Grand Parkway Association could get those segments ready for construction.

The Grand Parkway Association had an important ally and promoter on the Texas Transportation Commission: Houstonian and commission chairman Bob Lanier. Lanier was pushing for increased private-sector involvement in new highways to stretch state highway construction dollars as far as possible. Lanier was helping the Grand Parkway effort to showcase what he hoped would be the wave of the future. Not only would the local participation save TxDOT a lot of money, but the use of state funds (as opposed to federal funds) to construct the facility would eliminate the need for costly and time-consuming environmental impact studies. Lanier's ownership of a large tract of land along the proposed parkway route in northwest Harris County would later become a point of controversy in his support for the Grand Parkway, however.

The now-official Grand Parkway Association set up an office and lined the walls with maps and aerial photographs. Engineers worked to plot out a route where they could obtain donated right-of-way and avoid existing structures to keep costs low. Progress seemed to be good. Officials in Montgomery County north of Houston reported in February 1985 that they had obtained commitments for 95% of the right-of-way for the section between the North Freeway (IH 45) and the Eastex Freeway (US 59). In trying to identify and obtain a 170-mile-long (272 km) freeway corridor, the Grand Parkway Association was attempting to perform a task that would normally take 10 years or more. In fact, officials had been busy acquiring right-of-way for the Beltway 8 for the previous 30 years, and efforts still weren't complete. Building a huge outer loop in a short time of approximately 10 years was a lofty goal, but it seemed possible at the time.⁶³

Not So Fast

It didn't take long for reality to set in. First, it would be impossible to obtain 100% or close to 100% of the right-of-way from donations. While large landowners were typically more than willing to donate the needed land, small landowners and farmers were more difficult to convince. The parkway would disrupt their farming operations and

rural lifestyle, and the financial payoff from the Grand Parkway would be sometime in the distant future. Other property owners didn't want their property severed. Inevitably there would be some litigation. A more realistic goal would be to obtain 80-90% of the right-of-way through donations, and as time went on, even that percentage would become impossible.

Second, the cost of preconstruction work turned out to be very high. The Grand Parkway Association needed to obtain financial donations from landowners to pay for preconstruction costs, which were reported at \$360,000 per mile in 1985. The collapse of Houston's economy in 1986 and accompanying free fall in property values greatly diminished landholders' enthusiasm for making cash contributions.⁶⁴

Third, the freewheeling business dealings of the Grand Parkway Association came under closer scrutiny in 1986. At issue were potential conflicts of interest because some of the association's directors owned property or had business interests tied to the Parkway's proposed route around Houston. The Texas Transportation Commission adopted new rules in April 1986, prohibiting individuals with real estate interests from serving as directors of private transportation corporations. Three of the five directors of the Grand Parkway Association, including the executive director, were forced to resign.⁶⁵

It became clear that the Grand Parkway Association would need to take the project one step at a time. Around 1987 effort was refocused on the western segment that originally inspired Knipe and Hooper to resurrect the Grand Parkway in 1982.

Building the First Section

In 1987 the Grand Parkway Association worked to finalize the route of the western segment between the Katy Freeway (IH 10) and the Southwest Freeway (US 59), but there was one complication. A landowner just south of the Katy Freeway didn't want the freeway to pass through her property and was threatening litigation to move the alignment to the edge of her property. It was ironic that this landowner was Vivian Smith, widow of oil and real estate magnate R. E. "Bob" Smith. Probably no one else in Houston had used Houston's burgeoning freeway system in the 1950s and 1960s as a vehicle for generating real estate wealth better than Bob Smith. Bob Smith had astutely bought large tracts of land along freeway corridors, especially the West Loop near the Galleria, and cashed in as the freeways and booming city pumped up property values. Regardless of the wealth that freeways had contributed to her estate, Vivian Smith didn't want a freeway through her property. In spite of objections from Smith and others, in March 1988 the Texas Transportation Commission approved the planned alignment of the Grand Parkway through Smith's property. The case would eventually be settled in court years later, after the death of Vivian Smith in 1989.⁶⁶

In the meantime, the Grand Parkway Association was scrambling to come up with the money to fund its end of

the deal to provide all land and preconstruction services. By 1989 it became clear that there would be a shortfall. If the Grand Parkway's first segment would be constructed, TxDOT was going to have to pick up a share of the cost that was originally intended to be the responsibility of the Grand Parkway Association. The association was still optimistic that construction could begin in the summer of 1989.

But there was an even bigger hurdle looming: environmental issues. By 1989 there were already disputes about the level of environmental studies needed for the project. The U.S. Fish and Wildlife Service held up approval of the western segment, saying that a comprehensive study of the impact of the entire Grand Parkway was needed. The Army Corps of Engineers sided in favor of the highway and had no objections to its construction. On February 20, 1991, after nearly two years of stalemate, the Department of the Interior refused to support the Fish and Wildlife Service's request for a broader study and authorized the Army Corps of Engineers to issue a permit for filling wetlands. Construction on the 19-mile (30 km) segment was underway by the end of 1991. The west Grand Parkway was officially dedicated on August 30, 1994, in a large ceremony in Sugar Land near the south end of the segment. Only about three miles (5 km) of the segment were constructed to full freeway standards. The rest consisted of main lanes or frontage roads, and was designed to be easily upgradeable to full freeway status with the construction of overpasses.⁶⁷

The first section of the Grand Parkway was built. It wasn't easy, and building future sections wouldn't be any easier.

In the Crosshairs of Environmentalists

The dispute regarding the level of environmental study required for the first segment of the Grand Parkway was not the end of the story. In fact, it was just the beginning. Stopping the Grand Parkway became one of the top priorities of environmental groups, especially the Sierra Club and the Audubon Society. The proposed route of the Grand Parkway traversed through regions with environmental issues far more serious than any other Houston freeway had faced. The segment west of Houston between the Katy and Northwest Freeways crossed the Katy Prairie, a wintering ground for migratory birds. Southwest of Houston, the route crossed the Brazos River bottomland hardwood forest and came near Brazos Bend State Park, a park with a large wildlife population. Northeast of Houston, the route passed near Lake Houston State Park. North of Houston near the community of Spring and southeast of Houston near the community of Sante Fe, residents were vocal that they did not want the freeway nearby. But more than anything else, environmentalists were opposed to the parkway since they believed it would promote urban sprawl in the vast area around Houston. Controversy and the threat of lawsuits continued through the 1990s, with environmentalists asking for more comprehensive environmental impact studies. Ultimately it was deter-

mined that each section between radial freeways, called segments of independent utility, could be studied individually. In 2001 environmental groups attempted to use federal air quality regulations to kill the Grand Parkway and other highway projects.⁶⁸

In a 1996 report titled *Road to Ruin*, prepared by the groups Friends of the Earth and Taxpayers for Common Sense, the Grand Parkway was listed among 22 nationwide highway projects that the groups identified as most wasteful and environmentally damaging. The 1999 version of the report listed the Grand Parkway as the fifth worst project in the nation among the 50 that were listed.⁶⁹

Still, there was near-unanimous political support for the construction of the Grand Parkway and particularly strong political support from outlying counties, especially Fort Bend County southwest of Houston. The reason was simple: growth was going to occur with or without the Grand Parkway. The environmentally sensitive areas around Houston would likely be urbanized—it was only a matter of time. There was no mechanism to stop or even slow growth in any region around Houston. Officials could look to any number of cities in the United States that had curtailed freeway construction in the 1970s but still sustained ongoing and unstoppable sprawl. Proactive planning was needed to avoid the transportation quagmires that cities such as Washington, D.C. and Seattle had gotten themselves into. The choice was clear: growth and sprawl with adequate transportation infrastructure, or growth and sprawl with inadequate transportation infrastructure and lower quality of life.

As an added plus for the Grand Parkway, officials with the Grand Parkway Association were touting its parkway-like qualities. Since most of the Grand Parkway would not have frontage roads, it would truly be a parkway in the sense that it would not be lined with commercial establishments and billboards like most other Houston freeways. Local officials painted a particularly grim vision of the future without the Grand Parkway. Suburbanites would be forced onto country roads that would be upgraded to arterial streets. The roads would subsequently be lined with strip malls and signage. Traffic lights would proliferate. The nightmarish stretch of FM 1960 in north Houston between the North and Northwest Freeways, with its endless traffic lights, commercial clutter, and traffic congestion, would become the harsh reality of the future. Environmentalists held steady in their opposition, but it seemed that local interests opposing specific sections of the Grand Parkway recognized the need for the parkway—they just didn't want it in their backyards.

The Grand Parkway opposition never gained critical mass. Opposition by environmental groups was often vocal, but the near-unanimous support of the Houston-area political establishment kept the project on track.

The Grand Parkway Model Falls Apart

In the early 1980s it seemed like a good idea. The Grand Parkway Association would obtain land donations for the right-of-way and pay for all work leading up to



The alternative: This view of FM 1960 north of Houston shows the probable future of suburban transportation in Houston without the Grand Parkway. The farm-to-market road has been engulfed by suburban development and has become a heavily commercialized corridor with nonstop strip shopping centers, signage, and traffic lights. (Photo: March 2003)

construction, making the projects attractive to TxDOT on a cost-benefit basis and expediting construction. The difficulty in completing the first section of the Grand Parkway cast that model into doubt. By the early 1990s any hope of moving the Grand Parkway forward with the originally contemplated model was gone. Numerous factors contributed to the demise of the original Grand Parkway model, but at the top of the list was the high cost of performing environmental studies. The complexity and cost of environmental studies increased substantially in the 1990s due to the Clean Air Act Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991. In 1991 TxDOT officials decided to perform a full environmental impact statement for each of the 10 unbuilt segments rather than a less comprehensive environmental assessment. Each segment would require millions of dollars in funding and years of study. The growth of Houston and increase in property values also made it more difficult to obtain land donations. The first segment of the Grand Parkway had about 90% of its right-of-way donated, but subsequent sections were not expected to equal that percentage. The long delays in obtaining environmental clearance, uncertainty over the availability of funds for construction, and lack of firm timetables for completing segments made donations less attractive to landowners along the route.⁷⁰

The tremendous difficulty in moving sections of the Grand Parkway to construction became even more

evident with the second segment, the I-2 segment east of Houston between the East Freeway (IH 10) and SH 146 in Baytown. The project was an ideal candidate for the original Grand Parkway model since a large landowner (USX Steel at the time) was willing to donate land and contribute to preconstruction costs. Preliminary work began in 1991. Seven years later in August 1998, the environmental impact statement was finally complete and a record of decision providing environmental clearance for the project was issued. The project then had to get in line for state funding. In the meantime, landowners became impatient and allowed offers of land donations to expire. The Grand Parkway Association was originally expected to provide 87.5% of the right-of-way for the segment. In February 2000, the percentage of donated right-of-way was reduced to 80%, and in March 2002 the percentage was further reduced to 60%. A \$1.7 million contribution from the new landowner of the USX tract was contingent on construction being underway by September 2003. Contracts estimated at \$43 million for the Grand Parkway and \$29.4 million for associated work on IH 10 are scheduled to be awarded just prior to the deadline.⁷¹

Approximately 11 years would lapse between the opening of the first segment of the Grand Parkway and the completion of the second segment. With nine additional unbuilt sections, the timeline for completion of the Parkway was looking to be very long—if it could be done at all.

Building Momentum

By the mid-1990s the Grand Parkway Association evolved into more of a coordination and lobbying entity for the Grand Parkway. The money to keep the project going would have to come from county governments, TxDOT, and toll road agencies.

The poor prospects for obtaining construction funding prompted an effort in 1998 to build the section around northwest and north Houston, from the Katy Freeway (IH 10) to the Eastex Freeway (US 59), as a tollway. In 1999 a consultant concluded that toll revenue would be sufficient to pay for only 25% of the project cost. The Harris County Toll Road Authority offered to build it as a tollway if TxDOT paid for 75% of the cost, but TxDOT rejected the proposal.⁷²

In 1998 the wheels were set in motion for substantial progress on the Grand Parkway—a wave of events that will probably lead to construction of numerous sections of the Grand Parkway. A study and public hearing process for the environmental impact statement for segment C southwest of Houston was launched in March 1998. This study considered one of the three most environmentally sensitive sections of the Parkway. The alignment would need to traverse through a region with parks, lakes, a large oil field, the Brazos River bottomland hardwood forest, an observatory, conservation areas, a prison, wildlife populations, and the wide Brazos River flood plain. In October 2000 a recommended preferred alignment which avoided the sensitive areas was approved by the Houston-Galveston Area Council, the regional planning agency that must approve all highway projects. A record of decision providing environmental clearance was expected in 2003. Fort Bend County voters approved a bond issue in 2001 providing \$7.7 million for project development and right-of-way acquisition, moving the project development process forward.⁷³

After the 1999 study concluding that the northwest and north sections of the parkway were not financially feasible as a tollway, TxDOT and the Harris County Toll Road Authority entered into an agreement to provide \$8 million in funding to complete environmental studies. In 2002 the preferred alignment for the corridor was identified. This 52-mile (83 km) stretch included two environmentally-sensitive sections, segment E in west Houston through the Katy prairie and segment G in north Houston through the San Jacinto River bottomland hardwood forest. However, the alignment through urbanized areas just west of the North Freeway (IH 45) proved to be the most controversial. Neighborhood groups threatened litigation to stop the Grand Parkway, but political officials held firm, saying that the Grand Parkway is needed. Ultimately, an alignment acceptable to the neighborhoods was selected, causing a snakelike curve in the route. The draft environmental impact statement was completed in 2003, and a record of decision authorizing construction is expected in 2004.⁷⁴

Key dates in the history of the Grand Parkway

1961	The inter-county loop is first discussed.
1965	Plans for a wide outer freeway loop are revealed.
1966	The Grand Parkway is named, included in the official long-range plan, and proposed to be the centerpiece of a belt of parks around the periphery of Houston.
1976	The Grand Parkway is cancelled.
1984	The Grand Parkway is restored to the official long-range plan. The Grand Parkway Association is formed.
1994	The first section of the Grand Parkway opens west of Houston.
1998	A series of environmental impact and alignment studies begins, defining the parkway route for approximately 103 miles (165 km).
2003	Construction begins on a 10-mile (16 km) section east of Houston. Toll road status becomes increasingly likely for the remaining sections.

In August 2002 a \$7.5 million study to define the alignment and complete the environmental impact statement for segment B southeast of Houston began. With the launching of that study, approximately 75% of the Grand Parkway was either built, was about to begin construction, had its alignment defined, or was under study. In 2001 the Harris County Toll Road Authority published a map showing potential future toll road corridors it might consider. The entire Grand Parkway, excluding the completed section west of Houston and the imminent section east of Houston, is shown as a toll road candidate. The northwest and north sections of the Grand Parkway were being re-studied for toll road feasibility in 2003. Toll-supported bond financing increasingly appeared to be the only way to build the Grand Parkway in the near future. In April 2003, the Texas Transportation Commission approved a resolution supporting the construction of the remaining sections of the Grand Parkway as tollways, with the Harris County Toll Road Authority taking over the sections in Harris County. The Texas Transportation Commission was essentially telling the Houston area that if it wanted the Grand Parkway built, it would have to be done with local funds. The financial strength of the Harris County Toll Road Authority and the acceptance of tollways in Houston make the financial feasibility of constructing the segments around northwest and north Houston as tollways increasingly likely.⁷⁵

In 2003 the Grand Parkway has achieved greater momentum than at any other time during its 38-year history. Many obstacles remain before construction can begin, and only time will tell if Houston gets its unprecedented third freeway loop. If a wide outer loop can be built in any major American city, Houston is the place where it will happen.