





# Downtown Freeways

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Building freeways through central business districts was a costly and difficult task. Numerous freeways converged in a small area, requiring a large number of freeway-to-freeway interchanges. Extensive connections into downtown streets were necessary. The street networks around downtown would need to remain intact where they crossed freeways. Traffic volumes were high, and right-of-way was often limited. Solving these problems necessitated the most complex designs in urban freeway systems.

The designers of Houston's downtown interchange complex faced these challenges, but they had certain advantages working in their favor. Houston's downtown environment was more conducive to freeway construction than most other cities. Outside the relatively compact core of downtown, there were practically no barriers to the construction of the freeway system. Better yet, there were low-density zones around the periphery of downtown, "slum" areas that invited freeways, a natural freeway corridor on the northwest side of downtown, and a city street network capable of handling large traffic volumes coming off the freeways. The result: Houston boasts one of the nation's most extensive and impressive downtown interchange complexes.

Downtown Houston and the extensive freeway system turned out to be a match made in concrete and steel heaven. As of the late 1960s, downtown Houston was a rather unimpressive collection of mid-rise office structures, many quite old. Around the same time, the freeway system into downtown was substantially completed, providing superb accessibility. By the early 1980s downtown Houston had one of the nation's more impressive skylines. The elevated freeways skirting the edges of downtown showcase the skyline to passing motorists, providing a unique driving experience.

(*Opposite page*) **Mega-merge:** The US 59-SH 288 interchange south of downtown is the widest section of downtown freeway. (Photo: May 2003)

## Origins

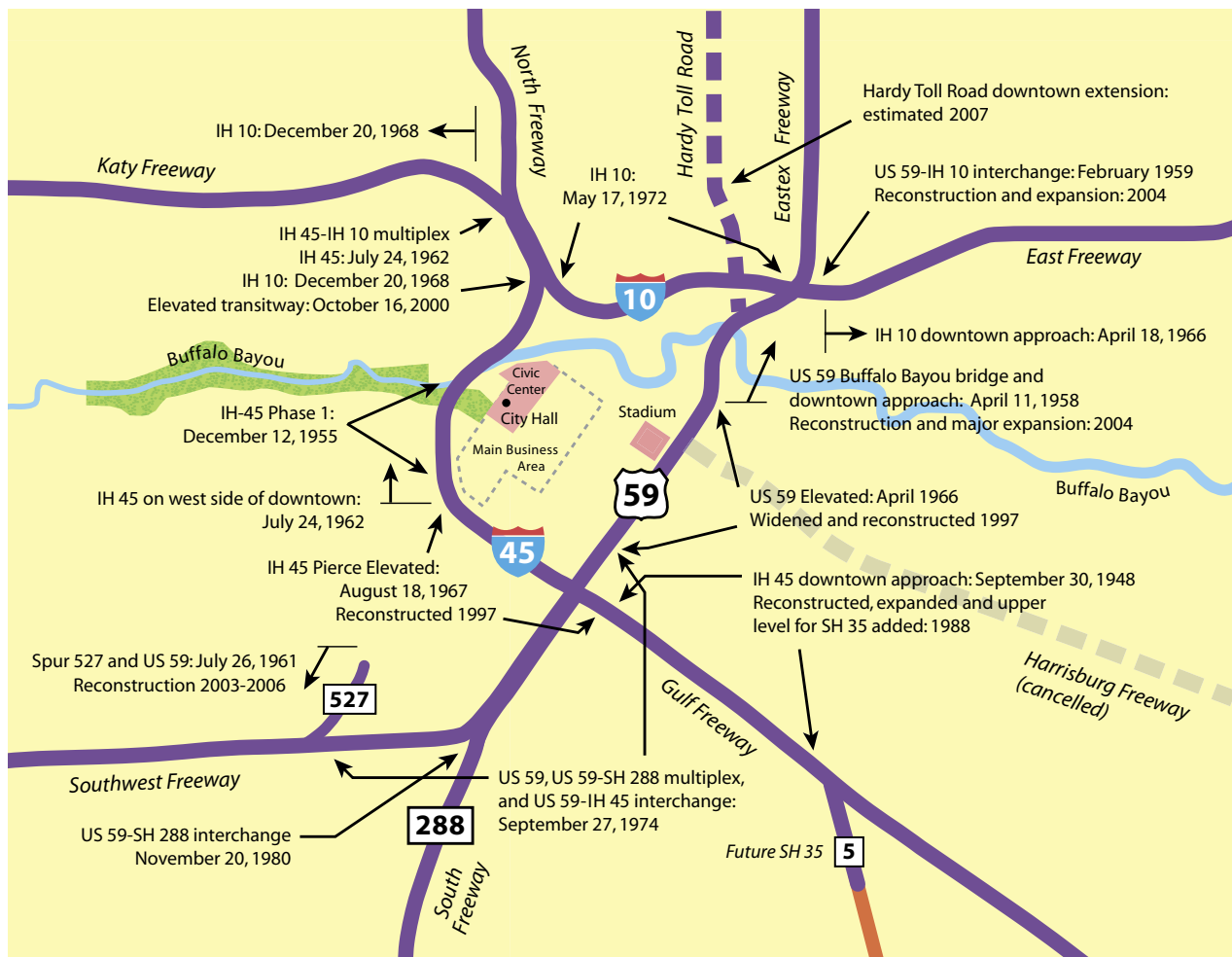
As Houston's freeway system was taking shape in the 1940s, the focus point was downtown. The Texas Transportation Commission approved the Gulf Freeway in October 1943, with the original planned alignment stopping just short of downtown. In May 1945, the commission authorized alignment studies for US 59 from Buffalo Bayou northward and US 75 (now IH 45) along the west and south sides of downtown. In October 1946, the commission approved the addition of the US 90 (now IH 10) freeway across Houston, which was planned to pass just north of the central business district. At this point, Houston's freeway system consisted of five spokes converging on downtown, and the miniloop around the central business district had three of its four sides in the development stage.

On September 30, 1948, the Gulf Freeway was opened just southeast of downtown Houston. The freeway's terminus into downtown was one of its more important design features. The freeway was directly connected to four high-capacity downtown streets—two inbound one-way streets and two outbound one-way streets. The head of the TxDOT Houston Urban Project Office, W. J. Van London, called the transition zone to the freeway the “loading platform.” In November 1948, *American City*

magazine stated that the freeway terminus “resembles the mouth of a stream with its delta widening out to receive the slower-moving waters.” The Gulf Freeway terminus set the standard for all other freeways entering downtown, with each freeway distributing traffic onto several downtown streets.

In 1950 Van London and city officials were working to define the details of the downtown interchange complex, including exact alignments. At the time, 10 freeway spokes were envisioned for downtown Houston. The early vision included the 7 existing spokes in 2003 and Memorial Parkway, the unbuilt Harrisburg Freeway, and a route between the South and Gulf Freeways that later became the Alvin Freeway. Double-deck structures were studied, particularly for IH 10 north of downtown and some of the distribution structures into downtown. However, no double-deck structures were ultimately used.<sup>1</sup>

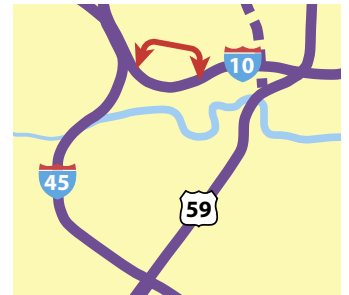
Formulation of the downtown freeway plan was part of a comprehensive local effort to define Houston's overall freeway system. In April 1953, the Texas Transportation Commission formally approved the US 59 freeway on the east side of downtown, closing the freeway loop around downtown. Houston's first comprehensive freeway plan was ready for presentation to the Texas Transportation Commission in July 1953. The initial version of the plan



**June 2005 Update:** The US 59/IH-10 interchange opened to regular traffic in October 2003 and was fully completed in early 2004 when the HOV lane opened. Construction was accelerated to complete it in advance of the 2004 Superbowl.



**The double deck that wasn't:** Early concepts for downtown Houston freeways included possible double-deck freeways, such as this one that was contemplated for IH 10 on the north side of downtown. Although downtown Houston has many elevated freeways, no double-deck structures were built. IH 10 north of downtown, opened on May 17, 1972, was the next-to-last segment of originally-planned downtown freeway main lanes to open. (Photo: TxDOT)



for the downtown interchange complex was slightly different from the final plan. In the 1953 plan, the Southwest Freeway followed the present-day route of Spur 527 all the way to IH 45 on the southwest side of downtown (see plan map, page 13).<sup>2</sup>

In 1954 the freeway master plan was adjusted, bringing the downtown interchange complex to its near final general configuration. In the final plan, Spur 527 was strictly a part of the Southwest Freeway distribution system into downtown streets. With the final and official plan in place, it was clear that Houston's downtown freeway complex would be extensive. It featured two major multiplex freeway interchanges, where two freeways would run parallel to each other—one on the north side of downtown with IH 45 and IH 10, and one on the south side of downtown with US 59 and SH 288. There would be two stack-type interchanges, one at US 59 and IH 45, and one at US 59 and IH 10. IH 45 on the west side of downtown would feature an elevated complex of ramps connecting to downtown and the parkways along Buffalo Bayou. All downtown freeways would be elevated above grade or depressed below grade.

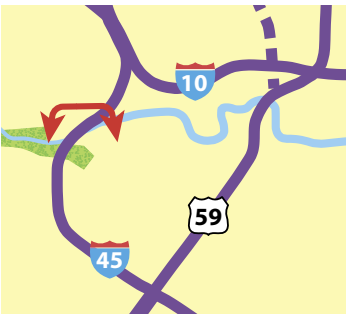
There were still many details to be worked out. In May 1957, city of Houston planning director Ralph Ellifrit and TxDOT Houston Urban Project Office head A. C. Kyser met in Kyser's office to plan details of the downtown

freeways. Two days later Ellifrit summarized their plans in a letter titled "Central Interchange Study." The letter detailed how the existing downtown street system would be fully integrated into the freeway system by assigning at least four feeder streets to each radial freeway. To increase the merging distance between the US 59-SH 288 interchange and nearby US 59-IH 45 interchange, Ellifrit recommended a southward shift of the US 59-SH 288 interchange. Most of the ideas contemplated in the May 1957 meeting, including the southward shift of the US 59-SH 288 interchange, would become part of the final plan. Houston's downtown freeways were designated as the Houston Central Interchange.<sup>3</sup>

In August 1960, the Texas Transportation Commission closed the last remaining gap in the downtown freeway system by formally approving US 59 between Spur 527 and IH 45. Part of this newly approved section would become the widest and most impressive freeway segment in the downtown area.<sup>4</sup>

In 1963 the overall plan for the downtown Houston freeway system was finalized. There would subsequently be only three significant changes to this plan. First, the interchange at the intersection of the planned Harrisburg Freeway and US 59 would never be built, since the Harris-





**Clearing the path:** Right-of-way clearance for present-day IH 45 on the west side of downtown was complete when this photo was taken on August 3, 1954. This section of freeway was the first to be constructed in downtown Houston. The parallel rows of buildings in the upper right of the photo are part of the Allen Parkway Village housing project. (Photo: Squire Haskins Photography, Dallas)

burg Freeway was later cancelled. Second, a third freeway multiplex would be added southeast of downtown along IH 45 where SH 35, the planned Alvin Freeway, merged with IH 45. And third, the Eastex Freeway interchange complex on the northeast side of downtown, including the interchange with IH 10, would be substantially expanded in work that began in the late 1990s.<sup>5</sup>

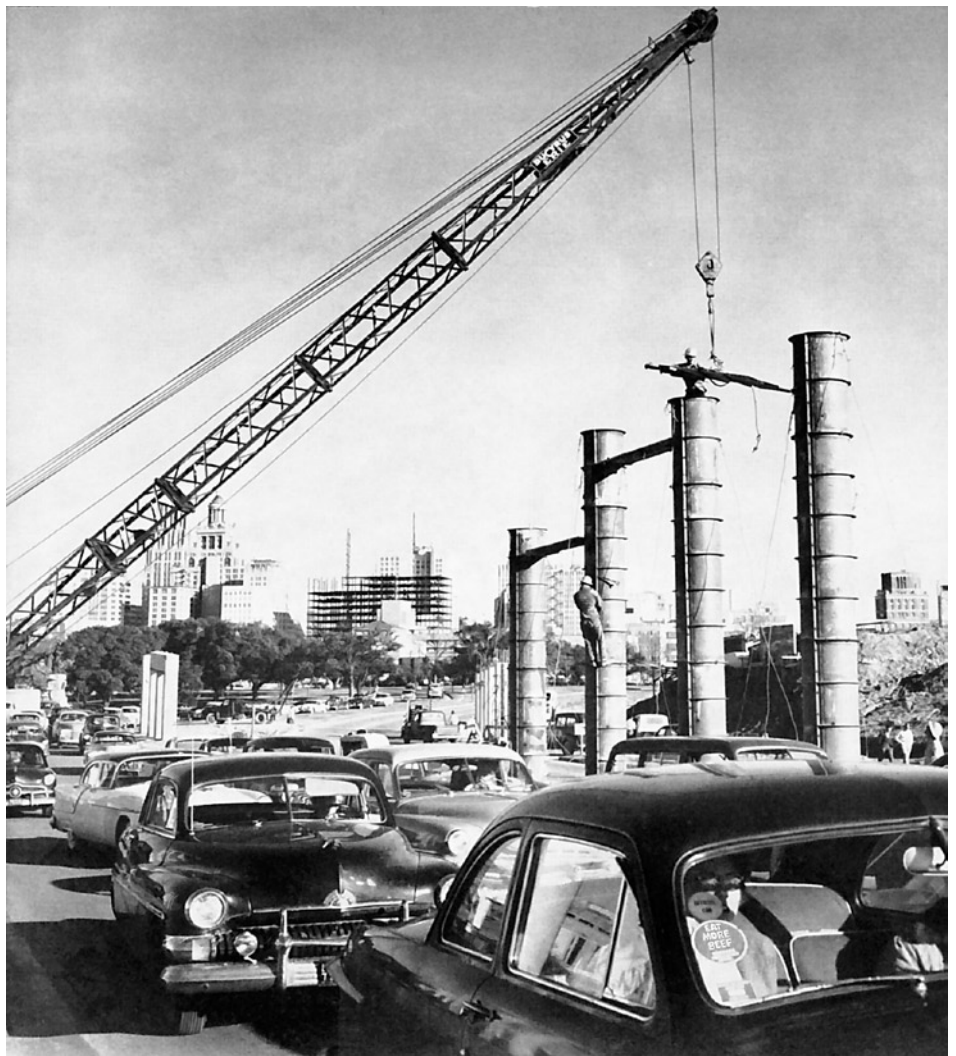
### Clearing the Way

Most of the right-of-way clearance for Houston's downtown freeways consisted of residential structures,

with some areas of low grade commercial structures and light industry also affected. The older, decayed neighborhoods around downtown Houston worked in favor of the freeway builders. Although slum clearance was much less pervasive in Houston than it was in older eastern cities, two of Houston's best examples of slum clearance occurred immediately adjacent to downtown freeways. The Allen Parkway Village project, originally known as San Felipe Courts, was opened in 1942 and IH 45 was constructed along its eastern edge in 1955.\* The Clayton Homes housing project was built just northeast of

\* Allen Parkway Village became the focus of a long-running, highly contentious controversy when the city of Houston began efforts to demolish it in the mid-1970s. In early 1996 a compromise plan was approved, and 677 of the 963 units were demolished in 1996 and 1997. The controversy was not related to the adjacent IH 45 freeway.

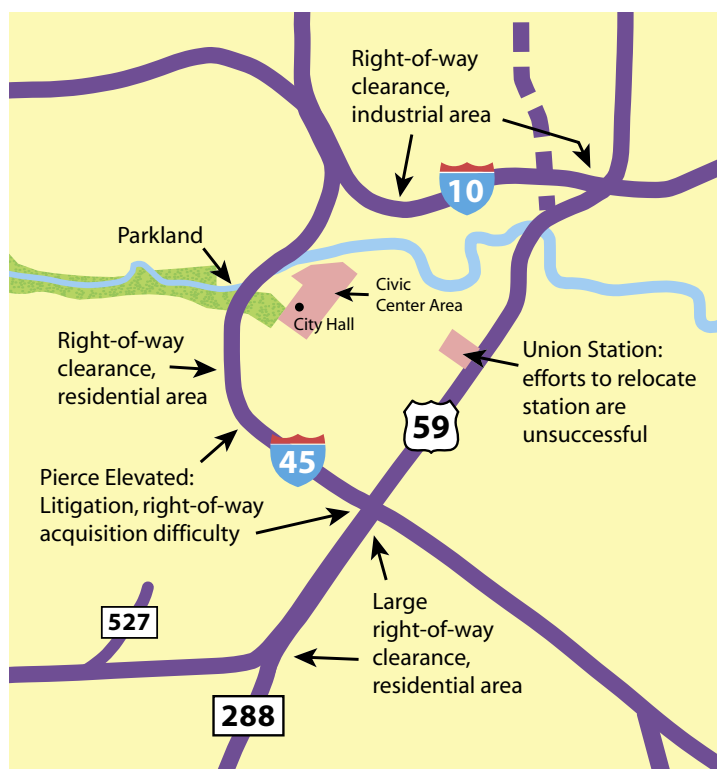
**Construction begins:** This 1954 photo shows the first construction on the downtown Houston freeway system—the first phase of IH 45 on the west side of downtown. This view looks east along Allen Parkway. (Photo: Greater Houston Partnership)



**The first downtown freeway:** This short section of IH 45 on the west side of downtown opened on December 12, 1955. This photo was taken within two years of the opening and looks southeast, similar to the perspective of the photo on the opposite page. (Photo: TxDOT)







**Few obstacles to freeways:** Downtown Houston presented few obstacles to freeway construction. The map above shows the locations of the freeway sections that presented some difficulty.

downtown in 1952, and in 1958 US 59 was constructed alongside the property. The largest right-of-way clearance for the downtown freeway system occurred in the late 1960s on the south side of downtown, where a very wide corridor was required for the US 59-SH 288 interchange. There were generally no objections to the displacement of residences in the neighborhoods around downtown.

Another possible roadblock to freeway construction was the parkland along Buffalo Bayou just west of downtown, adjacent to the Houston Civic Center. A web of elevated structures and connection ramps was envisioned for IH 45 through that section of downtown. In a 1979 interview, Ralph Ellifrit remarked that “there was considerable discussion” about building a freeway at that location, but “there was just no way” to build the downtown freeway system without routing the freeway there. Time would prove that the freeway would not have a negative impact on the park or downtown civic center.<sup>6</sup>

On the east side of downtown, US 59 needed to pass

over a rail yard which included Union Station, one of the city’s railway stations for passenger service. In 1953 the city of Houston began efforts to relocate Union Station, which was controlled by the Houston Belt and Terminal Railroad, to Southern Pacific Railroad’s Grand Central Station. City planners envisioned connecting the Eastex Freeway (US 59 north of downtown) into the street immediately adjacent to the elevated structure, Chartres, and the three parallel streets to the west, using a distribution system similar to the “loading platform” where the Gulf Freeway distributed traffic into downtown. However, Union Station blocked three of the four streets which would connect to the freeway, making the distribution system impractical. Efforts to relocate the station continued through the mid-1950s, with negotiations breaking down by 1958. In 1960 the matter needed to be resolved so construction could move forward. On November 2, 1960, officials from the city of Houston, TxDOT, and the railroad reached an agreement after a one-and-a-half hour session. The railroad agreed to relocate some tracks to provide space for the columns of the US 59 elevated structure, but the Union Station itself would stay. As a result, the Eastex Freeway would lack a full distribution system into downtown in its original construction, since the railroad station blocked the needed feeder streets. The Eastex Freeway’s poor downtown connections would not be improved until the major reconstruction of the US 59-IH 10 interchange began in the late 1990s. Around the same time, construction of a new baseball stadium began at the location of the former Union Station. The stadium, opened in March 2000, blocked the originally planned street access to the new interchange from the east side of downtown.<sup>7</sup>

The most controversial section of downtown freeway impacted commercial property, not residential areas or parks. IH 45 on the south side of downtown, now known as the Pierce Elevated, required acquisition of property slated for commercial development by its owners. Two bank structures were planned for the corner of Main and Pierce, right in the path of the freeway. In 1956 the city of Houston refused to issue building permits to the landowners in order to keep the property clear for the freeway. However, freeway construction was estimated to be 8 to 10 years in the future, and TxDOT did not have funds available to acquire the right-of-way. The landowners couldn’t improve their property, but there was no money available to buy it. In 1957 two landowners filed identical lawsuits to overturn the denial of building permits. The city was forced to rescind the “building lines”\* it had es-

(*Opposite page*) **The spaghetti bowl:** The upper photo, taken in May 1961, shows construction in progress to complete IH 45 on the west side of downtown. The project included the addition of collector-distributor structures and numerous connection ramps. Engineers dubbed the new interchange the “spaghetti bowl” because of its long, stringlike roadways. The term “spaghetti bowl” had fallen into disuse by the 1970s. The lower image shows a modern view of IH 45 on the west side of downtown. The configuration of the freeway remains unchanged since its completion in 1962. (Photos: upper, TxDOT; lower, September 2002)

\* “Building lines” were set by the city of Houston and Harris County to define the needed right-of-way for freeways. In general, building permits were not issued for improvements to property within the building lines.

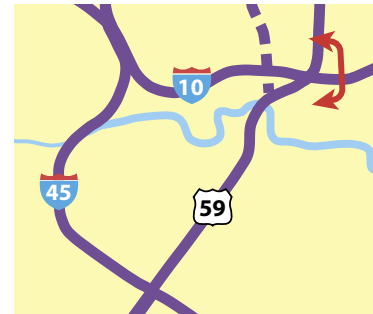








**Aiming for the downtown crossing:** This view shows the terminus of the East Freeway (IH 10) at US 59 in May 1961. Right-of-way clearance for IH 10 on the north side of downtown had not yet begun. A substantial number of structures were in the path of the freeway in the mostly industrial area. The westward extension of IH 10 was completed on May 17, 1972. (Photo: TxDOT)



tablished, leaving the corridor at risk for development.

By October 1958, the building lines were reestablished and TxDOT began protective right-of-way acquisition. But lack of funds limited the land acquisition to only a half-block wide strip along Pierce Avenue. The half-block strip was estimated to cost \$8 million and had a final cost of \$11 million. A full block strip was estimated at \$20 million. After adjusting for inflation in the overall U.S. economy to equivalent values in 2003 dollars, \$11 million translates to about \$56 million and \$20 million translates to about \$102 million—a large but not daunting cost. However, as a percentage of budgets at the time, \$20 million for a full block along Pierce Avenue would have been a huge expenditure. The total TxDOT budget for all of Texas in 1957 totaled \$242 million. In relative terms, the cost of a full block along Pierce in 1957 corresponds to about \$430 million in TxDOT's 2003 budget of \$5.2 billion. There was discussion of acquiring the full block, but limited financial resources ruled it out; getting the money to buy the half-block strip would be difficult enough. But the half-block strip was wide enough for a freeway with

only six lanes. The consequences of the 1956 decision to acquire only half a block were being felt in 2003, when TxDOT officials were studying ways to provide relief to the now critically congested Pierce Elevated.<sup>8</sup>

Controversy over the Pierce Elevated persisted until 1959, when a landowner was still fighting to have the building lines revoked. By that time, local authorities were not willing to entertain any ideas that would change the alignment of the freeway. TxDOT Houston Urban Project Office head A. C. Kyser stated that changing the route was out of the question, and the Houston Chamber of Commerce rallied its support behind the Pierce Elevated. By July 1960 all challenges to the Pierce Elevated had been dismissed, and approximately half the needed right-of-way had been acquired through protective right-of-way purchases.<sup>9</sup>

## Building the Freeways

The first construction on downtown Houston freeways was underway by late 1953, consisting of the first phase of present-day IH 45 on the western edge of downtown. The first freeway section, the main freeway lanes of IH 45, opened December 12, 1955. For the next 25 years there would be a steady progression of work on the Houston Central Interchange (see map on page 118 with completion dates). On April 11, 1958, the Eastex Freeway was extended into downtown with the opening of the Buffalo Bayou bridge. The Southwest Freeway and its distribution system into downtown via Spur 527 were completed on July 26, 1961. On July 24, 1962, IH 45 was completed from the north side of Houston into downtown, forming the first phase of the large IH 45-IH 10 multiplex. The IH 45 interchange structure on the west side of downtown was also finished in 1962 with the addition of collector lanes and connector ramps. In April 1966 the US 59 elevated structure on the east side of downtown was completed. Construction of the Pierce Elevated structure was complete in spring 1965, and it was opened to traffic on August 18, 1967, connecting the North Freeway to the Gulf Freeway. On December 20, 1968, the Katy Freeway (IH 10 West) was brought into downtown Houston, and the multiplex interchange with IH 45 was substantially complete. On May 17, 1972, IH 10 on the north side of downtown between IH 45 and US 59 was opened, completing IH 10 through Houston and the inner loop of freeways around downtown. The last major link in the downtown freeway system was finished on September 27, 1974, with the opening of US 59 between Spur 527 and IH 45. The US 59-SH 288 interchange was completed on November 20, 1980. With that project, the Houston Central Interchange was complete. Although major reconstruction of the Gulf Freeway just southeast of downtown would begin in the early 1980s, construction in the immediate downtown area would go into a state of dormancy for about the next 15 years.

## First Came the Freeways, then the Skyscrapers

In the mid-1960s, downtown Houston consisted of a modest collection of mid-rise office structures. By the late 1960s, most of the freeways into downtown Houston were complete and there was greatly improved access to downtown from all parts of the city. In 1970 the regional transportation planning group, the Houston-Harris County Transportation Study, published a report on the central business district which stated, "There is less traffic congestion travelling to or from the Houston central business district than in any city of comparable size. Comparative travel time studies conducted in 1960, 1965, and 1969 have shown that during the evening peak hours the travel time has been vastly improved in all directions except for the Gulf Freeway, although this facility is showing improvements compared with 1965." The reason for these improvements was, of course, the new freeway system. In terms of motorists' ability to efficiently travel during rush hour, 1970 would later be recognized as the year of peak

### Key dates in Houston's downtown freeways

<b>1945</b>	Official TxDOT authorization to begin study of downtown freeways.
<b>1948</b>	Gulf Freeway opens southeast of downtown with an extensive distribution system into downtown streets.
<b>1954</b>	The general plan for the downtown Houston freeway system is finalized as part of an overall freeway plan for the Houston region.
<b>1955</b>	First downtown freeway segment opens, a short section of IH 45 on the west side of downtown.
<b>1963</b>	The detailed plan for the downtown Houston freeway system is finalized.
<b>1967</b>	The Pierce Elevated section of IH 45 opens.
<b>1972</b>	IH 10 north of downtown opens, completing the loop around downtown.
<b>1974</b>	US 59 south of downtown opens, completing all downtown main lanes in the original plan except the cancelled Harrisburg Freeway.
<b>1980</b>	The US 59-SH 288 interchange opens, completing the originally planned downtown freeway system.
<b>1997</b>	The second wave of downtown construction begins with rehabilitation work and a large new interchange at US 59 and IH 10.
<b>2003</b>	Work begins on the complicated reconstruction of the Southwest Freeway (US 59) downtown approach.
<b>2004</b>	Completion of the US 59-IH 10 interchange.
<b>2007</b>	Scheduled completion of the Hardy Toll Road freeway extension into downtown, almost certainly the last new freeway for downtown.
<b>Future</b>	Potential improvement and expansion of IH 45 and US 59.

mobility in Houston.<sup>10</sup>

It didn't take long before downtown Houston was transformed into one of the more impressive skylines in the United States. In 1960, the central business district had 10 million square feet of office space, increasing to about 16 million square feet in 1970. Downtown Houston was on the threshold of a boom in 1970 with 8.7 million square feet of office space planned or under construction and huge projects being launched by real estate developers.\* The surge of skyscrapers mirrored the skyscraper booms in other freeway cities, especially Los Angeles and Dallas. Houston's downtown construction was further fueled by the 1970s energy industry boom.

The first major skyscraper to be constructed in Houston was the 50-floor, 714-foot-tall (218 m) One Shell Plaza in 1971. A succession of skyscrapers were built through the 1970s, culminating with Houston's tallest skyscraper, the 75-floor, 1,002-foot-tall (305 m) JPMorgan Chase Tower (formerly the Texas Commerce Tower), completed in 1982. In 2002 it was the ninth tallest building in the

\* The largest proposed development was the 32-block Houston Center. Only a small part of the original proposal was ultimately constructed. Other large projects included Cullen Center, Allen Center, and towers for Shell Oil.





**Pre-freeway downtown:** This 1967 photograph shows the modest collection of mid-rise office buildings that comprised downtown before the completion of the downtown freeway network. By 1968 most of the spokes leading into downtown were complete, and in 1974 the final section of main lanes in the originally planned downtown freeway network was opened to traffic. Houston's skyline was transformed in the 16-year period from 1971 to 1987. (Photo: TxDOT)

### Downtown Houston's tallest skyscrapers

Name (2003)	Address	Height		Floors	Completed
		Feet	Meters		
1. JPMorgan Chase Tower	600 Travis	1,002	305	75	1982
2. Wells Fargo Plaza	1000 Louisiana	972	296	71	1983
3. Bank of America Center	700 Louisiana	780	238	56	1983
4. Texaco Heritage Plaza	1111 Bagby	762	232	53	1987
5. 1100 Louisiana	1100 Louisiana	748	228	55	1980
6. Reliant Energy Plaza	1111 Louisiana	741	226	47	1974
7. Continental Center	1600 Smith	732	223	53	1984
8. Chevron Tower	1301 McKinney	725	221	52	1982
9. One Shell Plaza	910 Louisiana	714	218	50	1971
10. 1400 Smith Street	1400 Smith	691	211	50	1983

Data: Skyscrapers.com





**The Houston skyline, September 2002:** The downtown Houston building boom came to an end in 1986 with the collapse of Houston's energy economy. Since 1987, all newly constructed office towers have been no more than 40 floors tall. The popularity of suburban, campus-style office space seems to suggest that Houston's skyline will not receive any major new high-rise additions for the indefinite future. Still, downtown Houston remained vibrant in the 1990s and 2000s with the construction of new housing, sports stadiums, and the rebuilding of basic infrastructure.

United States and the 23rd tallest skyscraper in the world. In 1983 the 71-floor, 970-foot-tall (296 m) Wells Fargo Plaza was completed. Skyscraper construction in downtown Houston came to an end in the mid-1980s with the collapse of Houston's energy industry and the resulting severe economic recession. When the 53-floor Texaco Heritage Plaza was completed in 1987, it appeared that no more skyscrapers would be constructed for a long, long time. In 2000, however, the Houston-based Enron Corporation began construction of a 40-floor skyscraper which was nearing completion in late 2001, just as the company collapsed in one of the most dramatic corporate failures in the history of the United States. Other smaller office structures were built in the 2000-2003 period. In December 2001, downtown Houston had approximately 40 million square feet of office space, including 28 million square feet of class A office space.<sup>11</sup>

In spite of the impressive skyline and freeway network, urban advocates in the 1980s complained that downtown Houston was hollow, becoming nearly deserted at the end of the business day. Houston's underground tunnel system kept office workers below ground, inhibiting street activ-

ity. Downtown Houston would achieve revitalization in the 1990s, a renaissance engineered by Mayor Bob Lanier, Houston's great road building advocate of the post-1980 era. After concentrating his efforts on transportation in the 1980s, Lanier was elected mayor in 1991 and focused on making the city safe and rebuilding basic infrastructure, including roads and sidewalks. When Lanier exited the mayor's office at the end of 1997 due to term limits, the revitalization of downtown was in full progress. Numerous apartment and loft-style residential structures were built, bringing long-sought urban dwellers into the core of downtown. Lanier's successor, Lee Brown, sought to capitalize on the downtown momentum by constructing a light rail line on Main Street. Construction on the rail line began in 2001 and is scheduled for opening in 2004.

### **The Second Wave**

In the United States, construction and improvement of downtown freeways was largely dormant by the 1970s. Freeways in downtown districts had fallen into disfavor with planners who became more interested in promoting transit and pedestrian activity. Some viewed freeways as





**Houston's freeways turn into lakes:** Tropical Storm Allison in June 2001 unleashed a major flood event, and Houston's freeways sustained some of the most dramatic flooding. Virtually all depressed freeways around Houston filled with water. Flooding along White Oak Bayou submerged much of the at-grade interchange of IH 45 and IH 10 north of downtown, shown above in a photo taken June 9, 2001. (Photo: *Houston Chronicle*)

barriers, cutting off parts of the city from each other. Los Angeles, always the bellwether, typified this trend. Much of its downtown interchange complex dates from the early 1950s and was complete by 1962. It has seen practically no improvement since its original completion, and no major improvement is planned in the future. The Los Angeles downtown freeway complex is certainly showing its age. Phoenix, Arizona, in a project completed in 1990, placed a downtown section of IH 10 in a tunnel to minimize impacts. Boston, Massachusetts, spent a staggering \$15 billion to rid its downtown of freeways by burying them underground.

But Houston would retain and improve its downtown freeway system starting in the mid-1990s. The Pierce Elevated, IH 45 on the south side of downtown, was reconstructed in 1997. US 59 on the east side of downtown was resurfaced and widened to eight continuous lanes in 1997. In October 2000, a long, elevated connector ramp for buses and high occupancy vehicles was completed over the IH 10-IH 45 interchange on the northwest side of downtown.

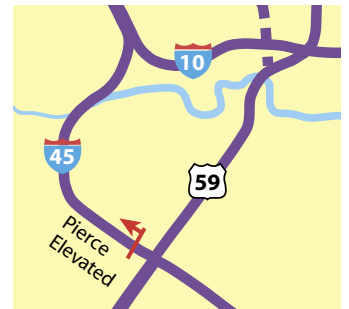
In 1998, the first major construction since the completion of the downtown interchange complex in 1980 was underway. A major new interchange took shape on the northeast side of downtown at the intersection of Eastex

Freeway (US 59) and the East Freeway (IH 10). Included in the interchange is the downtown distribution system originally envisioned by planners in the 1950s. The operational efficiency of the distribution system may be compromised when it opens in 2004 because a new baseball stadium was constructed on the location of the former Union Station rail yard. The stadium ensures a permanent barrier to north-south traffic flow where the connection ramps reach downtown streets. The new interchange will also accommodate a planned new radial spoke for the downtown freeway system, the extension of the Hardy Toll Road into downtown Houston as a toll-free facility. Construction of the Hardy Toll Road extension is expected to begin in 2005, with completion around 2007.

In 2003 a comprehensive study is in progress to determine future improvements to IH 45 and the section of US 59 south of IH 45. The six-lane Pierce Elevated section of IH 45 has become a critical bottleneck in Houston's freeway system. The study will identify needed improvements and determine what is feasible for the Pierce Elevated, which has high-rise structures immediately adjacent to it. At the very minimum, the oldest sections of Houston's downtown interchange complex should be brought up to modern standards, and recommendations could include major expansions or additions.



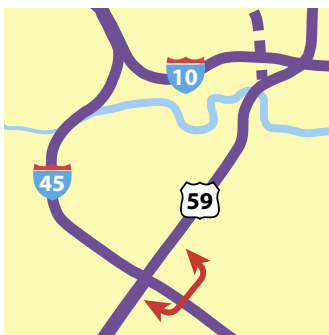
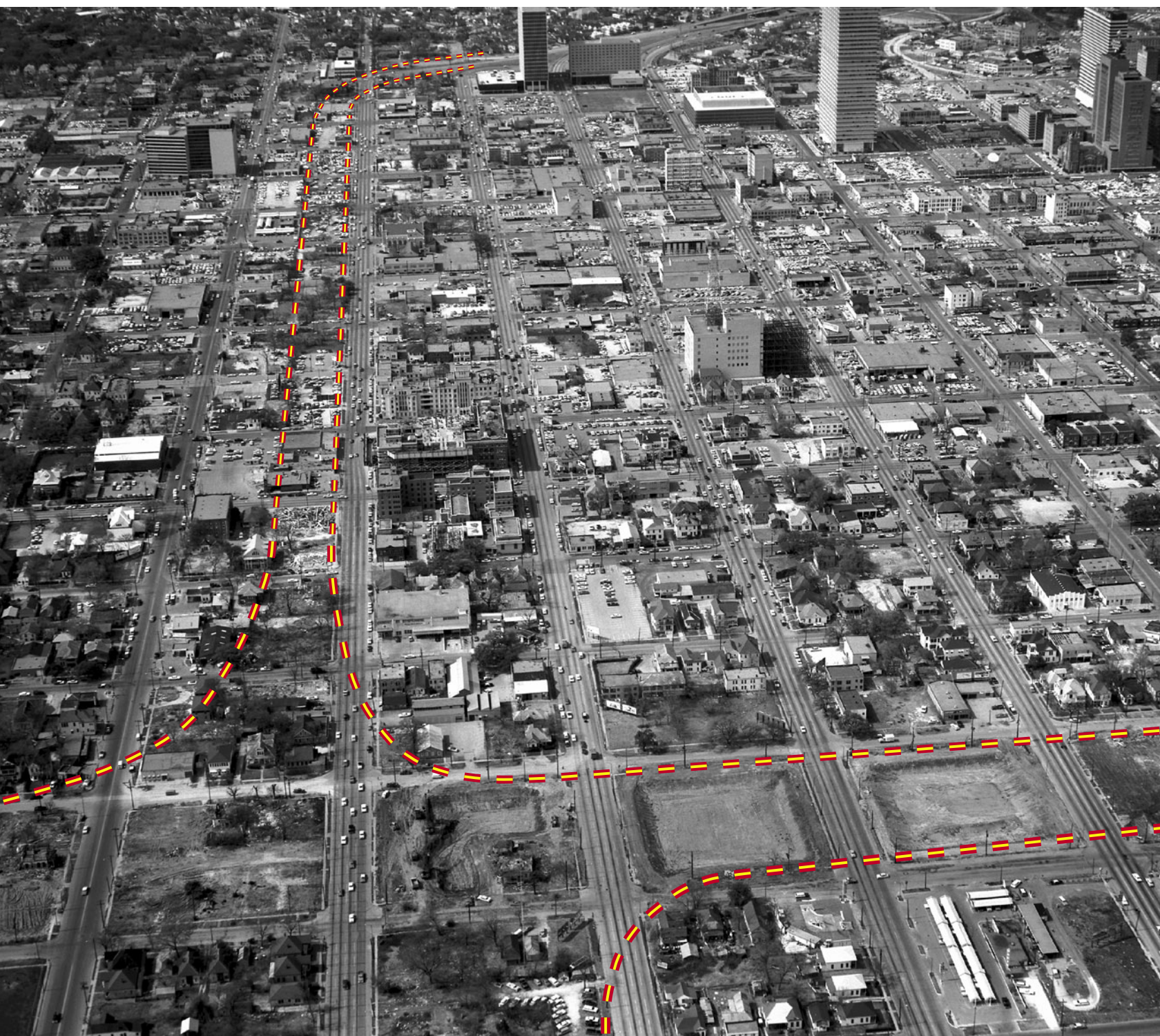
**Pierce, before the elevated:** This view looks west along Pierce Avenue at Jackson, prior to the construction of the Pierce Elevated section of IH 45. The Pierce Elevated was constructed immediately adjacent to the south (left) side of Pierce. Although the corridor for the elevated freeway consisted mostly of vacant lots and lower-tier commercial establishments, it was the most controversial section of freeway in the downtown interchange complex. Commercial interests owning property in the path of the freeway had plans for developing their property. Lawsuits were filed, but by 1960 all challenges were dismissed and the freeway moved forward on its originally planned alignment along Pierce, opening in August 1967. (Photo: TxDOT)



**The orphan ramp, 1962-1972:** This connector ramp overpass at the south end of the IH 45-IH 10 interchange was completed in 1962 with the construction of IH 45. However, the section of IH 10 which would use this ramp was not completed until 1972. The idle ramp prompted speculation from many motorists, including one person who wrote to the *Houston Chronicle* in 1967 believing that "current plans don't call for its use and it will just stand there forever."<sup>12</sup> (Photo: Greater Houston Partnership)







**On the eve of freeway construction:** This 1963 aerial view of the southeast side of downtown shows the area just before freeway construction projects would begin. The routes of IH 45 (top to bottom) and US 59 (left to right) are indicated by the dashed lines. Excavation work had already begun for US 59 in the lower section of the photo. Right-of-way clearance is in progress along Pierce Avenue. (Photo: The Positive Image)



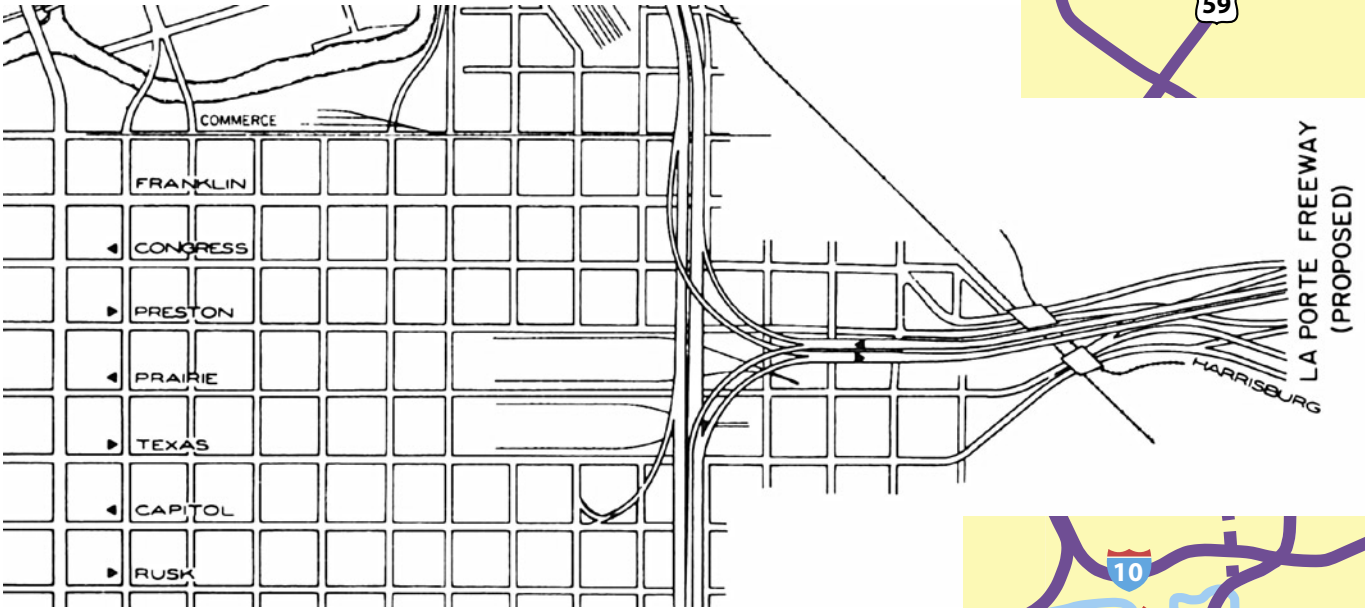
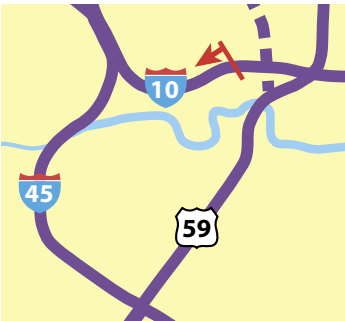


**Critical bottleneck:** The six-lane Pierce Elevated, named after the street immediately adjacent to it, has become the most critical bottleneck in the downtown interchange complex. Designed to carry 75,000 vehicles per day, the freeway was serving approximately 200,000 vehicles per day in 2003. As this photo shows, large structures alongside the freeway make a major expansion very difficult. In the foreground is the interchange with US 59. The US 59 main lanes are depressed below grade and are not visible in this view. (Photo: May 2002)

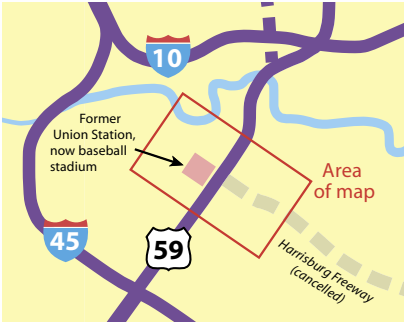




**IH 10 north of downtown:** This section of freeway, opened on May 17, 1972, is simple and basic in comparison to other freeways in the downtown interchange complex. The dedication ceremony coincided with the retirement of Albert C. Kyser, head of the TxDOT Houston Urban Project Office from 1955 to 1972. Kyser and City of Houston Planning Director Ralph Ellifrit were the most influential persons in the design of the downtown interchange complex. (Photo: July 2002)



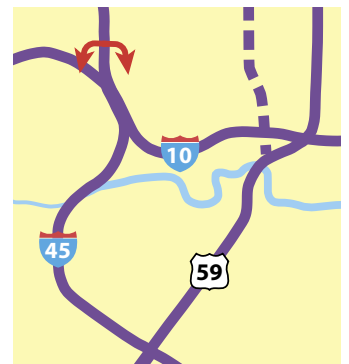
**The unbuilt:** This view shows a section of the final plan for the downtown interchange complex, which was approved in 1963. The La Porte Freeway, also known as the Harrisburg Freeway for the unbuilt section inside Loop 610, was planned to terminate at US 59 near what is now the baseball stadium for the Houston Astros. The La Porte Freeway was cancelled in the mid-1970s due to community opposition and funding shortages. It is the only part of the originally planned downtown interchange complex that was not constructed. (Map: HMRC)







**IH 45 construction:** This view shows the construction of IH 45 on the north side of downtown in May 1961 at the location of the multiplex interchange with IH 10. Initially only IH 45 was constructed through the interchange. This section of freeway parallels White Oak Bayou and followed an ideal freeway corridor due to the limited development. Houston's 1942 *Major Street Plan* identified the White Oak Bayou corridor as one of the three best potential alignments for new freeways. (Photo: TxDOT)

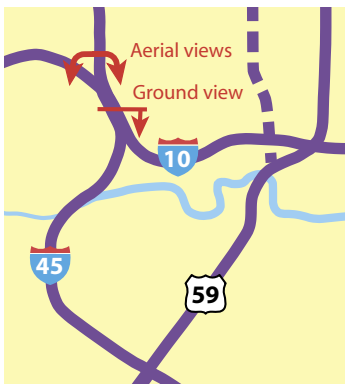






**One freeway complete, one to come:** These views show the IH 45-IH 10 multiplex interchange prior to the construction of IH 10. The wide median and adjacent cleared right-of-way would later become IH 10 and its connection ramps. The upper photo was taken just after the freeway opening in July 1962. The lower photo was taken in December 1964. (Photos: upper, HMRC MSS 157-907; lower, TxDOT)



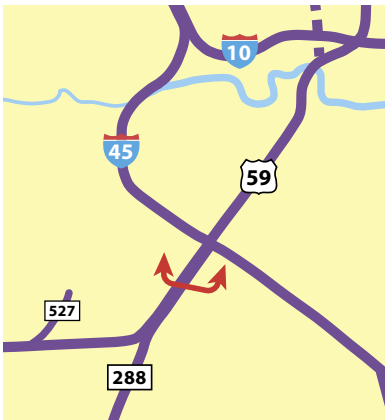


**Transitways finish the interchange:** The interchange remains in its original 1968 configuration, except for the addition of transitway lanes. The elevated transitway ramp for high-occupancy vehicles was opened October 16, 2000. (Photo: September 2002)

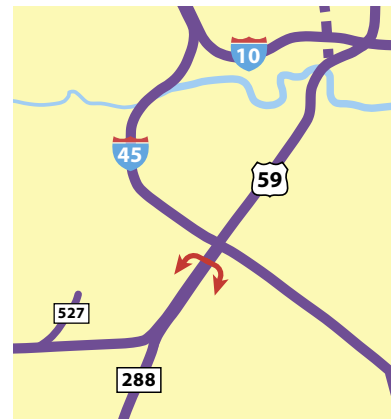




**US 59 construction:** This view shows construction of the interchange at US 59 and IH 45 in April 1972. The IH 45 main lanes had previously opened in 1967. (Photo: TxDOT)



(*Opposite page*) **Scorched earth turns into freeway:** These photos show before and after views of the US 59-SH 288 multiplex interchange on the south side of downtown. The construction of this wide freeway required the largest right-of-way clearance in the construction of the downtown interchange complex. In the upper photo, taken in January 1969, right-of-way clearance is just about complete. The freeway was opened to traffic on September 27, 1974. The entire interchange was finished in 1980 with the completion of connections to the SH 288 South Freeway, shown in the far distance in the lower photo. (Photos: upper, *Houston Chronicle*; lower, May 2002)



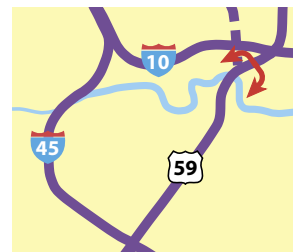








**Construction of the US 59 Buffalo Bayou bridge, November 1957:** The completion of this link on April 11, 1958, brought the Eastex Freeway into downtown Houston. The row of buildings just to the left of the freeway is the Clayton Homes housing project, which opened March 22, 1952. It replaced Schrimpf Alley, which was reportedly the worst slum district in Houston. Land acquisition costs for the Clayton Homes project were paid by Susan V. Clayton, wife of Houston cotton magnate and statesman William L. Clayton.<sup>13</sup> (Photo: TxDOT)







**US 59 gets its downtown connections:** These photos show the new interchange complex being constructed on the Eastex Freeway (US 59 North) approach to downtown. Original plans for the downtown Houston freeway system included a complete distribution system for each freeway coming into downtown, but plans for the Eastex Freeway were dropped because the Union Station rail yard blocked the needed feeder streets. In the late 1990s work began to rebuild the US 59-IH 10 interchange and add a distribution system for the Eastex Freeway.

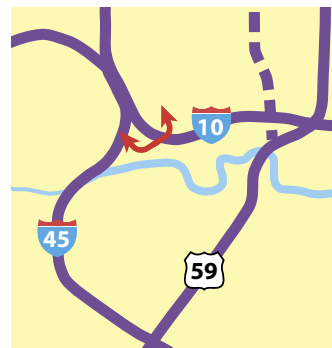
In the upper photo, the original US 59 structure is the second from the right and was in the process of being demolished when the photo was taken in May 2002. In the photo at left, taken in November 2002, the original bridge structure has been almost completely demolished—all that remains are a few piers near the bottom of the photo. The new US 59 southbound main lanes were constructed on the location of the demolished original bridge. The project is scheduled for completion in 2004.

The US 59 downtown distribution system and accompanying reconstructed interchange at IH 10 is the first new-facility construction in downtown Houston since the original completion of the interchange complex in 1980.





**Freeway with a view:** The elevated structures on IH 45 skirting the west and south edges of downtown provide motorists with outstanding views. When the Pierce Elevated section of IH 45 opened in 1967, the *Houston Chronicle* took note of the impressive driving experience provided by the elevated freeways: “Not only does it speed the traffic flow, it also affords motorists a magnificent view of the business district. It’s almost like going up in a cable car.”<sup>14</sup> (Photo: May 2003)



(Opposite page) **Where the freeways come together:** Looking north along the IH 45-IH 10 interchange north of downtown. (Photo: November 2002)



