CHAPTER

10 Mid-Cities Freeways

North Texas freeways have two obvious points of focus, Dallas and Fort Worth. But there is a third focus which has made the North Texas freeway grid one of the most extensive in the United States. The freeways converging on Dallas-Fort Worth International Airport and surrounding it make the Mid-Cities the third hub of North Texas freeways. Mid-Cities freeways have attracted leading entertainment venues, stadiums, huge commercial developments and affluent suburbs. The Mid-Cities became home of the widest section of freeway in North Texas when the DFW Connector project on the north side of the airport was completed in 2013, and work is underway on the North Tarrant Express, one of the first two public-private partnership freeway expansion projects in North Texas.

Also see: Bush Turnpike/SH 161 including the Grand Prairie controversies, page 261; Chapter 9, Tom Landry Highway, page 393; SH 121 in Fort Worth and Mid-Cities, page 511

SH 114, the John W. Carpenter Freeway Home of Las Colinas

SH 114 was first designated as a freeway in January 1953 with TxDOT's approval of the Dallas County highway master plan. SH 114 was envisioned to be along the alignment of the original highway, including present-day Northwest Highway (Spur 348). However, the eastern end of the freeway was soon placed on a new alignment further south—an alignment which would form the distinctive freeway loop which surrounded Texas Stadium.

The new alignment at the eastern end appears to have its roots in a proposed new thoroughfare called River View Road originally included in the 1950 county road bond plan. River View Road passed through the ranch of John W. Carpenter, who was among the most influential civic leaders in Dallas and served as president of the Dallas Chamber of Commerce in 1950 and 1951.[1]

In 1954 Dallas County began efforts to convince TxDOT to adopt the River View Road route into the state highway system with the ultimate goal of making it a freeway. In the following years Carpenter worked to secure land donations for 90% of the needed right-of-way for SH 114 and the section of SH 183 east of the intersection with SH 114. By July 1957 the new alignment with the freeway loop in Irving appeared on regional planning maps. Formal agreements for the construction of SH 114 were completed in 1958 and a public hearing for the new alignment was held in September 1959. In December 1959, six months after Carpenter's death, SH 114 and the adjacent section of SH 183 were named the John Carpenter Freeway in recognition of Carpenter's role in obtaining the right-of-way and TxDOT's approval for the freeway.[2]

Construction of SH 114 and Loop 12 at the site of the former Texas Stadium was underway in 1966 when Cowboys owner Clint Murchison began acquiring land within the freeway loop for his new stadium. The first section of the SH 114 freeway was completed in February 1971, ahead of the stadium opening in September.[3]

Also see: Texas Stadium freeways, page 370

Construction of the remaining unbuilt freeway in Dallas County was accelerated by plans for the Dallas-Fort Worth International Airport. In September 1967 local leaders unveiled a plan for a network of freeways to serve the airport, including the SH 114 freeway, and sought TxDOT's help in getting the freeways built in time for the airport opening. Construction of SH 114 to the north entrance of DFW Airport was complete in October 1973, just in time for the airport's opening in January 1974. The SH 114 freeway main lanes were gradually extended westward, reaching Southlake Boulevard in 1988 and SH 170 in 2014 (see map).[4]

Las Colinas

Texas Stadium, opened in 1971, was the most distinctive landmark along the freeway for 39 years until its implosion in April 2010. But another landmark with more longevity and more influence had also risen along the freeway. Las Colinas was launched in 1973 as one of the most ambitious and distinctive real estate developments in the United States. While the freeway was the product of the efforts of John Carpenter, Carpenter's son Ben would be the mastermind and visionary behind Las Colinas.

Las Colinas has its roots in the career of John Carpen-

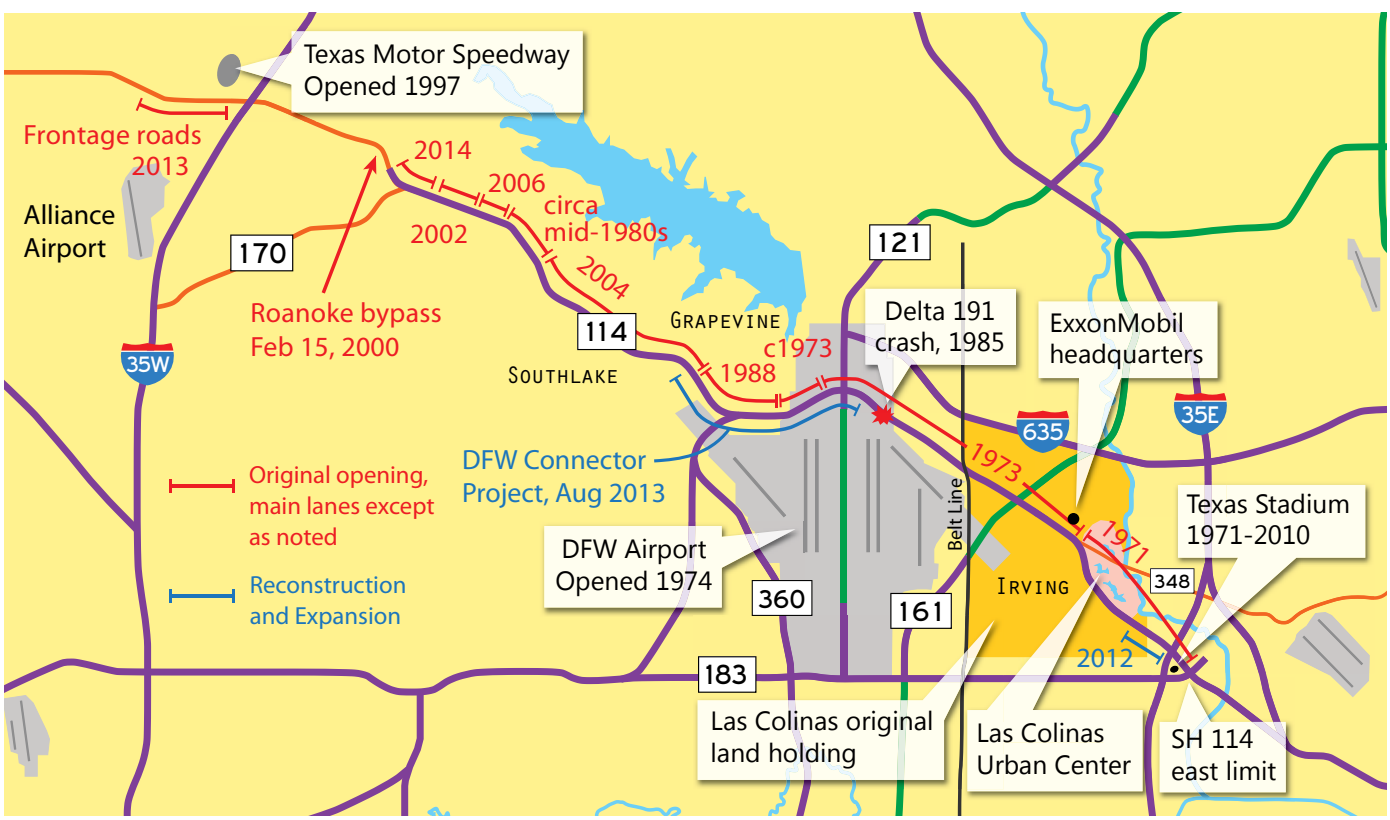
Dallas Public Library[47]

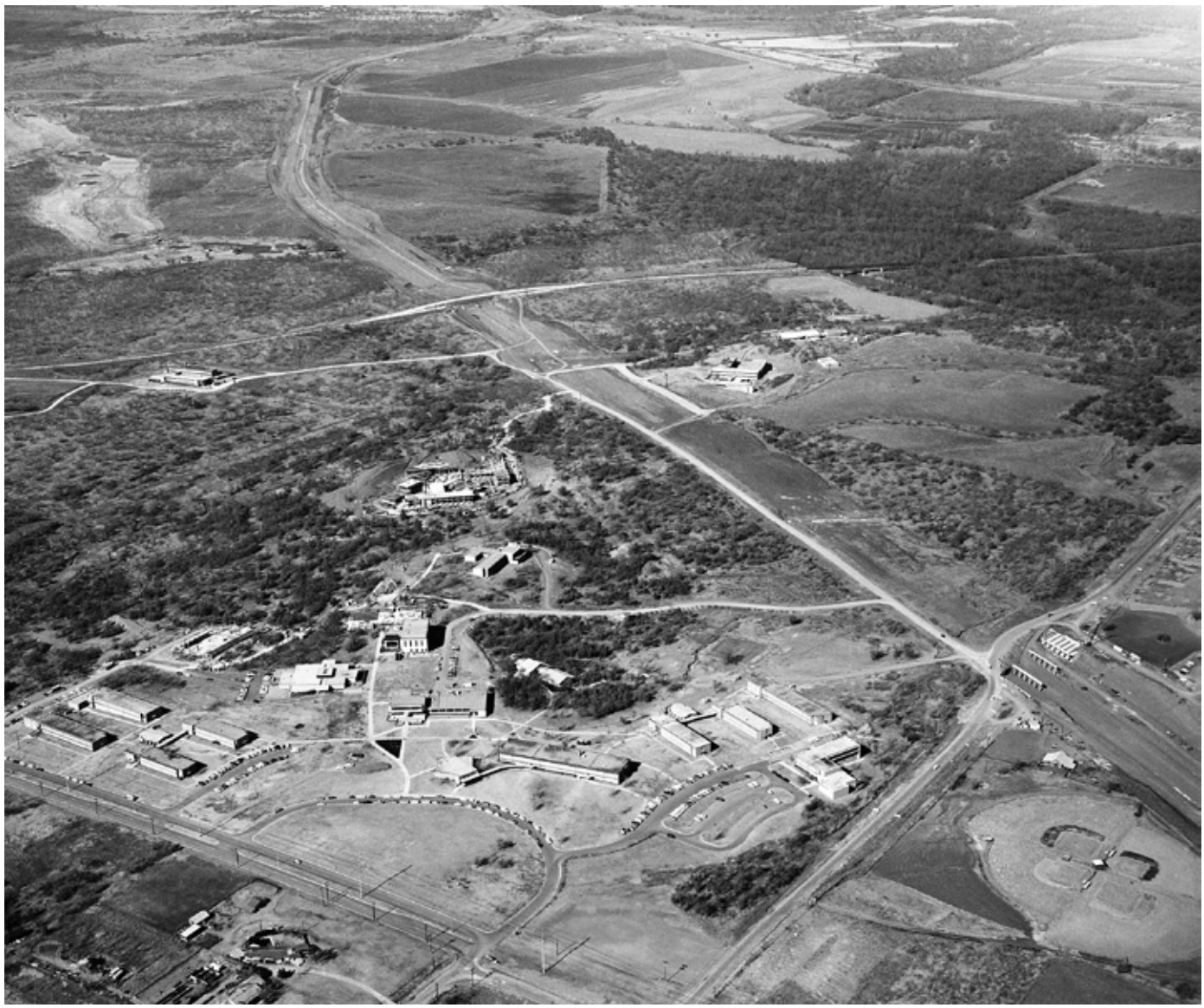
SH 114 in Irving and an adjacent section of SH 183 in Dallas are named for influential Dallas civic leader John W. Carpenter. Carpenter (1881-1959) was a successful executive and businessman, serving as president and chairman of the board of Texas Power and Light. In 1930 Carpenter founded Southland Life Insurance Company which became the vehicle for his son, Ben Carpenter, to finance the development of Las Colinas, which was built on the property of the Carpenter family ranch. Carpenter donated the right-of-way for the SH 114 and SH 183 freeways through his property, and persuaded other landowners to make donations so 90% of the needed right-of-way was donated.[48]

ter, who moved to Dallas from Corsicana in 1918 to become vice president and general manager of Dallas Power and Light Company. Around 1928 Carpenter established a ranch northwest of Dallas near the confluence of Hackberry and Cottonwood Creeks, formally naming it the Hackberry Creek Ranch but informally adopting the name "El Ranchito de Las Colinas", the little ranch of the hills, as suggested by his wife. After World War II the ranch was managed by son Ben Carpenter and son-in-law Dan Williams. Ben Carpenter and Williams expanded the ranch to 6000 acres by the time John Carpenter died in 1959. Around that time Ben Carpenter and Williams began their 15-year effort to plan their new real-estate development, with Carpenter taking the lead.[5]

Increasing property taxes in the 1950s made development of the land inevitable. Selling off the ranch parcel by parcel to developers would have been the easy way to make a quick buck, but Carpenter's appreciation for the land inspired him to ensure that only the best possible development would be built on his ranch. And to achieve that goal, he needed to be in control.[6]

In the 1950s it was expected that the property would be almost entirely residential and new subdivisions including Northgate were built on the southern edge of the ranch. But with the announcement of the location of DFW Airport in 1965 the ranch was ideally positioned for commercial and office development, and Carpenter updated his vision for the property. In 1970 Carpenter created the Southland Financial Corporation which absorbed the family's life insurance firm Southland Life, founded by John Carpenter in 1930. The financial structure was in place for the big investment needed





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This undated view from circa 1970 looking northwest shows the path of SH 114 at the University of Dallas just west of Loop 12. Work was underway on the Tom Braniff Drive overpass in the foreground. Further west, at present-day Las Colinas, the path for the freeway is visible as ground clearing was just underway.

to launch his vision.[7]

In September 1973 plans were revealed for the 3500-acre development and its official name, Las Colinas. The crown jewel was the 960-acre Las Colinas Urban Center located alongside the freeway, featuring the 125-acre Lake Carolyn and canals to create a Venice-like atmosphere for the planned concentration of office towers. For Carpenter, Las Colinas wasn't just about building a first-class development, it was raising the bar to a new level of planning and high-quality, distinctive design.

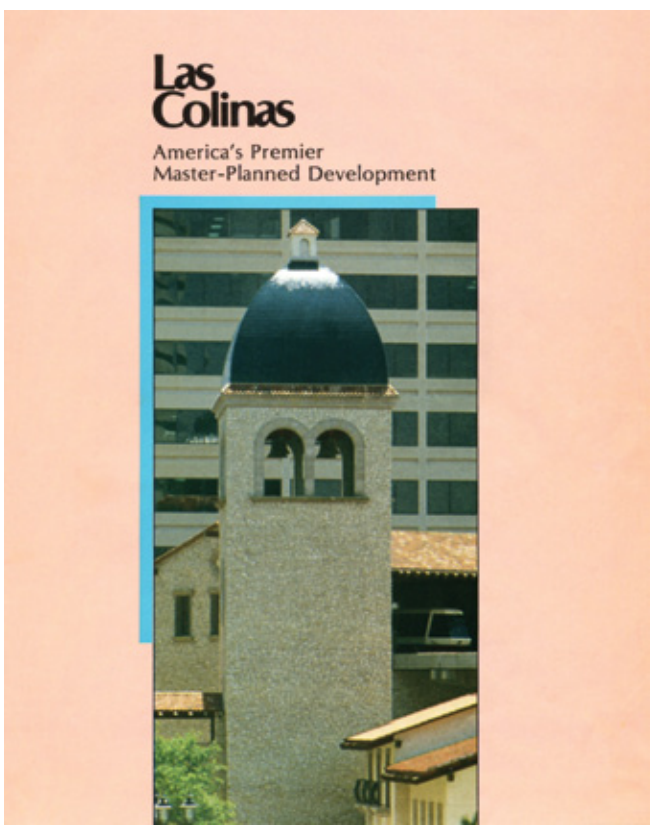
By 1974 motorists on Carpenter Freeway saw giant earth-moving machines digging Lake Carolyn and preparing the site for development. The construction boom which defined Las Colinas took place in the early 1980s, and by the ten-year anniversary in 1983 a stunning new city had risen from the Trinity River bottomland. Las Colinas had become everything Carpenter had planned it to be—distinctive, upscale and increasingly a magnet for large and prestigious businesses looking for office space. The total acreage of Las Colinas had reached over 12,000 acres after a 1980 acquisition of adjacent property, but the crown jewel of the development remained the Urban Center along Carpenter Freeway.[8]

But there was trouble ahead. Bringing Carpenter's vision to reality had been expensive, and the office construction boom in the early 1980s had saddled Southland Financial with $700 million in high-interest, short-term debt. The life insurance division of Southland Financial was sold for $352 million in January 1984 to improve the balance sheet, but the financial situation continued to de-

Las Colinas Association

This circa 1975 view looks southeast along SH 114 at Las Colinas with the excavation of Lake Carolyn complete and site preparation around the lake in progress. The October 1987 promotional brochure at lower right proclaimed Las Colinas to be “America’s Premier Master-Planned Development”. Ben Carpenter (1924-2006), son of the freeway namesake John Carpenter, was the visionary and mastermind driving Las Colinas to realization. It turned out that Ben Carpenter dreamed too big as the project experienced financial difficulty in the late 1980s and the Carpenter family lost control of the project to creditors in 1992.

Las Colinas Association



Dallas Public Library[60]

Author, April 2011

This April 2011 view looks northwest along SH 114 at Rochelle Blvd-Riverside Drive, showing Las Colinas with the Urban Center and Lake Carolyn on the right. The freeway alongside Las Colinas remains in its originally built configuration with only four main lanes, but in the lower part of the photo work can be seen on the first expansion project, completed in July 2012. There are long-term plans to expand the freeway to eight main lanes and four toll lanes, and in 2013 TxDOT was attempting to advance the expansion project to construction with a public-private partnership.

teriorate since the firm had minimal earning power and its value was based on its real estate holdings which consisted mainly of land and office buildings in Las Colinas. By the end of 1986 debt had climbed to $968 million ($2.1 billion in 2013 dollars) with annual interest payments of $82.5 million. In the meantime, revenue was declining, leading to a loss of $16.3 million in 1986, and the commercial real estate market was in a severe downturn. The day of reckoning was coming, and the Carpenter family was facing a tremendous challenge to retain control of Southland Financial and Las Colinas. Ben Carpenter's health issues forced him to step down and son John Carpenter III took over as chief executive officer in late 1986.[9]

It was initiation by fire for the new 38-year-old CEO as the following years became a daunting struggle for survival. Southland posted a $94 million loss in 1987 and the stock price dropped to $2 a share, down from $28.50 in the fall of 1986 and its earlier peak near $40. Southland's workforce was slashed. Remaining executives tried to juggle demands from creditors, particularly Drexel Burnham Lambert* which had financed Southland with $350 million in junk bonds. Negotiations with Drexel and other creditors continued and finally after a marathon session a restructuring deal was reached in June 1989. The real estate assets of Southland, consisting mainly of Las Colinas, were sold for $290 million in cash to a partnership which included the Carpenter family. Although the Carpenter family became a minority ownership partner, John Carpenter III remained in charge of the development.[10]

In spite of all the financial difficulty, Las Colinas remained a unique asset which could not be duplicated and the new ownership was committed to retaining the project's high standards. In October 1989 good news arrived when Exxon, then the third-largest U.S. corporation and the world's largest oil company, announced it would move its corporate headquarters to Las Colinas from New York.[11]

But turning Las Colinas into a profitable operation was a huge challenge in the still-ailing real estate market. The majority owners forced out the Carpenters and their management firms in June 1992, effectively ending the role of the Carpenter family in Las Colinas. In 1997 Ben Carpenter sold the land that was the first property of the original ranch purchased by his father in 1928—the heart of "El Ranchito de Las Colinas" which was the site of the family home. It was the end of an era for Las Colinas and the Carpenter family, but even with the remarkable transformation of the Trinity River bottomland into a sparkling

* Drexel Burnham Lambert was best known for junk bond trader Michael Milken. The firm went bankrupt in 1990 due to its involvement in illegal activity in the junk bond market. Milken spent 22 months in prison.

Author, April 2005

Corporate mecca This April 2005 photo looks southeast along Carpenter Freeway just east of SH 161, the Bush Turnpike. The Las Colinas Urban Center is visible in the distance on the right. The wooded area along the left side of the freeway is the property of the headquarters of ExxonMobil, typically listed among the world's largest five corporations in terms of sales and market value. The April 2011 view below shows the ExxonMobil headquarters building. Two other corporate headquarters along the SH 114 corridor are consumer products manufacturer Kimberly-Clark and construction giant Fluor. Communications firms Verizon and Nokia have large offices in the corridor.

Author, April 2011

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Southlake, before the money arrived This 1965 aerial view at SH 114 and Carroll Road looking southeast shows the original two-lane highway crossing through a rural landscape. The location of Dallas-Fort Worth International Airport was announced in 1965, launching the growth that would occur in the adjacent areas. Southlake would go on to become a highly affluent suburb with a semi-rural atmosphere. SH 114 was improved to become a four-lane divided highway, but by the late 1990s traffic had overwhelmed the highway and local interests lobbied hard to get the section upgraded to a freeway. On February 7, 2004, a dedication ceremony was held for the opening of the freeway from Park Boulevard at the Southlake-Grapevine border to Kirkwood Boulevard at the Southlake-Westlake border. In addition to the ribbon cutting below, a second ceremonial ribbon was broken by a NASCAR racecar traveling at 150 miles per hour on the freeway (see page 35).

Mike Lewis Photography

Author, October 2011

This October 2011 view looks northwest along SH 114 at Kirkwood Boulevard in Southlake. This office development began in the 1980s and the Kirkwood overpass was built at that time, well before the adjacent sections of the SH 114 freeway which were opened in the 2000s.

office district, there was much to be done to complete the development.[12]

By 1996 a recovery was underway and Las Colinas was finally back in the growth mode. Building occupancy was high, the first new office construction in about ten years was underway and the Urban Center transit system, idled in 1993, was restarted in 1997. The surge in new construction was focused further west along Carpenter Freeway near the intersection with the Bush Turnpike (SH 161), and the Urban Center remained in somewhat of a 1980s time warp with ample vacant land around Lake Carolyn and aging roads which were becoming rough and bumpy. The Mandalay Canal through the center of the development, which had been active with shops and visitors in the 1980s, was largely vacant and deserted by the late 1990s and the signature water taxi service was terminated in 1999. The Urban Center was in a special tax district, the Dallas County Utility and Reclamation District, established in the 1980s to build roads, waterways and flood control to enable development, but its $240 million debt burden in 1998 necessitated a sky-high property tax rate which frightened away new development. In December 1998 the City of Irving established a new tax district to attempt to reduce and stabilize the tax rate, but by the mid-2000s the district's debt climbed to $300 million and the high tax rate still stifled new development.[13]

It became increasingly apparent that the way forward for the Las Colinas Urban Center was with conventional low-rise apartment complexes and homes, not gleaming office towers and distinctive architectural designs. In December 2005 the remaining 600 acres of undeveloped land were sold to Houston developer Hines for around $100 million, with Hines indicating it would shift planned office development to become residential. By 2010 Las Colinas was in the growth mode again, with a wave of new housing construction and planning underway for a new Las Colinas entertainment center. Irving's new convention center opened in Las Colinas in January 2011 and officials also expected renewed interest with the arrival of the Dallas Area Rapid Transit Orange Line light rail in July 2012. After years of delays and controversy, in July 2013 Irving City Council voted to provide public funding, the amount later determined to be $26 million, for a $149 million entertainment center including a concert hall and restaurant complex, with opening planned for 2016.[14]

As it reached its fortieth birthday in 2013, Las Colinas was a mature development, mostly built-out but still with available land for growth to write the final chapters of its story. It was a roller coaster of booms and busts along the way. But even though it didn't become everything Ben Carpenter envisioned, it remains a one-of-kind, distinctive community—all made possible by SH 114, the Carpenter Freeway. ■

Texas Department of Transportation

The DFW Connector Political leaders and transportation officials celebrated the opening of all regular traffic lanes of the $1.1 billion DFW Connector project on August 21, 2013. Cutting the ceremonial banner with the scissors is Victor Vandergriff, member of the Texas Transportation Commission. To the left of Vandergriff, also holding the scissors, is Victor Mendez, administrative head of the Federal Highway Administration (FHWA). The October 2013 view below looks east from Texan Trail in Grapevine, with the central managed lanes not yet open to traffic. The DFW Connector project, originally called "The Funnel" since it is the traffic artery between Grapevine Lake and DFW Airport, transformed this section of freeway into the widest in North Texas, with 22 lanes at with widest point (including frontage road lanes, managed lanes and regular lanes).

Author, October 2013

SH 114 and the Delta 191 Crash

Dallas Morning News

Above, emergency personnel load William Mayberry's body onto the gurney after his vehicle was struck by Delta 191. Mayberry's Toyota Celica became a mangled chunk of metal after the impact by the aircraft's left engine.

William Mayberry was a new arrival to North Texas in early August 1985, relocating from Vicksburg (Miss.) just a week earlier and starting a new job as a mechanic at Toyota of Irving. After work on Friday, August 2, 28-year-old Mayberry started his drive home, going westbound on SH 114 to Grapevine. Thunderstorms were brewing that afternoon, including a particularly nasty cell along SH 114 just north of DFW Airport.

The trip did not turn out well. At 6:05 PM, while driving on SH 114 north of the airport, he was decapitated and instantly killed when the left engine of Delta Flight 191, a Lockheed L-1011 jet, struck his car. The top half of the car was sheared off, leaving behind a mangled clump of steel on the highway.[15]

The aircraft bounced off the highway and then veered to the left, plowing through a field and then striking a water tank which caused most of the aircraft to disintegrate as it was engulfed in a fireball. In addition to Mayberry, the immediate death toll of the crash included 134 of the 163 passengers and crew, with two survivors dying more than 30 days later bringing the total death toll to 137. In its aftermath, Delta Flight 191 became one of the more influential disasters in airline flight safety, galvanizing the industry to develop and implement new technology to detect and avoid windshear.[16]

Associated Press[62]

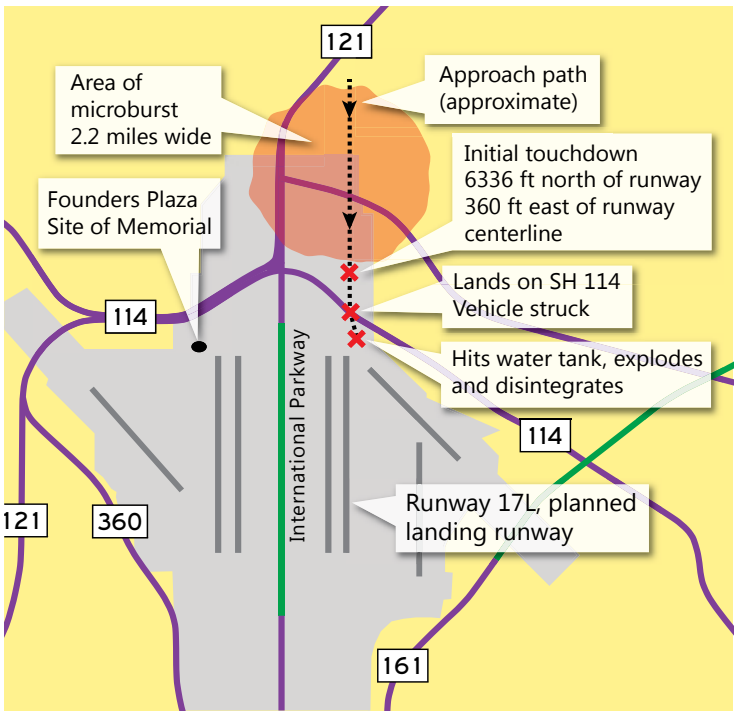
Private Collection

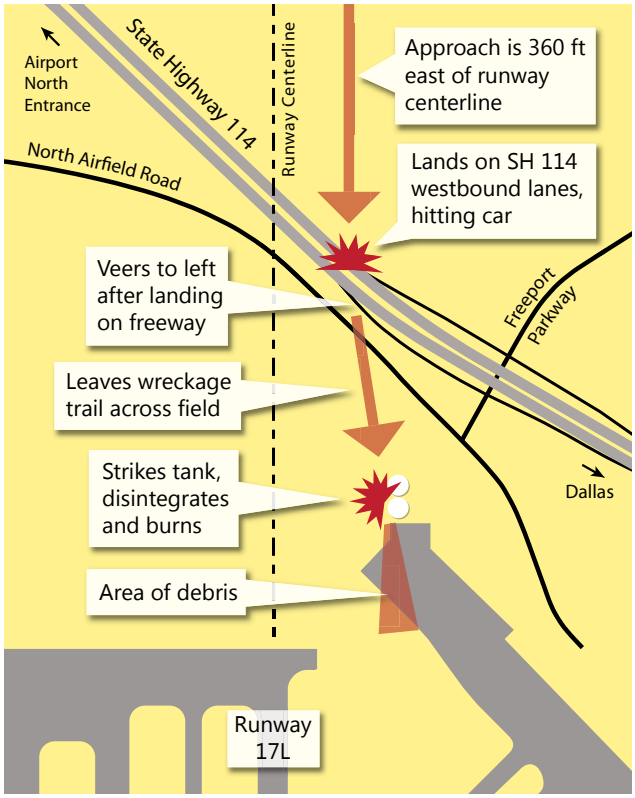
This view of the burning wreckage of Delta 191 was captured by a passenger in an aircraft taxiing nearby.

Associated Press[63]

This view looks south from SH 114 and shows the trail of debris from the freeway to the water tank where the impact occurred. The wreckage was still smoldering at the time of this photo. The street in the foreground is North Airfield Road, which is just south of the freeway.

For motorists on SH 114 the descent of the jet onto the freeway in the rainstorm was a surreal and frightening experience. One other car was grazed by the aircraft, with the driver sustaining only minor injuries. The drivers of two cars and a tractor-trailer saw the scene developing just ahead of them and slammed on their brakes to avoid the jet. The three vehicles collided with each other, causing vehicle damage but no injuries. Motorists crawling in the rush-hour traffic immediately after the accident saw the twisted metal of the remains of Mayberry's Toyota Celica on the interior shoulder of the westbound lanes.[20]





The maps and aerial view show the path of Delta 191 as it landed on SH 114, crossed the open field while shedding debris and struck the water tank, causing the aircraft to explode and disintegrate. The freeway intersection to the right of the crash scene is Freeport Parkway.

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Findings from the official National Transportation Safety Board (NTSB) report

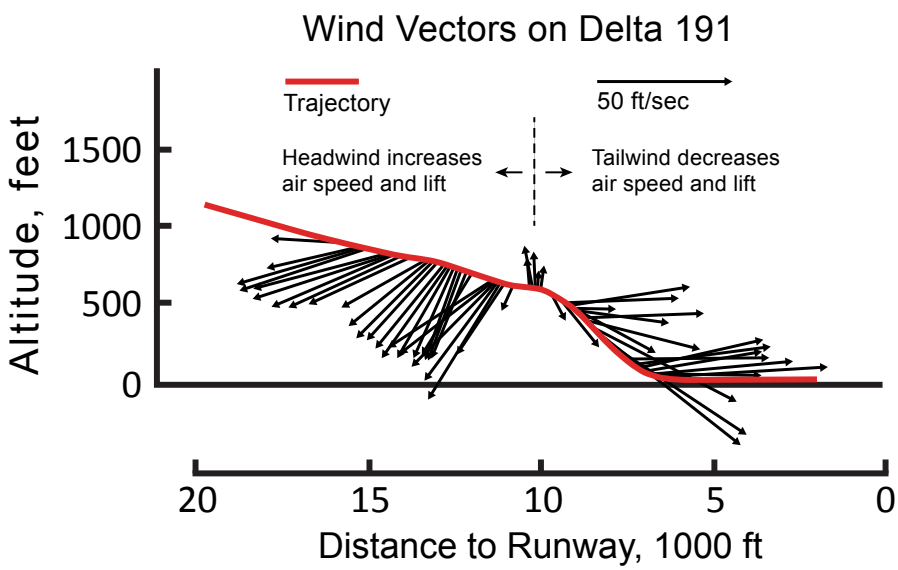
"The National Transportation Safety Board determines that the probable causes of the accident were the flightcrew's decision to initiate and continue the approach into a cumulonimbus cloud which they observed to contain visible lightning; the lack of specific guidelines, procedures, and training for avoiding and escaping from low-altitude windshear; and the lack of definitive, real-time windshear hazard information. This resulted in the aircraft's encounter at low altitude with a microburst-induced, severe windshear from a rapidly developing thunderstorm located on the final approach course."

Summary of Sequence of Events

Delta Flight 191 initially touched down in a field 6336 feet north of the runway threshold and 1500 feet north of SH 114. Only the rear landing gear touched the ground, leaving tracks which extended for 240 feet. There was another brief touchdown, and then the aircraft landed just before the north edge of SH 114 with the front landing gear reaching the ground on the westbound lanes of the freeway. The aircraft's left engine slammed into William Mayberry's car which was traveling in the westbound lanes. Three light fixtures along SH 114 were knocked down, one on the north side and two on the south side of the freeway. After the impact the aircraft's direction was turned toward its left, sending it away from the runway approach centerline and toward two water tanks located 1700 feet beyond the highway. The first debris coming off the aircraft were found just south of the eastbound SH 114 main lanes. The breakup of the plane was underway as it proceeded south of the highway. Seven hundred feet south of SH 114 the left engine created a 2.5-foot-deep crater measuring 45 by 12 feet at the surface. The aircraft grazed the north water tank and then impacted the south water tank about 3195 feet after the initial touchdown, causing the complete disintegration of the aircraft except for the rear section which remained intact. The rear section was the only part of the aircraft recognizable to non-specialist observers, and was where 20 of the 29 survivors were seated.[16]

Windshear is a change in wind speed and direction over a relatively short distance in the atmosphere. It is commonly observed near downbursts, which are strong downdrafts of rain-cooled air occurring in thunderstorms. As the downward-flowing column of air hits the ground, it spreads out in all directions creating brief but strong straight-line winds which often cause damage on the ground. As the air flows outwards it often curls back upward creating a circular swirl of air called a vortex which can cause an aircraft to experience rapidly changing winds and turbulence.

In 1985 windshear was known to be a significant risk to aircraft during takeoff and landing. However, understanding of the phenomenon was still in the research stage, training of pilots and flight controllers was minimal and radar to detect windshear was still being developed.



Graphic adapted from reference 17, wind vector sizes are approximate

The thunderstorm which caused the crash of Delta 191 developed between 5:52 and 6:00 PM, reaching a classification of very strong, a rating of 4 on a scale of 1 to 6. The maximum width of the downburst was approximately 2.2 miles (3.4 km), classifying it as a microburst, which has a maximum diameter of 2.5 miles (4.0 km). The maximum downdraft airspeed at the center of the storm was 49 feet/second (33 mph) and the windshear across the storm was at least 84 miles/hour (73 knots). Analysis of the Delta 191 flight recorder data revealed that the aircraft sustained a horizontal windshear, the change from headwind to tailwind, of approximately 68 mph and a maximum downward

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Emergency personnel retrieve bodies from the wreckage of Delta 191. The tail section was the only part of the aircraft to survive substantially intact.

wind of about 40 ft/second (27 mph). For reference, an aircraft on approach typically flies around 160 mph and the normal altitude of Delta 191 should have been 318 feet above SH 114.[17]

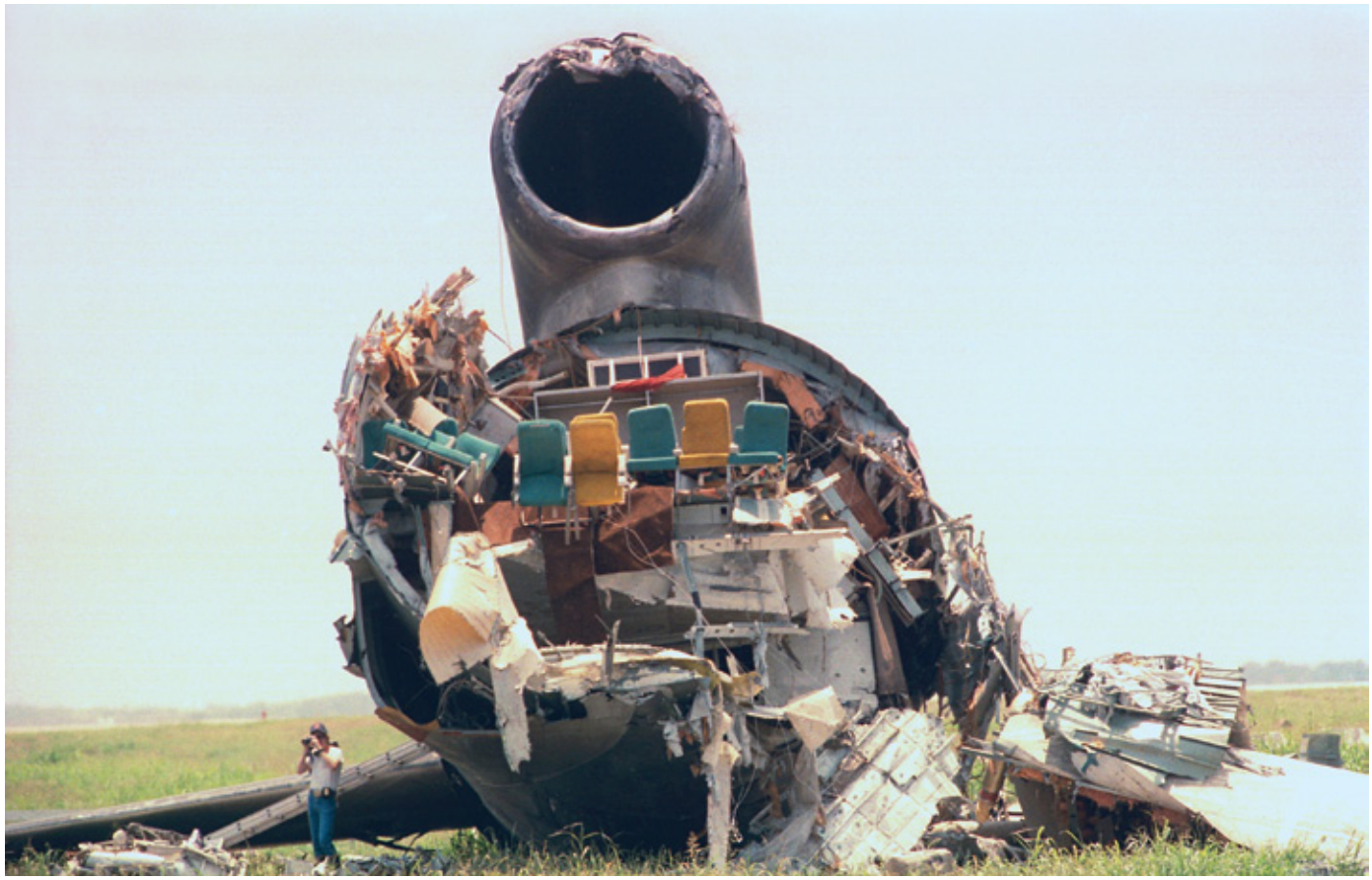
Downbursts are particularly dangerous for an aircraft on final approach for landing. As the aircraft approaches the downburst it flies into the winds which are directed outwards from the center of the downburst. This headwind increases the airspeed of the aircraft which increases the lift of the wings, tending to send the aircraft above its planned trajectory toward the runway. The pilot may react to this deviation by reducing engine power or making other flight control adjustments. As the aircraft passes the center of the downburst it receives a tailwind, reducing the airspeed and lift, causing the aircraft to drop below its planned trajectory.

The loss of lift caused by the airspeed change, about 68 mph for Delta 191, sent the aircraft below its planned trajectory, on a collision course with the ground well short of the runway. The captain applied full power to the engines in the attempt to recover, but the effort fell short as the aircraft touched down about 1500 feet north of SH 114 and then made the full-impact landing on SH 114.

Prior to the Delta 191 crash, downbursts had long been known to be a hazard to aircraft operations and two major commercial aircraft accidents in the United States had been attributed to microbursts. On June 24, 1975, an Eastern Airlines Boeing 727 approaching John F. Kennedy Airport in New York City experienced severe windshear associated with a thunderstorm, causing the aircraft to land 2400 feet short of the runway and subsequently crash, killing 113 of 124 on board. On July 9, 1982, a Pan American World Airways Boeing 727 flew into a microburst shortly after takeoff from New Orleans airport causing a crash which killed all 145 persons on board and eight on the ground.[16]

However, in the 1970s and early 1980s there was only a limited understanding of the meteorological aspects of downbursts, contributing to inadequate procedures for aircraft operations in the presence of downbursts. The subject was an active area of research in the early 1980s, with major research efforts taking place at Stapleton Airport in Denver in 1982 and 1984. The crash of Delta 191 at DFW is generally regarded as the event which galvanized the FAA and airline industry to implement a broad range of safety improvements relating to downbursts and windshear.[18]

In 1986 NASA and the Federal Aviation Administration (FAA) began working together to develop methods of detecting and avoiding hazardous windshear. The research, which involved flight tests in a specially modified Boeing



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Twenty of the 29 survivors were in the rear section of the aircraft, which included the smoking area where the highest survival rate occurred. The aircraft originated in Ft. Lauderdale, Florida, and was stopping in Dallas on its way to Los Angeles. Below, a Lockheed L-1011 aircraft approaches for landing just above the wreckage. The L-1011 was a three-engine, wide-body aircraft similar to the McDonnell Douglas DC-10. The L-1011 first flew in 1970 and entered commercial service in 1972. Production ended in 1984 with the 250th aircraft. Lockheed exited the commercial aircraft manufacturing business in 1984 due to the losses it sustained on the L-1011 program, mainly due to low sales.

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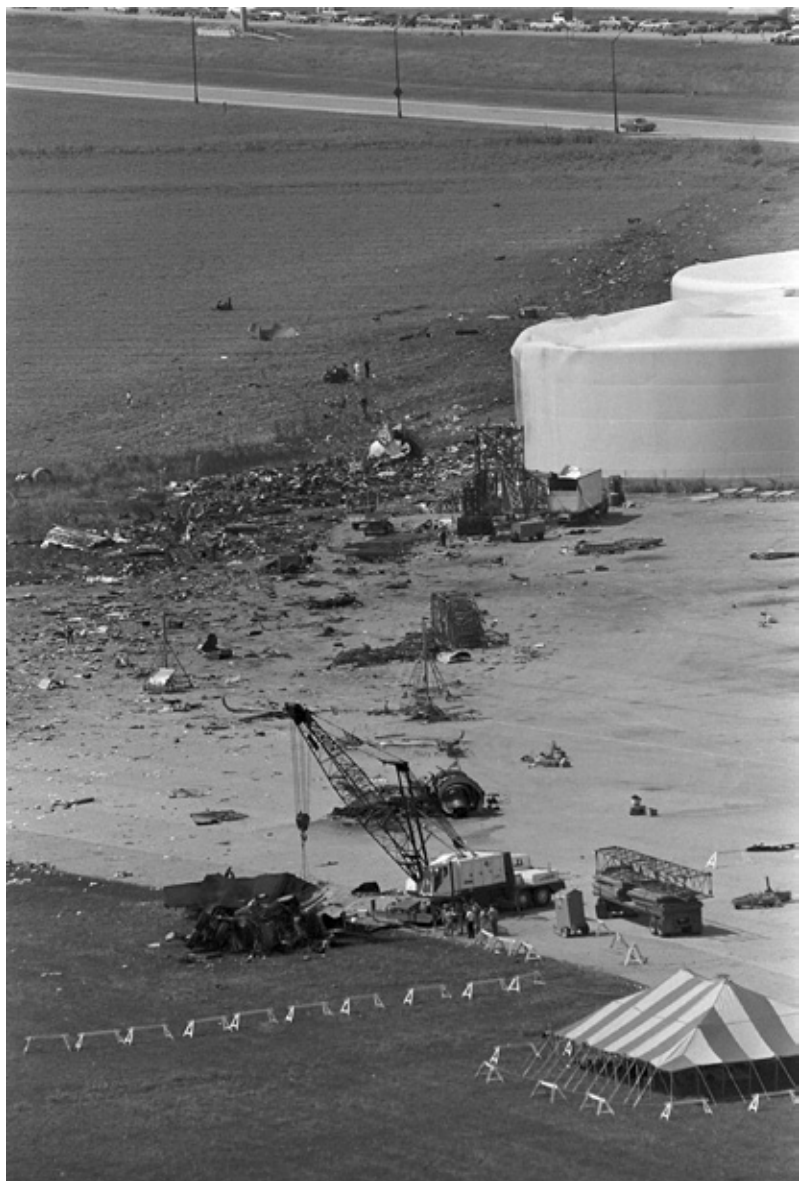
These views show the debris field near the point of impact at the water tank. In the above view, the SH 114 overpass at Freeport Parkway is visible in the background. The damaged water tank was repaired and remains in service in 2013.

737 test aircraft in 1991 and 1992, led to the development of new windshear detection technology, and the first aircraft-based windshear-detection radar was certified for use in 1994. The technology was widely installed in commercial aircraft in the mid-to-late 1990s.[19]

For ground-based radar, the FAA accelerated the development and installation of the next generation of airport radar, Terminal Doppler Weather Radar. The radar identifies and warns air traffic controllers of windshear and microbursts, in addition to providing the traditional radar reporting of precipitation. After numerous delays in the early-to-mid 1990s, the first system became operational in 1994 in Houston. DFW Airport's system was dedicated in October 1995.

Delta Flight 191 initiated improvements in pilot training and cockpit procedures for handling microburst windshear. The situation encountered by Delta 191 is now standard in pilot flight simulator training. Guidelines for pilot cockpit communication were revised as a result of the Delta 191 crash investigation. For ground response, standards for procedures and equipment of accident emergency responders were revised based on the events of Delta 191. ■



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This piece of wreckage, with a rear landing gear assembly, was one of the larger items of debris remaining after the crash. Below, a small memorial and descriptive plaque is located at Founder's Plaza on the northwest side of the airport.

Author, May 2011

SH 183, Airport Freeway and Carpenter Freeway
Home of the Original North Texas Freeway Tunnel

UT-Arlington Library Special Collections[71]

An American Airlines Boeing 707 taxis over SH 183 in this undated photo from circa 1970. The tunnel opened in 1964 for the extension of the runway at Greater Southwest International Airport and was demolished in 1988, 14 years after the closure of the airport. American Airlines used the airport for training 707 pilots, and the 707 shown in the photo was almost certainly on a training mission.

SH 183 has nothing distinctive along its length today, but that wasn't always the case. Until 2010 Texas Stadium stood near its eastern end, and from 1964 to 1988 it was the home of the original North Texas freeway tunnel which went underneath a runway of the Greater Southwest International Airport. In 2010 much of the freeway seemed to be in a time warp, in its originally-constructed configuration lined with 1960s- and 1970s-era commercial establishments. But change is coming. A massive rebuild of the west end of the corridor using a public-private partnership began in 2011, and work was proceeding in 2013 toward a similar public-private partnership to add toll lanes to the east end of the corridor through Irving. In the future SH 183 may still be just a way to get from point A to point B, but the freeway corridor itself will be impressive and, for drivers on the toll lanes, very expensive.

Also see: Texas Stadium Freeways page 370; John Carpenter biographical information and photo page 422

Origins

Construction on State Highway 15, the original highway on the SH 183 alignment, began in the late 1930s but was not completed before World War II. With the suspension of noncritical highway construction due to the war effort, the highway remained unfinished in the early 1940s. Local efforts to complete the highway in 1943 were unsuccessful when the War Production Board did not view the project as a military necessity. Construction was approved after a second request in March 1944 and work was soon underway to complete the highway. A ribbon-cutting ceremony for the final link was held on September 30, 1944, to

UT-Arlington Library Special Collections[72]

The ceremony for the completion of the original two-lane SH 183 highway took place on September 30, 1944, at Belt Line Road. Dallas Mayor J. Woodall Rodgers is second from the right. Also shown, from left to right, are J. J. Hurley, Ft. Worth; Dallas County Judge Templeton; Major Gen. Richard K. Donovan, commanding general of the 8th Service Command; Tarrant County Judge Kraft; Rodgers; and State Highway Commissioner Reuben Williams.

This September 1960 view shows construction of SH 183 at its eastern terminus at Interstate 35E Stemmons Freeway in Dallas. The land along Stemmons and SH 183 was mostly vacant, but it wouldn't stay that way for long. The Stemmons Freeway corridor became the corporate power corridor of the 1960s, while the SH 183 corridor was developed with warehouses and light industrial structures.

TxDOT Travel Information Division

City of Irving archives

This undated view from the mid-1950s looks northwest across the original two-lane SH 183 in Irving at Britain Road. In the foreground is the Highway 183 Drive-in cinema, which operated from the 1950s until around 1983.

open the two-lane highway. In Dallas County the highway followed the alignment of present-day Spur 482 (Storey Lane) between the location of the former Texas Stadium and the Field Traffic Circle, which was at the intersection of Northwest Highway and Harry Hines Boulevard (see photo page 184).[22]

The planned opening of the new Amon Carter Field airport in April 1953 at SH 183 and SH 360 spurred efforts to improve the highway. In 1952 Dallas County officials began efforts to build a more direct route to the highway from downtown Dallas, promoting a new link called Hi-Line Road on the general location of the present-day freeway between IH 35E and the former Texas Stadium. Civic leader John Carpenter was instrumental in securing right-of-way donations for approximately 90% of the eastern section of the freeway, allowing construction to begin in 1958. The eastern section of freeway, from SH 114 to IH 35E, was named the John Carpenter Freeway in 1959 in recognition of his efforts.[23]

By 1955 SH 183 had four lanes from Fort Worth to Belt Line Road in Irving, and in 1956 work began to upgrade the two-lane highway from Belt Line to Loop 12. The site for Dallas-Fort Worth International Airport was designated in 1965 and SH 183 became the primary access route to the airport from both Dallas and Fort Worth. In 1967 leaders unveiled plans for transportation improvements to serve the airport, and upgrading the entire length of SH 183 to freeway standards was a top priority. In 1973 work was complete on the full length of the freeway.[24]

The Original North Texas Freeway Tunnel

Before DFW International Airport, there was the Greater Southwest International Airport (GSIA). Never heard of it? Before it was named GSIA, it was Fort Worth Amon Carter Field, in honor of Fort Worth civic leader Amon Carter Jr who pushed the airport project forward. Still never heard of it? Well, the airport was a commercial failure from its beginning since it was never able to compete with Love Field in Dallas. Dallas officials made sure Love Field remained the preferred airport in North Texas by continuously improving it in the 1950s and 1960s. But from the perspective of freeways, GSIA was the location of one of the more

UT-Arlington Library Special Collections[73]

The above July 1956 view shows Amon Carter Field, looking due south, with the original SH 183, then a four-lane divided highway, crossing from left to right across the lower part of the photo. In 1960 plans were prepared to lengthen the north-south runway, extending it northward into the path of SH 183. SH 183 was aligned underneath the runway with the tunnel, which is shown below on the day it opened on July 14, 1964.

Dallas Public Library

Dolph Briscoe Center for American History, the University of Texas at Austin[74]

This view shows the intersection of SH 183 and SH 360 in 1958, with the vehicle proceeding eastbound on SH 183. In the background a sign pointing to Fort Worth Amon Carter Field is visible. When Dallas and Fort Worth were negotiating an agreement for the airport, a location exactly halfway between the two cities was necessary in order not to favor either city. SH 360 was exactly halfway, 19 miles to each city center. However, when Dallas officials discovered that the terminal location had quietly been moved to the west side of the property in the airport plans, they immediately ended their participation and proceeded to improve Love Field, which went on to dominate regional air travel until the opening of DFW Airport in January 1974.

UT-Arlington Library Special Collections[75]

This was the main terminal of Amon Carter Field, renamed Greater Southwest International Airport in 1962, shown in an undated 1960s photo. Due to the lack of scheduled air service at the airport, the terminal was a sleepy, peaceful place for most of its existence until regular activity ended with the last commercial flight in 1968.

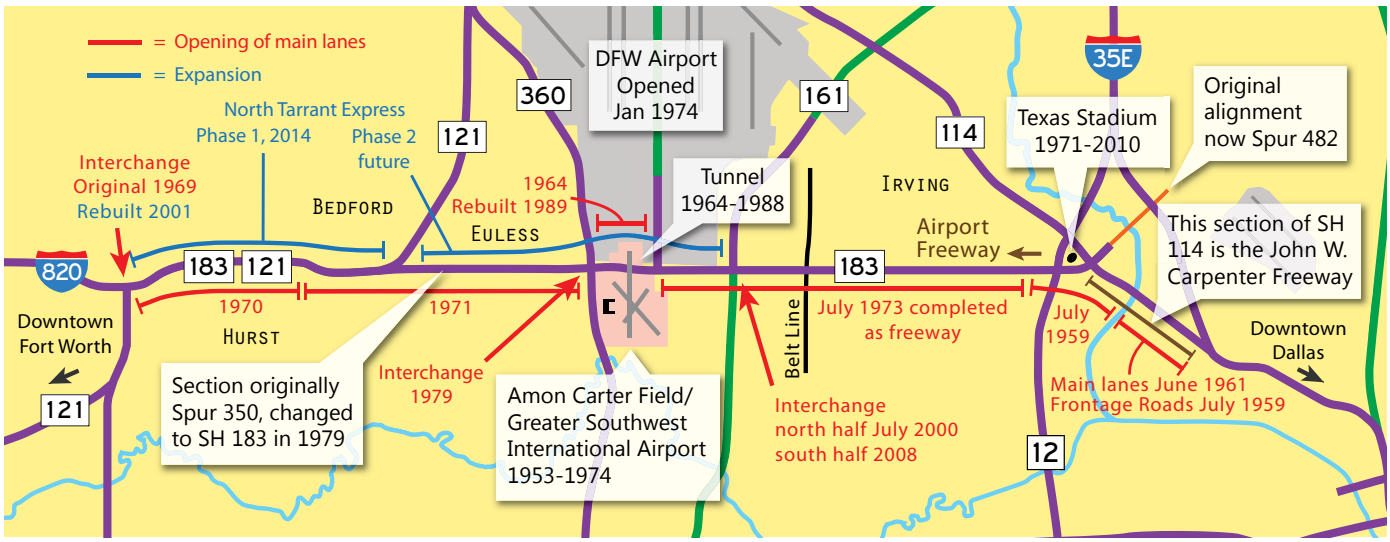
Dallas Morning News

UT-Arlington Library Special Collections[76]

GSIA airport closed to all aircraft operations when DFW Airport opened in January 1974, but it took some time to clear away the abandoned airport. Demolition of the terminal building took place in August 1980. The SH 183 tunnel increasingly became a hazard and traffic bottleneck in the 1980s, and in May 1988 it was finally removed with an explosive demolition. The main airport runway south of SH 183 was converted into Amon Carter Boulevard, which is main street serving the office complex on the property today.

distinctive features on North Texas freeways from 1964 to 1988—the SH 183 tunnel underneath the main runway of GSIA.

The idea of an airport midway between Dallas and Fort Worth can be traced back to the late 1920s when Curtis-Wright aircraft set up a plant and airfield in Grand Prairie right on the Dallas-Tarrant county line. In the 1930s Arlington considered the idea of a "midway airport" but gave up due to lack of financing. In the 1930s and 1940s the cities of Dallas and Fort Worth attempted to put their differences aside to settle on a location and design for an airport, but pride and emotion on both sides of the negotiating table were just too much to overcome. It didn't help that the negotiators were Fort Worth's Amon Carter, legendary in his dislike for Dallas, and Dallas Mayor J. Woodall Rodgers, staunch supporter and promoter of Dallas. The location of the terminal and administration building, toward the east side (favoring Dallas) or west side (favoring Fort Worth) of the property was an issue which had caused discussions to break down. Tentative plans placed the terminal on the north side of the property along SH 183 without favoring Dallas or Fort Worth. While planning was in progress during Mayor Rodgers' tenure from 1939 to 1947, Rodgers sought to review the plans. Unsuccessful in viewing the



Author, 2011

This view shows the site of the SH 183 tunnel in June 2011. Amon Carter Boulevard was built on the alignment of the runway and now crosses over SH 183.

Author, 2011

Once upon a time, this was the main runway for Greater Southwest International Airport. Today it is Amon Carter Boulevard. American Airlines headquarters is located along the road on the right. American Airlines became the largest airline in the world after the December 2013 merger with US Airways, completing a long and often controversial reorganization since declaring chapter 11 bankruptcy in November 2011.

UT-Arlington Library Special Collections[77]

This undated view from the late 1960s looking west at Central Drive in Bedford shows construction underway on SH 183.

plans at the regional Federal Aviation Administration office, he traveled to Washington DC to see them. He discovered that the terminal had quietly been moved to the west side of the property along SH 360. Infuriated Dallas leaders immediately ended their participation in the airport and proceeded with plans to upgrade Love Field.[25]

Fort Worth decided to proceed with the airport on its own with federal assistance and Fort Worth Amon Carter Field opened in April 1953. Six airlines operated 83 daily flights just after the opening, and that was as good as business would ever be. Patronage of the airport declined steadily as Dallas Love Field continued to expand and attract regional airline growth.[26]

As the jet age began in the 1950s, Carter Field needed a longer runway to accommodate newly introduced jet aircraft. On March 5, 1960, US Representative Jim Wright announced funding to lengthen the runway to 9000 feet, extending it onto the alignment of SH 183 which ran just north of the end of the runway. A southward extension of the runway was not feasible due to the Rock Island Railroad just south of the runway.[27]

The solution for SH 183 was to build a tunnel underneath the runway and adjacent taxiway. Describing the structure as a tunnel is somewhat of a stretch—at 900 feet long, it could almost be classified as a long underpass. But in North Texas it was the only structure resembling a tunnel, and after its opening on July 14, 1964, it reigned as the only vehicular tunnel in the region for its entire existence.

The airport was renamed Greater Southwest International Airport in November 1962 in hopes of gaining more Dallas participation, but Dallas still had no interest as it continued to improve Love Field and expand its operations. In July 1963 commercial flight volume at Carter Field had dwindled to 30 flights per day. But the airport had become a busy training center for American Airlines, which opened a stewardess training center just west of the airport in

UT-Arlington Library Special Collections[78]

The above undated view from the late 1960s looking east shows construction underway on SH 183 at Central Drive in Bedford. The stub-out for the future SH 121 freeway can be seen on the left. Below, work is underway on the connections to SH 121 in December 1979.

UT-Arlington Library Special Collections[79]

TxDOT Travel Information Division

This early 1960s view looks west along SH 183 at the site of the former Texas Stadium, which was built in the foreground area on the right side. Construction began in 1969 and the stadium opened in 1971. The stadium was imploded in April 2010 and the property has subsequently been used by TxDOT as a construction staging area.

Also see: Texas Stadium Freeways page 370

1957 and in 1962 made the airport its exclusive training center for Boeing 707 pilots.[28]

In September 1965, just a year after the freeway tunnel opened, the site of the planned Dallas-Fort Worth International Airport immediately north of GSIA airport was announced. The end of commercial flights in 1968 was anticlimactic since each of the seven airlines still serving the airport offered no more than two incoming and two outgoing flights per day. From that point on it was only a matter of time until GSIA would close, and flight operations ended when DFW Airport opened in January 1974.[29]

The airport was abandoned and the tunnel was obsolete, but there were no immediate plans to demolish them. The airport terminal building was demolished in 1980. The runway which crossed over SH 183 became the main boulevard of the new development on the property, CentrePoint Business Park. Although the tunnel wasn't a detriment to the light traffic of its early days, by the 1980s it had become a nuisance, maintenance hassle and traffic flow bottleneck, particularly when drivers slowed to adjust to changing lighting conditions. Its planned demolition couldn't come soon enough for local officials. Finally in May 1988 the remaining tunnel was wired with explosives and came crumbling down in a pile of rubble. North Texas freeways would remain tunnel-free until the construction of the deck over Woodall Rodgers Freeway (Spur 366) in Dallas in 2012. The Addison Airport Tunnel, a 3700-foot-long tunnel underneath the airport runway opened in 1999, is the only bored tunnel in North Texas but it is not a freeway facility.[30]

Author, April 2008

Texas Stadium, shown in April 2008, was the most distinctive landmark along SH 183 from the stadium opening in 1971 until its implosion in April 2010. In January 2014 the City of Irving began negotiations with a real estate developer to redevelop the site.

Modernization and the Era of Tolls

The entire length of SH 183 between Dallas and Fort Worth had attained freeway status by 1973, just in time for the opening of DFW Airport in January 1974. But most of the freeway was built to minimum standards with only six main lanes and a narrow right-of-way in many sections.

Modernization of the west section of SH 183, through Hurst, Euless and Bedford, proceeded first. Plans for widening SH 183 and an adjacent east-west section of Interstate Loop 820 from SH 183 to IH 35W were proceeding independently until 2003 when new state legislation authorized private investment in highway facilities. In Texas the arrangements with private investors are called comprehensive development agreements (CDAs), while elsewhere they are typically called public-private partnerships (PPPs). In 2004 a proposal was received for new tolled lanes along most of the entire length of SH 183 and TxDOT launched a formal procurement process in compliance with the governing legislation. Around that time, the west section of SH 183 was split from the east section for the rebuilding process.

The complicated project remained in the study and proposal phase for the next two years until December 2006 when TxDOT unveiled a new plan for a comprehensive system of managed toll lanes on IH 35W north, the north section of Loop 820 and the west section of SH 183. The plan was officially named the North Tarrant Express. But more difficulties and complications would delay the project. Although the project was exempted from new legislation in 2007 which placed limits on privately funded toll roads, the project's cost and complexity slowed progress in 2008. In January 2009 the process finally reached the point of selecting a private developer, with a team called NTE Mobility Partners, led by Spanish toll road operator Cintra, the winner. The 13.5-mile-long first phase of the project, with an initial construction cost of $1.15 billion and a 52-year life-cycle cost of $2.5 billion, included the north section of Loop 820, east of IH 35W, and SH 183 from Loop 820 to the SH 121 split. On SH 183 the project will rebuild the existing six main lanes and add four new tolled lanes. NTE Mobility Partners will collect tolls on the new lanes for 52 years. Construction was underway in 2011 with completion scheduled for late 2014.[31]

Widening the freeway through Irving would be even

Author, November 2013

This November 2013 view looking west toward Hurstview Drive shows the North Tarrant Express construction in progress and nearing completion on this particular section. The lanes in the middle, used by eastbound traffic at the time of this photo, will be tolled managed lanes.

more challenging due to the narrow right-of-way and high impacts on adjacent commercial and residential areas. In 1984 Irving officials first began lobbying for improvements and in 1987 officials proposed 6.9-mile-long elevated structures to add extra lanes through Irving. But it would be a long, long process before plans would be approved and construction could begin.[32]

TxDOT conducted a formal study of the east section of SH 183, from IH 35E in Dallas to SH 360 southwest of DFW airport, from March 1998 to April 2000. The study recommended expanding the freeway to have eight regular main lanes and three reversible tolled managed lanes. The design details of the expansion were defined by a preliminary engineering study from 2001 to 2004. After both elevated and below-grade options were considered, the final recommendation set the expansion to occur at ground level, necessitating a major right-of-way clearance affecting mostly lower-tier commercial properties which lined the frontage roads.[33]

Financing the project was the next challenge. A 2003 study found that tolls collected on the central managed lanes would pay for only about one-fourth of the overall project cost. New state legislation in 2003 introduced the possibility of private financing for the project via a CDA. The unsolicited CDA proposal received in March 2004 spurred an official request for proposals which resulted in a total of four proposals. Review of the CDA proposals in 2005 resulted in a design change, converting the three reversible managed lanes to four lanes, two each way, for a main lane configuration of 4-2-2-4.[34]

The CDA process was canceled in 2006, but TxDOT and the City of Irving proceeded with preliminary work relating to right-of-way. Revised schematics were completed in August 2006. The section of freeway with the most lanes is planned to be the far eastern end between IH 35E and SH 114 typically with ten regular lanes and six managed lanes.[35]

Right-of-way acquisition and clearance proceeded, gaining momentum in 2009. A total of 342 parcels of property were needed for the east section, and 65 buildings faced demolition. As of February 2011, 221 parcels (65%) were acquired and 33 buildings were demolished. In June 2011 Governor Perry signed legislation authorizing TxDOT to enter into a CDA for the east section. The private partner will collect tolls on the managed lanes for up to 52 years. In August 2012 TxDOT solicited proposals for a three-phase construction plan with an estimated total cost of $1.8 billion, but lack of interest from private developers prompted TxDOT in January 2013 to expand the project limits to SH 121 in Bedford in hopes of attracting more private-sector proposals.[36] ■

SH 360, the Angus Wynne Freeway

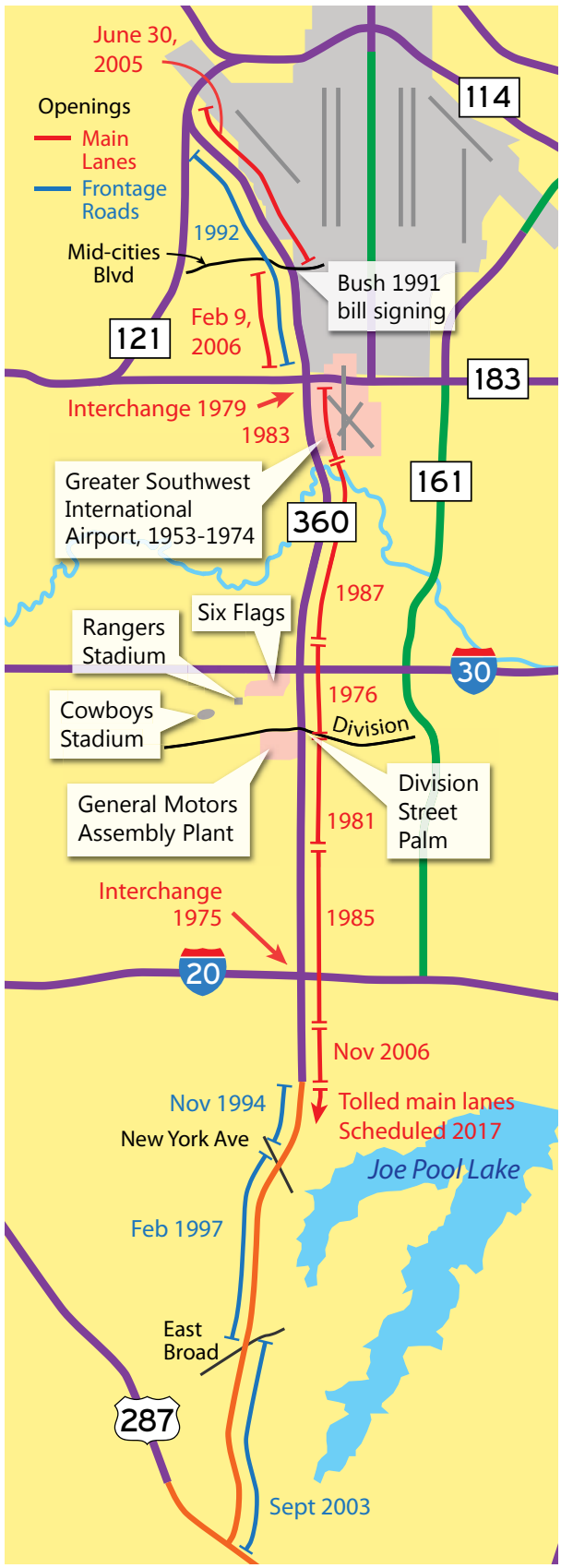
General Motors announced the acquisition of 255 acres for a potential future manufacturing or assembly operation in August 1951. It wasn't clear at the time if the site was envisioned for an automobile or defense-related operation, but at the groundbreaking ceremony on May 27, 1952, the plant was touted as GM's first dual-purpose plant, designed to be capable of producing military equipment, civilian automobiles, or a combination of both. Plans for aircraft production were abandoned in October 1952 and the plant has been used exclusively for automobile production. The first vehicle, a black Pontiac Chieftan, rolled off the assembly line on January 6, 1954, and the plant was formally dedicated with an open house in June 1954. The plant has survived wave after wave of General Motors plant closings, including the 2009 bankruptcy, and in 2014 produces GM's largest sport utility vehicles.[37]

The General Motors plant site selection was influenced by the need to be on a railroad corridor, and at the time the eastern boundary of the plant property was Watson School Road. In 1955 the new regional freeway plan proposed to convert Watson School Road into a freeway with a northward extension across the Trinity River to SH 183 and the new Amon Carter Field airport (see pages 440-447). There was little progress toward actual construction of the freeway in the following ten years, but the designation of the site of DFW Airport in 1965 revived planning for the freeway

Also see: Six Flags Over Texas, pages 415-418; Greater Southwest International Airport (Amon Carter Field), pages 440-447

Dallas Public Library[80]

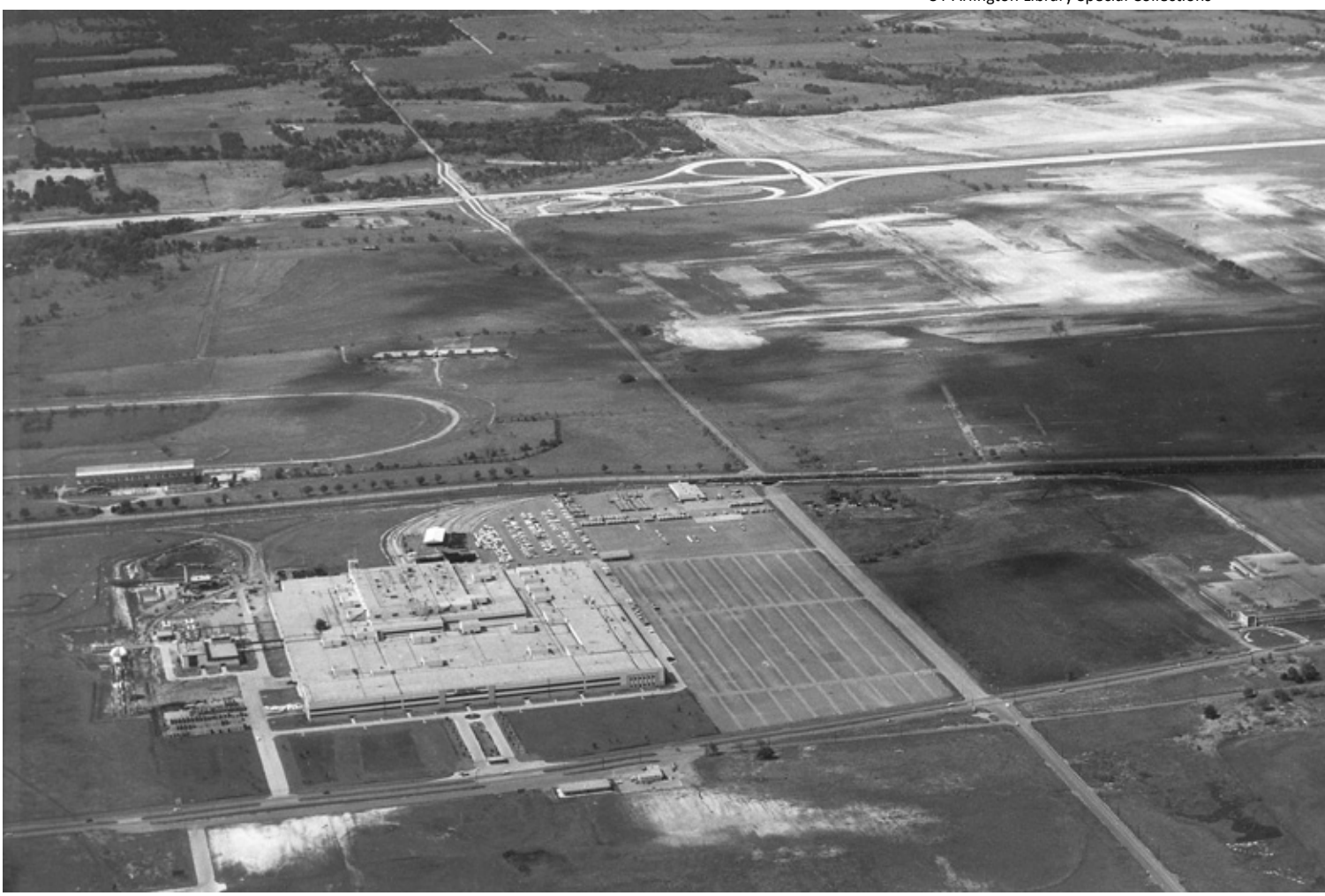
In 1997 SH 360 was named for Angus G. Wynne Jr, real estate developer who conceived and built Six Flags Over Texas, which opened in August 1961. Prior to Six Flags, Wynne developed the Wynnewood residential development in Dallas' South Oak Cliff, which broke ground in February 1946, and its highly successful Wynnewood Village Shopping Center which first opened in December 1949. Wynne also developed the Great Southwest Industrial District in the area around SH 360 and Interstate 30. Wynne (1914-1979), shown in a 1952 photo, came from a prominent family originally from Kaufman County, just southeast of Dallas County. In 2013, however, the freeway is rarely referred to as the Wynne Freeway. See page 415 for an additional photo of Wynne.[81]



UT-Arlington Library Special Collections[82]

The first vehicle produced at the General Motors Arlington Assembly Plant, a Pontiac Chieftan, rolled off the assembly line on January 6, 1954. Shown in the photo from left to right are J.L. Conlon of Detroit, general manager of the Buick-Oldsmobile-Pontiac assembly division, Arlington Mayor Tom Vandergriff and plant manager E.C. Klotzburger. Below is a May 1957 view of the assembly plant looking north with the original two-lane Watson School Road along the east side of the plant. Also visible in this photo is the Arlington Downs horse racetrack just north of the plant.

UT-Arlington Library Special Collections[83]



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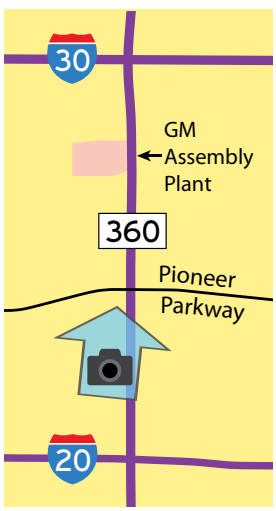


This 1968 view looks north along SH 360 at Pioneer Parkway, which crosses left-to-right across the lower part of the photo. SH 360 stopped at Pioneer Parkway at that time and was a minimal facility.

construction. In 1966 TxDOT officially designated SH 360 as a freeway from SH 183 to US 287 in Mansfield, and in 1969 the north section from SH 183 to SH 121 in Grapevine received freeway status. In 1967 political leaders unveiled a plan for a network of freeways to serve the planned Dallas-Fort Worth International Airport by its scheduled opening in 1972 (which was delayed to January 1974), including construction of SH 360 between SH 183 and IH 20. But other freeways serving DFW Airport were designated as higher priority, and progress on SH 360 remained slow with no main lanes open or under construction in January 1974 when the airport began operations.[38]

Efforts to begin construction were complicated by the 1973 energy crisis and rampant inflation. The first contract for main lanes was scheduled to be awarded in December 1973, but all contract bidding was canceled due to uncertainties over future supplies of fuel and construction material. The project went to bid in January 1974, and the lowest bid was 37% above the estimate. Still, the project moved forward and the first main lanes opened in 1976. Over the next eleven years sections opened to complete the originally planned freeway between SH 183 and IH 20 in 1987.[39]

In 1984 Arlington and Grand Prairie political leaders began efforts to build SH 360 south of IH 20. However, TxDOT's lack of funds made competition for project funding intense and local governments were expected to make increasingly large contributions. In August 1984 TxDOT agreed to build the freeway if most of the right-of-way was donated, and officials in nearby cities began efforts to secure the land, estimated to cost $18 million, with Arlington and Grand Prairie taking the lead. But obtaining land donations proved to be more difficult than expected. When other freeways received large donations of land it was typically by a few wealthy landowners or develop-

UT-Arlington Library Special Collections[85]

Pre-freeway SH 360 The above August 1965 view looks southbound along the original two-lane SH 360 near Brown Boulevard. The lower view from June 1973 shows the frontage roads at present-day Interstate 30, the Tom Landry Highway, which was then the Dallas-Fort Worth Turnpike. The first main lanes of SH 360 were built at this location. Work was underway in 1974 after a short delay in 1973 caused by the oil embargo and associated rampant inflation.

UT-Arlington Library Special Collections[86]

The Heartwarming Story of the Division Street Palm

Photos courtesy Richard McMullen

It was a very peculiar and unusual instance of freeway landscaping–a palm tree growing and thriving on the embankment of the Division Street overpass. Palm trees in North Texas, along a freeway?

It was certainly not the most hospitable spot for a palm tree with its poor soil, North Texas winters and exhaust-laden air. The tree was a specimen of Washingtonia filifera, commonly called the California Fan Palm, native to spring-fed oases in the desert southwest, primarily in southern California. But this palm tree knew how to survive and grow, becoming a large and prominent tree alongside the roadway. The palm tree was certainly the gem of an otherwise harsh landscape of concrete and nearby industrial structures, including the adjacent General Motors assembly plant.

How did the palm tree take root alongside the freeway? Several family members of a former Arlington resident reported a well-established family story (not independently verified) that in 1995 their relative, a musician from Mexico no longer in Texas, was cycling across the Division Street bridge when he saw a nursery-size palm fall from a truck into the roadway. With no way to carry it, he scrabbled a hole next to the road and planted the little tree on the spot.

Richard McMullen, a research engineer, took notice of the tree while driving on SH 360 one day. Fascinated by it, he adopted it as his own and called it the Division Street Palm, keeping watch over it and informing others of its remarkable story. But in 2009 it appeared that the hardy palm tree would meet its end as work was underway on reconstruction and expansion of SH 360, necessitating the removal of the tree. McMullen resolved to do whatever he could to save the tree. He contacted a *Dallas Morning News* columnist who featured the story of the tree in the paper in October 2009. Once the story was out, the tree had a future. TxDOT provided equipment and logistical support for the tree removal and a local tree contractor donated labor and transport for the relocation. The chosen destination was a city recreation center near McMullen's home in Carrollton. In December 2009 the Division Palm was relocated to its new home where it has been doing well.[57]

ers who owned very large tracts in the freeway corridor and would benefit from the freeway. However, the path of SH 360 south of IH 20 generally had a large number of landowners with small tracts of property, and the corridor was not a short-term high-growth area. In July 1986, with a deadline rapidly approaching, Arlington and Grand Prairie disbanded efforts to secure right-of-way donations due to lack of success. The project appeared dead.[40]

But all was not lost. Local officials managed to secure some land donations and the projected traffic on the corridor was revised upward due to the opening of Joe Pool Lake, improving the cost-effectiveness of the project and making it viable. In November 1986 TxDOT approved funding for construction of frontage roads. The first section of frontage roads opened in 1994 and they were completed to US 287 in 2003. A short section of main lanes was completed near IH 20 in 2006, but the remaining 9.7 miles of main lanes will be tolled. In January 2013 TxDOT and the NTTA reached an agreement for construction of the tolled main lanes, with construction expected between 2015 and 2017.[41]

The northern section of SH 360, along the west side of DFW Airport between SH 183 and SH 121, was also a long-delayed project. After approval by TxDOT in 1969 and a public hearing in 1972, little progress was made until 1984 when TxDOT approved funds for right-of-way acquisition. Construction of the frontage roads moved forward in the early 1990s. On December 18, 1991, the construction zone at the Mid Cities Boulevard overpass served as the backdrop for President George H.W. Bush and a delegation of political leaders as Bush signed the $151 billion Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), financing highway and mass transit construction for the following six years (see photos pages 16 and 17). The frontage roads were completed in 1992 and the main lanes in 2006.[42] ■

Author, November 2013

This November 2013 view looks north along SH 360 from the Glade Road overpass on the west side of DFW Airport.

Interstate 20 Mid-Cities

Discussion of a freeway between Dallas and Fort Worth on the south edge of the urbanized region began around the time of the construction the Dallas-Fort Worth Turnpike in the mid-1950s when toll-averse interests wanted to secure a non-tolled freeway route connecting Dallas and Fort Worth. The Federal-Aid Highway Act of 1956 launched the full-scale construction of the Interstate Highway System, but present-day IH 20 connecting Dallas and Fort Worth was not included in the original interstate route plan. Most of Interstate Loop 820 in Fort Worth was in the original Interstate Highway System plan as was IH 635 in Dallas, which began at IH 35E and proceeded eastward. The missing Mid-Cities link was between the southeast corner of IH 820 in Fort Worth and IH 35E in south Dallas.

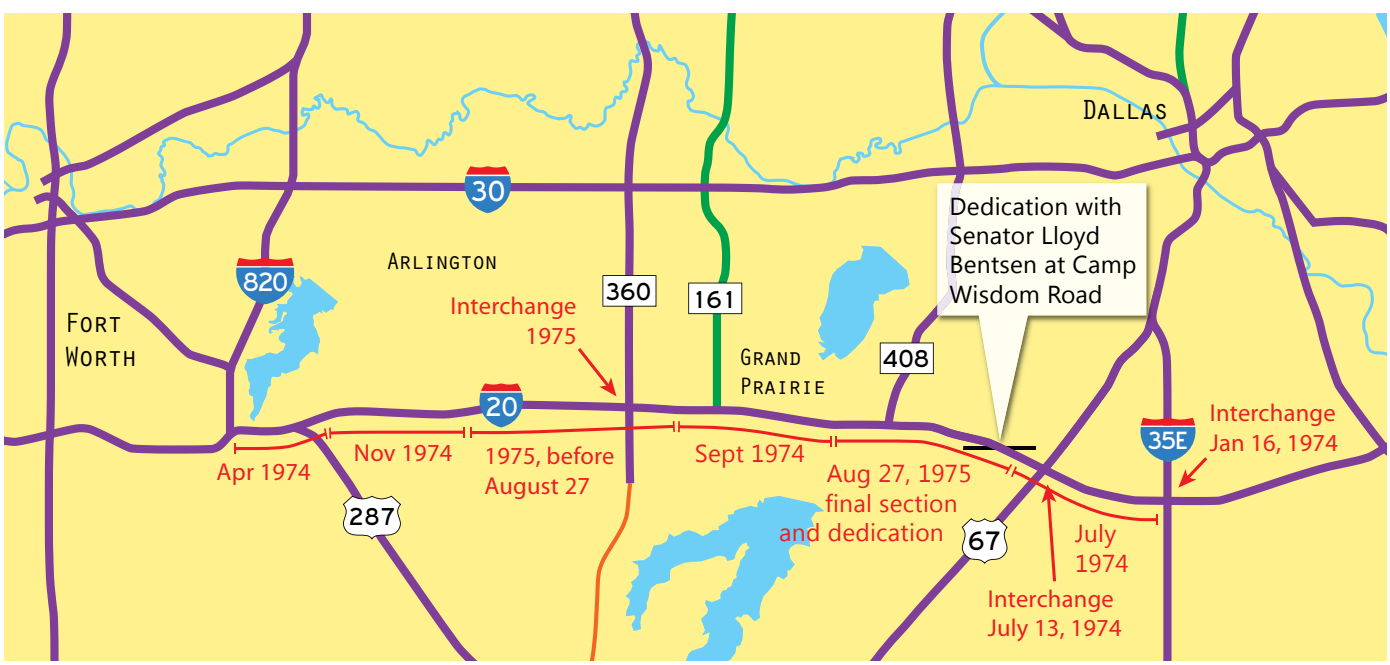
In 1957 the immediate task for political leaders was to prevent the designation of the Dallas-Fort Worth Turnpike as IH 20 since that would preclude the possibility of making the proposed southern freeway an interstate highway with highly desired 90% federal funding. In March 1957 Congressman Jim Wright of Fort Worth, who served on the House Committee on Public Works, worked to promote the "Southern Expressway" in the US House and local interests made presentations to the US Bureau of Public Roads in April and May 1957 in support of the interstate designation.[43]

The bureau's decision on this section of IH 20 in August 1957 was both good news and bad news. On the plus side, the bureau ruled that the Dallas-Fort Worth Turnpike would not be designated as IH 20, and the southern freeway remained the logical alignment for IH 20. On the down side, the bureau did not add the link as part of the Interstate Highway System.[44]

Also see: Interstate 20 in Fort Worth, pages 503-510; Interstate 20 in Dallas, page 317; Senator Lloyd Bentsen cutting the ribbon for the final section to open, page 19

The decision was certainly good news for the Dallas-Worth Turnpike since a competing toll-free route would have cost the turnpike authority revenue and possibly compromised its ability to meet its financial obligations. There are no official reports that the federal decision was influenced by the turnpike, but it most likely was a factor. Local officials continued to promote the freeway as a state highway project for the following seven years until 1964 when TxDOT and Washington were ready to take action.[45]

In January 1964 a North Texas delegation made a presentation to the Texas Transportation Commission urging official designation of the freeway. In April 1964 the commission officially added the missing link of IH 20, from the southeast corner of Loop 820 in Fort Worth to IH 35E south of Dallas, to the state highway system, with an estimated cost of $34 million. Only one task remained—obtaining interstate highway status from Washington. In October 1964 the Mid-Cities link was officially made part of the Interstate Highway System. The delay in obtaining approval would ultimately be beneficial since freeway design standards had improved in the previous years, resulting in a higher quality and wider design. Construction began in 1971 and the final section of the Mid-Cities link was dedicated on August 27, 1975, with the ceremonial ribbon cut by Senator Lloyd Bentsen and his wife underneath the Camp Wisdom Road overpass (see photo page 19).[46]



TxDOT Travel Information Division

From the DFW Airport Runways to Interstate 20 This December 1974 photo shows paving in progress on IH 20 at Hill City Drive in Duncanville. The contractor, Zachry Construction, brought the paving machine from DFW Airport where it was used to build the airport runways and taxiways. The machine was described as the world's largest slip-form paving machine, capable of paving a mile of 48-foot-wide concrete in a single day. However, the concrete plant and dump trucks couldn't supply concrete fast enough to keep up with the paver, so 2200 to 3000 feet per day were normally paved. Slip-form paving, which became widely used in the 1960s, uses a stiff concrete mixture which holds its shape when poured in position. The May 2005 view below looks east with the Mountain Creek Parkway intersection in the foreground and a wide split in the highway just ahead as IH 20 traverses the steepest freeway grade in North Texas, rising up from the low-lying area of Mountain Creek.[58]

Author, May 2005

Since its original completion, improvements to IH 20 in the Mid-Cities have mostly been at intersections to accommodate the traffic generated by steady development in the corridor. Frontage roads were mostly omitted from the original construction and sections have been added. Interstate 20 from Grand Prairie westward to the Tarrant/Parker county line was designated as the Ronald Reagan Memorial Highway by state legislation in 2005, one year after Reagan's death. In 2006 signage recognizing the designation was installed near Park Springs Road in Arlington. ■

Author, 2011

Associated Press[87]

Interstate 20 from Grand Prairie westward through Tarrant County to the Parker County line was designated as the Ronald Reagan Memorial Highway by state legislation in 2005, one year after Reagan's death in 2004. Signs recognizing the designation were installed along IH 20 in Arlington in 2006. Above, Cowboy legends Tom Landry and Roger Staubach joined Reagan at an August 22, 1984, rally in Dallas held in conjunction with the Republican National Convention at Reunion Arena in Dallas. In 1979 Arlington considered naming the section of freeway within its city limits the John Wayne Memorial Highway to give the area a new image.[59]

International Parkway

The idea of a central north-south spine highway for the airport was part of the original concept for the airport developed in 1967 and was retained when the terminal design was substantially altered in 1968. In October 1968 plans to toll the main airport road were revealed, both to raise revenue and discourage use of the highway by non-airport traffic. The highway was called the spine road in most published reports until 1972 when the name International Parkway appeared. Construction was substantially complete by June 1973 and the highway was fully opened to traffic on September 21, 1973, when the connections to SH 183 were opened. Dedication weekend with an open house and air show featuring the first appearance of the Concorde in the United States took place September 22 and 23, 1973. Airport operations began with the arrival

UT-Arlington Library Special Collections[88]

The Original Plan This model shows the original plan for DFW Airport terminals and International Parkway. The spine corridor was narrow and International Parkway is shown passing underneath the terminal buildings. The architect, New York City-based Tippetts-Abbett-McCarthy and Stratton, developed the concept in 1967 and the model was unveiled in August.[50]

By July 1968 the DFW Regional Airport Board began to have concerns about the design, particularly the flow of traffic on the spine highway, and two additional architects were hired to review the design and make changes. Two months later in September the new team unveiled the revised design with semicircular terminals which would become the basis for the final design. The semicircle terminal design isolated the terminal passenger departure and arrival loading zones from the spine highway and opened up a large area of land within the semicircle for parking. The initial plan for semicircular terminals showed International Parkway as a conventional freeway with a narrow median, but in the final design the northbound and southbound lanes were separated by a wide median which accommodated buildings and the control tower.[51]

UT-Arlington Library Special Collections[89]

The Concorde supersonic passenger jet crosses International Parkway on January 13, 1979, when regularly scheduled Concorde service was launched. Dallas-Fort Worth was one of only four U.S. airports to have regularly scheduled Concorde service.

The *Concorde* and DFW Airport

The British-French Concorde is among the most historic aircraft in commercial aviation, and Dallas-Fort Worth International Airport played a part in the United States connection. The first Concorde to land in the United States touched down at DFW Airport on September 20, 1973, for the airport open house and dedication ceremony. The Concorde arrived from Caracas, Venezuela, with a delegation of reporters and dignitaries after setting a speed record on the Paris-to-Caracas route the day before. The Concorde became the highlight of the opening weekend festivities.[52]

The first Concorde commercial service began in 1976 from Washington DC to London and Paris. Service to New York City followed in 1977. Only two other airports in the United States had scheduled Concorde service—Miami and Dallas-Fort Worth. North Texas political and business leaders began lobbying for service in 1975, emphasizing the big welcome the service would receive rather than the opposition and controversy that was raging in New York. By September 1975 Dallas-based Braniff Airlines and British Airways were discussing a joint venture to bring Concorde service to DFW airport and an agreement was reached in February 1977. Final plans included agreements with both British Airways and Air France. The first flight with a Braniff crew landed on December 10, 1978, in preparation for the January 13, 1979, launch of service featuring five flights per week, three to London and two to Paris, which connected through Washington DC with a subsonic flight at mach 0.95, about 100 miles per hour faster than a regular aircraft.[53]

One day before the official launch of service thousands of spectators gathered along SH 114 and airport access roads to view the near-simultaneous arrival of two Concordes, one each from British Airways and Air France. Hundreds of dignitaries and spectators greeted the two Concordes at the service kickoff party at the terminal. After all the celebration, Braniff Airlines faced the task of making the service economically viable with rising fuel prices resulting from the Iranian Revolution underway that same month and the associated panic in the energy market.[54]

By April 1980 jet fuel prices had risen 121% since the start of the service and Braniff could no longer keep the fuel-gulping Concorde flying to Dallas. The Concorde, optimized for supersonic flight, was particularly inefficient during its subsonic flight between Dallas and Washington. In

UT-Dallas Library[90]

The first Concorde in the United States The Concorde arrived on September 20, 1973, to participate in the official opening ceremonies of DFW Airport. The jet was painted with British Airways livery on one side and Air France livery on the other. The Concorde parked next to a Braniff Airlines 747 at present-day terminal B. While the Concorde was an outstanding technical achievement, it was a market disaster as fuel prices rose and environmental concerns mounted in the 1970s. The Boeing 747, with its high-volume economic advantage, would go on to dominate long-haul travel. Dallas-based Braniff Airlines was best known for its artistic and colorful aircraft exterior designs, many by artist Alexander Calder, and its flight attendant uniforms by fashion designer Emilio Pucci. Braniff terminated operations in May 1982 due to bankruptcy.

its official statements Braniff did not disclose load factors or the losses incurred, but a *Dallas-Time Herald* article reported that an average of only 33 of the 100 seats on the jet were filled. The final Concorde flight from Dallas-Fort Worth was on May 31, 1980. The high cost of operating the Concorde relegated it to a small niche connecting New York and Washington to London and Paris. During its trans-Atlantic flight at supersonic speed, the Concorde was reported to use four times as much fuel per passenger as a Boeing 747. No numbers were reported for sub-sonic flight on the Dallas-to-Washington segment. While a Concorde had 100 seats, a 747 could carry between 350 and 500 passengers depending on its configuration.[55]

The Concorde had a short encore performance at DFW Airport. Between June 16 and August 25, 1988, British Airways provided twice-a-week service to London with a stop in Washington DC while the regular aircraft on the route, a DC-10, was out of service for refurbishment. The return of the DC-10 marked the end of regular Concorde service at DFW Airport, but there would be other visits for charters until the Concorde was retired from service in 2003.[56]

For those two windows of time when the Concorde served DFW, motorists cruising on the freeways around DFW Airport could get the rare treat of spotting the sleek jet coming or going. The general public will probably never again be able to fly at supersonic speeds, but in 2013 Fort Worth billionaire Robert Bass (see photo page 496) is financing a venture attempting to bring a supersonic business jet to the market. Other aircraft manufacturers are also studying supersonic jets for the business market.

UT-Arlington Library Special Collections[91]

This undated view from circa 1971-1972 shows the massive construction zone of DFW Airport with International Parkway in the foreground.

The only traffic jam in the history of International Parkway? Maybe. This view shows traffic entering the airport for the official opening and air show during the weekend of September 22, 1973. Since International Parkway is controlled at both entry points to the airport and tolled, traffic is normally limited to airport traffic only, keeping International Parkway traffic smooth-flowing at all times.

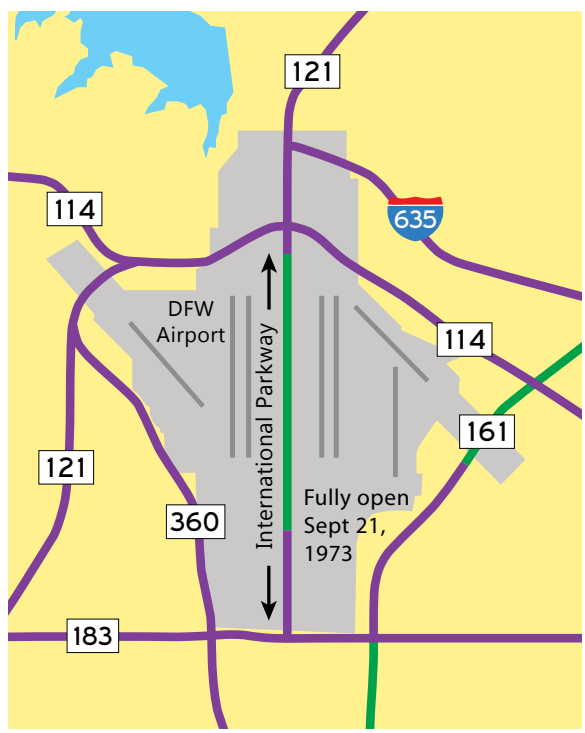
DFW Airport

UT-Arlington Library Special Collections[92]

This undated view shows International Parkway shortly after the airport opening in January 1974. The high-rise structure along the highway is the Airport Marina Hotel, which later became a Hyatt. The hotel was imploded in October 2001 to make way for the Grand Hyatt DFW and Terminal D which were built in the area behind the hotel and opened in 2005.

of the first scheduled commercial flight at 12:07 AM on January 12, 1974. The section of International Parkway between the south airport entrance and SH 183 is officially designated by TxDOT as state highway Spur 97, but is rarely referred to by its official designation.[21]

While the airfield and terminals have seen tremendous growth since the airport opening, International Parkway has changed very little since its capacity is easily sufficient to meet the needs of airport-related traffic. ■



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