Appendix C
Additional Information on Roadway Development in Each State

Illinois

Route 66 in Illinois – General Background
Illinois was the first state to have its entire section of route 66 completely hard-surfaced. In 1918, Illinois voters approved a $60 million bond issuance to finance the construction of approximately 4,800 miles of hard road state highways.

At the 1919 annual meeting of AASHO, Anson E. Marston, dean and director of the engineering department at Iowa State College, and later President of ASCE in 1929, presented a plan to the State highway officials: “The country is about to spend untold billions of dollars in the construction of paved roads. Yet there is a very serious lack of the fundamental scientific data which are absolutely essential to the correct design and construction of paved roads.”

AASHO responded by influencing construction of the Bates Experimental Road near Springfield to investigate important factors involved in the rational design of pavement surfaces. Clifford Older, Chief Engineer of the Illinois Highway Department, published the results of this study in the 1924 Transactions of ASCE as Paper No. 1546, entitled, "Highway Research in Illinois", and in Bulletin No. 18 of the State of Illinois.

Building on the success of the 2018 bond issue, an additional $100 million in bonds was approved in 1924. By the end of 1926, all of the $60 million State Bond Issue for road construction had been contracted, and SR4, renamed to Route 66, was paved from Chicago to East St. Louis.

Over the next several decades, the legacy of the Bates road test eventually extended well beyond the borders of Illinois. As one of the best-documented initiatives of its kind during that era, the Bates Road Test helped set the stage for larger-scale efforts that were also undertaken to assess the most optimal materials and designs for the development of long-lasting roads. These efforts included several loading tests on concrete pavement that were conducted by the U.S. Bureau of Public Roads in the 1930's. A later road test in 1958 to 1960 by AASHO in Ottawa, Illinois, established design parameters for roads and bridges on the Interstate system.

References for the above General Background may be found via the following links
International Society for Concrete Pavements - Bates Road Test
Sangamon County Historical Society - Bates Experimental Road
Illinois Division of Highways on the Bates Experimental Road project
Modern highways got start in Sangamon County
International Society for Concrete Pavements - AASHO Road Test - Ottawa, IL, 1958-1960 AASHO Road Test
Historical Concrete Pavement Explorer - AASHO Road Test - Ottawa, IL
Flexible Pavement Design - State of the Practice, National Center for Asphalt Technology
National Park Service - Illinois Road Segments

Additional references for Illinois may be found via the following links

- Bates Experimental Road - Illinois Highway Department - 1922
- ASCE Transactions 1924 - Highway Research in Illinois - Clifford Older, Chief Highway Engineer
- Illinois Route 66 Corridor Management Plan Illinois Route 66 Heritage Project
- Road Construction in Illinois - Frank T. Sheets, Chief Highway Engineer - Bluebook of Illinois 1927-1928
- Surface Oiling of Earth Roads - B.H. Piepmeier, Maintenance Engineer, Illinois State Highway Department, 1915
- Manual On Road Construction - B.H. Piepmeier, Engineer of Construction, Illinois Division of Highways, 1921
- Highway Officials of Illinois in 1917 - Illinois Highway Improvement Association
- Brick Paved Segments of Route 66 - The Route 66.com
- Illinois Highway Improvement Bluebook 1919 - Illinois Highway Improvement Association
- Historic Drawbridges on Route 66 - (Various authors)
- Route 66 in Madison County - By Cheryl Eichar Jett
- Database of Historic Bridges in Illinois - By Jim Ross

Key Professionals related to Illinois roadway development may be found via the following links

- Anson E. Marston
- Arthur Newell Talbot
- Harold M. Westergaard
- Clifford Older
- Samuel Ellsworth Bradt
- Frank T. Sheets
- B.H. Piepmeier
- Ernst Lieberman - Chief Highway Engineer in 1938 (Biography not available)
- Raymond F. Dawson

Missouri

Route 66 in Missouri – General Background
At the beginning of the twentieth century practically all of Missouri's roads were dirt roads haphazardly maintained by county governments and local township road overseers.

In 1907, a series of new state laws sought to improve roads at the county level. Legislation that year established the office of State Highway Engineer within the State Board of Agriculture; provided for county highway engineers; required automobile licensing and registration; and created a state road fund of $500,000 for new construction or road improvements, distributed among the counties according to their assessed valuations. The first State Highway Engineer, Curtis Hill, had a largely advisory capacity to the county highway engineers who, in 1908, organized themselves into the Highway Engineers Association of Missouri. Additional legislation in 1909 reestablished the road fund on a permanent basis. That year Hill classified only 5,000 miles of roadways as "improved" out of the 110,000 miles of roads across the state. Additional legislation in 1909 reestablished the road fund on a permanent basis.

In 1913, the Missouri General Assembly replaced the State Highway Engineer with a State Highway Commissioner and Deputy Commissioner, and created the Missouri State Highway Department, relieving the State Board of Agriculture of its responsibilities in matters of road construction and maintenance. The expanded duties of the new Highway Commissioner, Colonel Frank W. Buffum, and Deputy Commissioner W. S. Hawkins, included devising specifications and design plans for road construction, including "standard gauge roads" which would be designated by a given name or number.

In March 1917, he Missouri General Assembly passed the Hawes Road Law, which strengthened the role of the Missouri State Highway Department, placing it under the authority of a four-member State Highway Board. The board appointed Graham, as State Highway Engineer, who began outlining the state road system. Graham's proposed system of 5,000 miles connected all of the counties and the larger population centers, and the plan remained the foundation of Missouri's road system.

The McCullough-Morgan Act of March 1919 amended the Hawes Law by providing for a Highway Superintendent who would generally oversee the State Highway Department operations and serve as secretary to the State Highway Board. John M. Malang, who had overseen construction of the first concrete road on the state highway system, Federal Aid Project No. 2 from Webb City to the Kansas state line, became the new Highway Superintendent. In 1920, Superintendent Malang, Governor Frederick Gardner, and the Missouri Good Roads Federation spearheaded an intensive campaign for a $60 million state bond issue to "Lift Missouri Out of the Mud." The bond issue passed in November 1920 in sixty-one of the 114 counties.

The Centennial Road Law of 1921, designed to implement the 1920 bond issue, created a four-member Missouri State Highway Commission with broadened powers to locate, design, construct, and maintain the state highway system, let contracts, and purchase rights of way. The commission was authorized to appoint a Secretary to the Commission, a Chief Counsel, and the Chief Engineer, and reinstated Alexander W. Graham as Chief Engineer.

During 1922, the new Missouri State Highway Commission began its work in constructing the state highway system as mandated by the Centennial Road Law, and began by hiring Rollen J. Windrow as a consulting engineer. On June 1, 1922, Bion H. Piepmeier replaced Alexander Graham as Chief Engineer, who with Windrow completed the study of the primary

road system, which, when constructed, would connect twenty-six cities, serving 91 percent of Missouri's urban population and half of the state's total population.

In 1926, the Missouri State Highway Commission published and printed 600,000 copies of its state highway map with Route 14 from St. Louis to Joplin and Route 1F from Joplin to Kansas labeled as US 60. This was unacceptable to Governor William H. Fields of Kentucky, since route numbers ending in "0" were supposed to run in an East/West direction.

The Executive Committee of The Joint Board of Interstate Highways then agreed to assign "62" to the Chicago to Los Angeles route and "60" to the route through Kentucky, but this was unacceptable to Illinois, Missouri, and Oklahoma.

On April 30, 1926, Cyrus Avery, Highway Commissioner from Oklahoma, B.H. Piepmeier, Chief Engineer of the Missouri Highway Department, and John M. Page, Oklahoma's Chief Highway Engineer, met in Springfield, Missouri, in an attempt to resolve the issue. Page noticed that the number "66" had not been assigned to any route. Avery and Piepmeier immediately sent a telegram to FHWA Chief MacDonald: "We prefer sixty six to sixty two."

Thus, Route 66 was born, becoming an iconic road that would stretch across multiple states and capture the imagination of travelers for decades to come.

References for the above General Background may be found via the following links

A History of the Missouri State Highway Department, Davis C. Austin and Thomas J. Gubbels
Historic Preservation Section, Design Division, Missouri Department of Transportation

From Names to Numbers: The Origins of The U.S. Highway System", Richard F. Weingroff, Federal Highway Administration

Birthplace of Route 66 Springfield, MO, C.H. Skip Curtis, Curtis Enterprises, 424 S. National, Springfield, MO 65802

Additional references for Missouri may be found via the following links

- **The History of Route 66 in Missouri - It All Started Here - Springfield Missouri Convention & Visitors Bureau**
- **Route 66: Missouri - National Park Service**
- **History of Route 66 in Missouri - By Joe Sonderman, The Route 66 Association of Missouri**
- **Excerpts from the Missouri Corridor Management Plan - Great River Associates**
- **St. Louis County - Great River Associates**
- **Roads and Their Builders - The Missouri State Highway Commission**
- **The Centennial Road Law of 1921 - 2023 Old Settlers Gazette**
- **A History of the Missouri State Highway Department - David C. Austin and Thomas J. Gubbels, Missouri Department of Transportation**
- **1943 History of the Missouri State Highway Department - H.B. Dickey, The Missouri State Highway Department**
- **Missouri Highways - The Years Between - Missouri State Highway Commission**
- **Serving Missouri's Transportion Needs For 75 Years - The Missouri Highway and Transportation Commission**
- **Commission Members, Chief Engineers, Secretaries to the Commission, and Chief Counsels - The Missouri Highway and Transportation Commission**
- **Database of Historic Bridges in Missouri - Jim Ross**

Key Professionals related to Missouri roadway development may be found via the following links

In September, 1906, the Missouri State Board of Agriculture sponsored a good roads convention in Chillicothe to consider the question of a better system for road construction and maintenance in the State. Attendance included 200 appointed delegates and 4,000 to 5,000 people. During the convention three miles of improved dirt road were constructed for a prize of $200. At the conclusion of the convention, among several resolutions adopted, the first was to recommend to the State legislature the creation of the office of State Highway Engineer under the jurisdiction of the State Board of Agriculture. As a result of that convention the following engineers or other professionals were a few that figured prominently in the formative years of Missouri's state highway system leading to the creation of U.S. Highway 66.

Curtis Hill Missouri's First State Highway Engineer, 1907-1913
Frank W. Buffum Highway Commissioner 1913-1917
Frederick D. Gardner Governor of Missouri 1917 - 1921
Alexander W. Graham State Highway Engineer 1917-1922
Harry Hawes Author of Hawes Road Law of 1917
J.G. Morgan Co-author McCullough-Morgan Law of 1919
Theodore Gary Highway Commissioner 1921 - 1926
B.H. Piepmeier State Highway Engineer 1922-1927
Rolen J. Windrow Consulting Engineer 1922 - circa 1927
Leif J. Sverdrup Engineer of Bridges 1924 - 1928
John M. Malang Highay Superintendent 1924 - 1928
Thomas H. Cutler State Highway Engineer 1927 - 1936
Norman R. Sack Engineer of Bridges 1928 - 1942
Carl W. Brown State Highway Engineer 1936 - 1951
Rex Whitton State Highway Engineer, President of AASHTO, FHWA Administrator

Reference

A History of the Missouri State Highway Department David C. Austin and Thomas J. Gubbels, Historic Preservation Section, Design Division, Missouri Department of Transportation

Kansas

Route 66 in Kansas – General Background

The first Kansas road laws were enacted in 1855 at a meeting of the free-state assembly in Topeka, Kansas. One of these allowed for the establishment of territorial roads. Beyond designating these routes, however, territorial government took little responsibility. The law stipulated that no territorial funds could be applied to pay for territorial roads. The general road law gave authority for establishing roads to "the tribunal transacting county business," which could approve or deny petitions by twelve householders for opening new roads. While the commissioners were given the power to "lay out, alter, or discontinue any road," they could do nothing until they had received a petition.

Road overseers, appointed in each district by the county commissioners, would supervise construction and maintenance by work crews made up of male residents 16 to 45, each of whom were legally obligated to the district for one month of road work. The law also established the first body of standards and specifications for construction by requiring that wetlands and streams be bridged, so long as no bridge cost more than $50. Roadways could be no less than twenty feet in width and no more than forty feet wide. Provisions for road construction enacted by the territorial legislatures became the basis for the states' road laws in its constitution when Kansas was admitted to statehood on January 29, 1861. The constitution sealed the state treasury against road construction by providing that "the state shall never be a party to carrying on any works of internal improvements." These laws remained the system by which Kansans acquired their highways until the next century. From 1875 to 1900 few state roads were established and little change was made in the laws or system of management, except that the township was made the unit instead of the county.

In 1909, The Kansas Legislature created the Office of County Engineer and authorized the Board of County Commissioners of each county to appoint a county engineer to supervise county road and bridge work. Also in 1909 the extension service of Kansas State Agricultural College, which later became Kansas State University, appointed W.S. Gearhart as Extension Highway Engineer to advise the county engineers on road matters. In 1911, The Legislature created the Office of State Highway Engineer to serve the counties, and Gearhart was designated as State Engineer, in which position he served until April, 1919. The Kansas Legislature also created a road classification system consisting of state, county, mail, and township roads. State roads were defined by the Legislature; county roads were designated by county commissioners; free delivery mail routes were roads not designated as state or county roads; and township roads were designated as all other public highways within a township. County and state roads were maintained at the expense of the county; mail route and township roads were maintained by township overseers.

The State Highway Commission was created in 1917 and consisted of three members: the governor, who was the ex officio chairman; and two members appointed by him or her from districts defined by law. They served four-year terms. The commission was repealed in 1925 and was recreated consisting of three members appointed by the governor from named districts for four-year terms. The commission from their own membership selected the chairman. In 1927, the membership of the commission was increased to six and the commission appointed a director on the recommendation of the governor, serving at his or her pleasure. Provision was made in the 1929 Laws for the Commission to establish rules and regulations governing the transaction of their business. In August of 1975, the State Highway Commission of Kansas became the Kansas Department of Transportation.

In 1920, faced with the loss of federal funds because of the lack of state control, Kansas voters passed a "good roads" amendment allowing state aid to counties for roads. The counties and townships still controlled the road system, an arrangement that violated federal law. In 1928, $2 million per year of federal aid for Kansas roads was stopped because

the state would not fund a state highway system. In that year, Governor Ben Paulen borrowed money from Topeka banks to pay for the State Highway Commission and called a special session of the legislature to propose a constitutional amendment removing all obstacles to establishing a statewide highway network. In 1929, after passage of the amendment, Kansas joined the other 47 states and the state began building and maintaining a system of cross-state highways.

Additional references for Kansas may be found via the following links

- **Kansas Department of Transportation - District 4: Southeast Area District Offices**
- **Kansas Historic Route 66 Byway receives state designation - Kansas Department of Transportation**
- **Rainbow Bridge - Wikipedia**
- **Rainbow Bridge - National Register Nomination**
- **Rainbow Bridge Celebrates 100 Years - Fernanda Silva**
- **James Barney Marsh - Kansas Historical Society**
- **J.B. Marsh Arch Bridge Patent - Google Patent Images**
- **Kansas Route 66 Historic District-East Galena - National Register Nomination Form**
- **Kansas Route 66 Historic District – North Baxter Springs - National Register Nomination Form**
- **Baxter Springs, Kansas - Wikipedia**
- **Baxter Springs Heritage Center & Museum - Baxter Springs Heritage Center & Museum**
- **Baxter Springs as a military post - Kansas Historical Society**
- **Fort Baxter,Kansas - Wikipedia**
- **Galena, Kansas - The Route 66.com**
- **Riverton, Kansas - Wikipedia**

Key Professionals related to Kansas roadway development may be found via the following links

- **State Highway Engineers 1917 to 1975**
- **State Highway Commissioners 1917 to 1975**
- **Advisory State Highway Commissioners 1917 to 1975**
- **Directors of the State Highway Commission 1917 to 1975**
- **K-DOT State Transportation Engineer 1975 to 1983**

Oklahoma

Route 66 in Oklahoma – General Background
Route 66 has been the path of migrants, dreamers, desperados, and an entire generation of vacationers discovering the way west. It was crafted into an American cultural icon by both its builders and its people, whose ingenuity and imagination brought to its history the character by which that era of travel is now defined. It is a ribbon of road, a TV show, a song, a book, and a post card. It is a collection of cozy motor courts, outlandish roadside attractions, and small town boulevards splashed with pulsing neon. Popularly referred to as The Main Street of America or The Will Rogers Highway, US 66 has come to symbolize the essence of going somewhere. It is history, it is legend, and above all, it is undying.

America's Mother Road, all of this and more, originally meandered more than 2,400 miles between Chicago and Los Angeles, including nearly 400 miles across Oklahoma. And while officially it no longer exists, a great deal of it remains to be driven, experienced, and enjoyed. Indeed, US 66, the road of dreams, is alive and well.

Because Route 66 was in a state of continual change from its beginning in 1926 until its de-certification in 1985, correctly identifying some of the alignments within its myriad of pathways now presents a challenge, even for seasoned enthusiasts or researchers. The process becomes further complicated when considering that many surviving sections of Route 66 were converted to county or state highways, or lie behind fences on private land. Additionally, many more stretches were completely obliterated; especially those in the path of limited access interstates built as the Mother Road's replacement.

Efforts to document unverified or suspected Route 66 alignments today often involves using a variety of resources, such as reference books, newspaper and magazine articles, vintage maps, old postcards, museum archives, aerial photographs, and transportation department documents, particularly construction plans or related project data. While some sources are better than others, most require corroboration. On-site inspection is also imperative.

Most vital to this process, however, is the availability of public records, as official documentation is virtually irrefutable and often eliminates the need for further research. It is this critical need that makes A Construction History of U.S. Route 66 in Oklahoma an invaluable publication.

By Jim Ross
Route 66 historian and author of "Oklahoma Route 66"
Taken from the forward of **DIRT ROAD TO "PAVED MAIN STREET OF AMERICA: A CONSTRUCTION HISTORY OF US ROUTE 66 IN OKLAHOMA"**

Additional references for Oklahoma may be found via the following links

Route 66: Oklahoma - National Park Service
A Chronology of the Construction History of Route 66 in Oklahoma - Oklahoma Department of Transportation, Planning & Research Division
History of Route 66 and Oklahoma City - City of Oklahoma City
Route 66 in Oklahoma City Historic Context Project Report - Blanton & Associates
Oklahoma Department of Transportation - Wikipedia
The Encyclopedia of Oklahoma History and Culture *Route 66* - Oklahoma Historical Society

Route 66 in Oklahoma: An Historic Context Review - **Oklahoma Historical Society**
Route 66 Construction History - **Oklahoma Department of Transportation, Planning & Research Division**
Upcoming Route 66 centennial to celebrate best of the Mother Road - **Oklahoma Department of Transportation**
Oklahoma's Memorial Highways & Bridges on Route 66 - **Oklahoma Department of Transportation**
Oklahoma Route 66 Corridor Management Plan - **TransSystems/Jacobs Carter Burgess**
Excerpts from Oklahoma Route 66 Corridor Management Plan - **TransSystems/Jacobs Carter Burgess**
Database of Historic Bridges in Oklahoma - **Jim Ross**
PhD Thesis
Oklahoma's Highways: Indian Trails to Urban Expressways **William Paul Corbett, PhD Thesis, Oklahoma State University, 1982**

Key Professionals related to Oklahoma roadway development may be found via the following links
Biographical information on individuals who were involved in the design and construction of Route 66 in Oklahoma is difficult to find.

The Oklahoma Historical Society's Encyclopedia of Oklahoma History and Culture lists only Sydney Suggs, who was appointed by Gov. Lee Cruce in 1911 as Oklahoma's first Highway Commissioner, and Cyrus Stevens Avery, who served as a state highway commissioner under Gov. Martin Trapp, from 1922 through 1926.

John M. Page was chief engineer of the Oklahoma Highway Department in 1926, when U.S. Highway 66 was officially numbered. Avery had campaigned to name the route from Chicago to Santa Monica as U.S. 60, but after months of controversy within the Joint Board of Interstate Highways, at a meeting in Springfield, Missouri, with Avery and Bion Piepmeier, Missouri's chief engineer, Page suggested the number 66, which was accepted by all participants in the naming of U.S. highways. No biographical Information for Page was found in a diligent web search.

The Encyclopedia of Oklahoma History and Culture pages on Suggs and Avery can be accessed at:

Sydney Suggs https://www.okhistory.org/publications/enc/entry?entry=SU004

Cyrus Stevens Avery https://www.okhistory.org/publications/enc/entry?entryname=CYRUS%20STEVENS%20AVERY

When Oklahoma was admitted to statehood in 1907, the state constitution established a framework for a highway department, but did not give the department any authority to oversee road construction, leaving this function to the counties and townships. The new highway department could only disburse funds for construction when these were available and to promote cooperation of local authorities as to routes, methods, and materials of highway construction. No changes came in this control procedure until the federal government passed the Federal Aid Road Act of 1916. In 1917 the Oklahoma legislature appropriated its first matching funds to obtain federal highway money, but the highway department still had no authority to oversee the construction of roads. Local authorities still made all decisions about the spending of funds.

In 1921 Congress modified the Federal Highway Act of 1916, calling for a system of interstate highways and advising states that if they wished to continue sharing in federal revenue they would have to designate specifically up to 7 percent of their roads to receive this aid. Oklahoma did not immediately respond to the new federal program owing to the desire to continue the local control system.

Not until 1924 did the state finally pass legislation reorganizing the state highway department, giving the state highway department the power to construct roads throughout the state and to maintain these to federal standards where necessary. By the end of 1924 the state highway department was finally in a position with funding and specific powers to build a viable state highway system. By that time, a number of Federal Aid projects on the roads that were to become U.S. Highway 66 had been completed by the counties in which the roads were located. (Oklahoma Transportation: Construction History of Route 66 https://www.odot.org/memorial/route66/route66const-hist.htm

Reference:

ROUTE 66 IN OKLAHOMA: AN HISTORIC PRESERVATION SURVEY

Texas

Route 66 in Texas – General Background

The Texas Highway Department, re-named Texas Department of Transportation in 1991, was established in 1917 by act of the Thirty-fifth Legislature and was originally charged with the primary responsibility of granting financial aid to counties for highway construction and maintenance. The act provided for a three-member Commission having the authority to appoint a State Highway Engineer. At the Commission's first meeting on June 4, 1917, George A. Duren was appointed to that position, in which he served until 1919. (Biographical sketches of Texas Highway Department chief engineers are listed below in the Key Professionals section.)

The Commission proposed that an 8,865 mile network of state highways be built. They published a map of the proposed system in June, 1917, which became the basis for the future Texas highway system, (the future Route 66, which followed a branch of the Ozarks Trail is labeled "13"), but few roads were actually constructed before the 1920's. In 1924, Gibb Gilchrist was appointed State Highway Engineer, having served as district engineer in both San Antonio and San Angelo. He resigned in 1925 when Miriam A. (Ma) Ferguson became Governor. A quick succession of five men held the department's executive post from 1925-1928. Gilchrist returned to serve from 1928 until 1937, when he left to become dean of engineering (and later, university dean) at Texas A&M University. It was during this period that the most significant progress was made in building the state highway system, and U.S. Route 66 was hard-surfaced across the state.

In 1927, DeWitt C. Greer joined the Texas Highway Department as an instrument man. He worked in various roles, including acting district engineer and later district engineer in the Tyler district. In 1936, he moved to Austin to head the department’s division of construction and design. In 1940, Greer became the state highway engineer and served in that role for 27 years. He retired from the Department in 1967, but continued to serve the state of Texas as a Highway Commissioner from 1969 to 1981. During his tenure, the Texas highway system expanded significantly.

The Texas Department of Transportation's Headquarters building in Austin, completed in 1933, is named the Dewitt C. Greer State Highway Building in his honor.

References for the above General Background may be found via the following links

Minutes of the Meeting of the State Highway Department June 4, 1917
Highway Department Records at the Texas State Archives, 1920s-1930s, 1962-1975
Texas Transportation Commission - Former Commissioners
Dewitt C. Greer State Highway Building

Additional references for Texas may be found via the following links

- Historic Texas Highway Program **Texas Historical Commission**
- Historic Texas Sign Management Report **Texas Historical Commission**
- Route 66 through Texas Historic Resouces Survey 2005 **Texas Historical Commission**
- Route 66 in Texas Survey Report 2018 **Texas Historical Commission**
- Route 66 Historic Resources Survey Manual **Texas Historical Commission**
- Transportation Related Reasearch Resources **Texas Historical Commission**
- Texas Highway Development **Texas State Historical Association**
- Handbook of Texas, Texas State Historical Association **Texas State Historical Association**

Texas Department of Transportation **Home Page**

Dirt Roads to Diverging Diamonds: A Century of Transportation in Texas **Texas Highways Magazine**

Good Roads for Texas: A History of the Texas Highway Department, 1917-1947 **John David Huddleston, PhD Thesis, Texas A&M University**

Texas and the Good Roads Movement: 1895 TO 1948 **Karl Edward Wallace III, Masters Thesis, University Texas, Arlington**

Texas Timeline **Texas Highways Magazine**

Database of Historic Bridges in Texas **Jim Ross**

Key Professionals related to Texas roadway development may be found via the following links

Texas Highway Department Chief Highway Engineers 1917 to 1985
(Names of chief engineers who influenced the development of Route 66 are highlighted and link to biographical sketches of those engineers.)

1. George A. Duren, **First Chief Highway Engineer, June 4, 1917 - May 19, 1919**
2. Rollin Joe Windrow, **May 20, 1919 - February 15, 1922.**
3. **J. D. Fauntleroy, February 16, 1922 - March 3, 1924.**
4. Gibb Gilchrist, **March 4, 1924 - February 15, 1925**
5. **J. Hank, February 16, 1925 - January 14, 1926.**
6. **W. P. Kemper, (acting), January 15, 1926 - February 28, 1926.**
7. **A. C. Love, March 1, 1926 - December 31, 1926.**
8. **Doak Rainey (acting), January 1, 1927 - January 31, 1927.**
9. **A. Thompson, February 1, 1927 - January 25, 1928.**
10. Gibb Gilchrist, **January 26, 1928 - September 30, 1937.**
11. Julian Montgomery, **October 1, 1937 - June 30, 1940.**
12. Dewitt Carlock Greer, **July 1, 1940 -January 31, 1968.**
13. James Colin Dingwall, **February 1, 1968 - January 31, 1973.**
14. Bannister Luther DeBerry, **February 1, 1973 - June 30, 1980.**
15. Marquis G. Goode, **Jr., July1, 1980 - August 31, 1986**

New Mexico

Route 66 in New Mexico – General Background

Route 66 was started in New Mexico in August of 1926 on existing roadways. The 506 mile distance across the state included passing over 4 major rivers, the continental divide at an elevation of 7250 ft., and seven Native American Reservations.

Politicians and Civil Engineers sought improvements and constructed a shortcut between Santa Rosa and Albuquerque in 1926 under difficult conditions and saved 90 miles. An additional shortcut from Albuquerque to Laguna was authorized late in 1926 to save another 17 miles.

These two shortcuts were officially incorporated into Route 66 in 1937, in the same year that the route was completely paved across the state.

Engineering features of the shortcut were that two bridges had to be constructed in flood plains that needed special features in the designs, and an underpass had to be constructed so that Route 66 travel would safely pass under the Atchinson, Topeka, and Santa Fe Railroad.

Additional references for New Mexico may be found via the following links

- **Introduction to Route 66 Nomination in New Mexico - Roger Zimmerman, P.E., PhD, Life Member ASCE**
- **Publications Related to Santa Rosa-Laguna Short Cut of Route 66 - Roger Zimmerman, P.E., PhD, Life Member ASCE**
- **Historic Route 66 in Albuquerque, New Mexico - Visit Albuquerque**
- **New Mexico Office of the State Engineer - University of New Mexico Digital Repository**
- **New Mexico Enters Sisterhood of States - Albuquerque Historical Society**
- **Source Documents Index - Albuquerque Historical Society**
- **Central Avenue Bridge Became a Part of Route 66 History - La Ćronica de Nuevo México - Historical Society of New Mexico**
- **Central Avenue Bridge Designated as a Historic Landmark - City of Albuquerque Planning Department**
- **New Mexico Road Segments - National Park Service**
- **New Mexico Historic Bridge Survey - Webmaster**
- **History of Albuquerque's Central Avenue - Robert Wood et al.**
- **INTRODUCTION TO NEW MEXICO SECTION OF NHCEL NOMINATION FOR ROUTE 66 - Roger Zimmerman, P.E., PhD, Life Member ASCE**
- **DRAFT CENTRAL AVENUE BRIDGE NOMINATION - Roger Zimmerman, P.E., PhD, Life Member ASCE**
- **Clyde Tingley and the Rerouting of Route 66 - Roger Zimmerman, P.E., PhD, Life Member ASCE**
- **INTERSECTION THAT SYMBOLIZES MAJOR CHANGES TO ALBUQUERQUE - Roger Zimmerman, P.E., PhD, Life Member ASCE**
- **DRAFT SANTA ROSA-LAGUNA SHORTCUT NOMINATION - Roger Zimmerman, P.E., PhD, Life Member ASCE**
- **Database of Historic Bridges in New Mexico - Jim Ross**

Key Professionals related to New Mexico roadway development are listed below.

Key Civil Engineers and Other New Mexico Professionals

Civil Engineers

E. B Bail, F. ASCE

- Project Manager for Santa Rosa Cut-off construction in December 1926.
- Northwest District Engineer in NM State Highway Department- January 1, 1925 to January 1, 1927.
- Documented construction of cut-off from Santa Rosa to Moriarty in December 1926.
- Worked in New Mexico Highway Department until 1957.
- Chose Burton G. Dwyer, F. ASCE, and Sam Fulton, Las Vegas District Maintenance Superintendent (References later) as team leaders for the two construction crews for the Santa Rosa Cut-off.

References:

Bail, E. B.," New Mexico-U. S 66 Albuquerque's Golden Road," NM Professional Engineer, July-August 1952.
ASCE Member search.

James A. French, M. ASCE

- State Engineer 1912-1918.
- State Highway Engineer 1922-1926.
- Responsible for selection of new Federal Highways in New Mexico that were initiated in December of 1925 and officially commissioned in August of 1926. Route 66 was announced in August of 1926.
- Responsible for creating US 470 from Willard, NM through Moriarty to Barton, Tijeras, and Albuquerque from 1926-1931.
- Passed away suddenly in October of 1926 on one of his highways near Encino, NM.

Reference:

Kammer, David, "Historic and Architectural Resources of Route 66 Through New Mexico; "
National Register of Historic Places, US Department of the Interior, National Park Service, August 1993.

Sam Fulton, Las Vegas District Maintenance Superintendent (1926)

- Team Leader for NM 6 construction from Santa Rosa to Palma.

Reference:

Bail, E. B.," New Mexico-U. S 66 Albuquerque's Golden Road," NM Professional Engineer, July-August 1952.

W. C. Davidson

- State Highway Engineer 1927-1931.
- Was involved in removal of US 470 and inauguration of US 366 and NM 41.
- Was highway department administrator for design and construction of Central Avenue Bridge over the Rio Grande in 1930.
- Was involved in negotiations for Re-alignment of Route 66 along Santa Rosa-Laguna Shortcut in 1931.

Reference:

Communications from Special Collections Library.

Frank Kimball, M. ASCE

- Northwest District Engineer in NM State Highway Department, January 3, 1927- April 1931.
- Accepted Santa Rosa Cut-off on first day on the job on January 3, 1927.
- Was responsible for Central Avenue Bridge Construction in 1930.

- Was responsible for new Laguna Cut-off construction from the Central Avenue Bridge.
- Was City of Albuquerque Engineer from 1920-1927.

References:

Bail, E. B.," New Mexico-U. S 66 Albuquerque's Golden Road," NM Professional Engineer, July-August 1952.
Healy Succeeds Dave Thornburg, Clovis Evening News Journal, Clovis, New Mexico, April 13, 1931.
ASCE Member Search.

W. R. Eccles

- State Highway Engineer, 1932-1933.
- Administrator when Rio Puerco Bridge was constructed.

Reference:

Internet

G. D. Macy, M. ASCE

- State Highway Engineer, 1934.

Reference:

Internet and ASCE Member search.

Grover Conroy, M. ASCE

- State Highway Engineer, 1935-1938.
- Was involved in final paving of the newly aligned Route 66 in 1937.
- Was the highway administrator when Route 66 was formally aligned over the Santa Rosa-Laguna Shortcut in 1937.

Reference:

Internet and ASCE Member search.

Burton G. Dwyre, F. ASCE

- Grant County Engineer 1920-1935.
- Was on loan from Grant County to be Team Leader for Santa Rosa Cut-off construction in December 1926.
- Dwyer's segment of the Santa Rosa Cut-off required 27 miles of construction over virgin land.
- State Highway Engineer 1939-1952. (Appointed by Governor Clyde Tingley).
- State president of New Mexico Section of ASCE in 1940.

References:

Bail, E. B.," New Mexico-U. S 66 Albuquerque's Golden Road," NM Professional Engineer, July-August 1952.
Obituary: January 13, 1992.

Engel Bert Van de Greyn

- Central Avenue Bridge Designer, 1930.
- Designed Don Gaspar Bridge in Santa Fe.

Reference:

NM State Highway Department drawings for Bridge 1557 (Central Avenue Bridge).

F. D. Shufflebarger

- Builder of Rio Puerco Bridge, which was designed by Kansas City Structural Steel Company.

Reference:

Citation for listing in National Register of Historic Places.

W. W. Kelly, M. ASCE

- Central Avenue Underpass Chief Engineer for Western Lines of A. T. & S. F. Railway Co.
- AT. & S. F. engineer responsible for design of Central Avenue Underpass for N. M. Highway Department.

References:

General Plan; The A. T. & S. F. Ry. Co, Western Line, Railroad and Track Provisions, Albuquerque, New Mexico, May 12, 1936.
ASCE Member search.

<u>Other New Mexico Professionals</u>

A. T. Hannett

- Mayor of Gallup, NM 1918-1922.
- Member of New Mexico Highway Commission 1923-1924.
- Governor of New Mexico 1925-1927.
- Signed NM Legislature Bill on March 19, 1925, that created NM 6 as a new route that went west from Santa Rosa to intersect the road going through Moriarty to Albuquerque.
- Authorized Santa Rosa Cut-off (NM 6) construction in November 1926 after not being reelected.
- Overspent Highway Maintenance Funds to finance Santa Rosa Cut-off construction.

References:

Kammer, David, "Historic and Architectural Resources of Route 66 Through New Mexico;"
National Register of Historic Places, US Department of the Interior, National Park Service, August 1993.
Bail, E. B.," New Mexico-U. S 66 Albuquerque's Golden Road," NM Professional Engineer, July-August 1952.
Hannett, A. T., "Sage Brush Lawyer" Pageant, 1964.
Kammer, David, "Route 66 through New Mexico: Re-survey Report;" Santa Fe New Mexico
Historic Preservation Division, Office of Cultural Affairs, March 2003.
Zimmerman, R. M.,"Rerouting Route 66 Through Tijeras Canyon." Memoirs of Roger Max
Zimmerman, Volume 5 Volunteer Activities, Library of Congress No. 2020922418; 2021.
5-Cent Gas Tax Passes, Hannett Administration Left Construction account $200,000 Over-drawn, Springer Says; Santa Fe New Mexican; Feb. 9, 1927.

Clyde Tingley

- Ex-officio Mayor of Albuquerque, 1922-1935.
- District 3 Highway Department Maintenance Superintendent 1923-1927.
- Wrote letter to Governor A. T. Hannett proposing Laguna Cut-off in June 1925.
- Governor of New Mexico 1935-1939.
- Got Federal WPA Funds to build Central Avenue Underpass, Tijeras Underpass, and Coal Avenue Viaduct in 1937.
- Was Governor when Route 66 was officially aligned from Santa Rosa to Laguna and paved across the state.

References:

Zimmerman, R. M. "Clyde Tingley and the Rerouting of Route 66," La Cronica de Nuevo Mexico,
Publication of the Historical Society of New Mexico, Issue No. 115, Fall 2021.
Kammer, David, "Historic and Architectural Resources of Route 66 Through New Mexico;"
National Register of Historic Places, US Department of the Interior, National Park Service, August 1993.

Letter from Clyde Tingley to Governor A. T. Hannett; Commission of Public Records, State Records Center and Archives; June 9, 1925.

Charles Springer

- Chairman of State Highway Commission 1919-1931. Served on commission from 1917-1931.
- Chairman of State Highway Commission that approved Laguna Cut-of December 29, 1926 while the Santa Rosa Cut-off was being completed.
- Authored two pieces of NM Legislation which laid the foundation for the state's entire road system.
- Springer wanted to tax gasoline for road building purposes and to issue short term debentures for road building instead of bonding the state.
- Worked to use over-expenditure of highway maintenance funds in 1926 to pay for Santa Rosa Cut-off construction.
- Got NM Gas Tax raised in 1927 to have more money for highways.
- Chairman of State Highway Commission when U S 470 was decommissioned and U S 366 from Moriarty to Albuquerque, NM was created in 1931. Also, NM 41 was created to go from Willard through Moriarty to Galisteo, NM.
- Chairman of State Highway Commission when the US Bureau of Roads officially accepted the Santa Rosa-Laguna Shortcut as the new alignment for Route 66 in 1931. This allowed federal funds to be spent on the shortened Route 66 across New Mexico.
- As a Republican, he served as State Highway Commission Chairman under Republican and Democratic Administrations.

References:

State Highway Commission Minutes -1925-1932; NM Department of Transportation.
5-Cent Gas Tax Passes, Hannett Administration Left Construction account $200,000 Over-drawn, Springer Says; Santa Fe New Mexican; Feb. 9, 1927.
Obituary: Clovis New Mexico Evening News Journal, Clovis, NM. February 12, 1932.

Richard C. Dillon

- Grew up in Springer, NM.
- Ran a store in Encino, NM.
- Was a New Mexico State Senator from 1924-1927.
- Served two-terms as Governor of New Mexico 1927-1931.
- As new Governor, accepted Santa Rosa Cut-off as shortened route from Santa Rosa to Moriarty on January 3, 1927.
- Approved state construction of Central Avenue Bridge over the Rio Grande in 1930.
- Supported Federal government decision in 1931 to realign Route 66 along the Santa Rosa-Laguna Shortcut.
- Set stage for construction of Rio Puerco Bridge in 1933 using Federal Highway funds.
- Did not follow tradition of firing highway department workers on Santa Rosa Cut-off after change of New Mexico Governor's Administration.

Reference:

Kammer, David, "Historic and Architectural Resources of Route 66 Through New Mexico;"
National Register of Historic Places, US Department of the Interior, National Park Service, August 1993.
Bail, E. B.," New Mexico-U. S 66 Albuquerque's Golden Road," NM Professional Engineer, July-August 1952.

Arizona

Route 66 in Arizona – General Background

Road-building in Arizona leading to the adoption of the alignment for Route 66 began with the appointment of Arizona Territory's first, and only, Territorial Engineer in 1909, James Bell Girand, who developed the plan for the state's first system of highways. When Arizona was admitted to statehood in 1912 the Office of the Territorial Engineer was redesignated as the Office of State Engineer with two-year terms for the designated State Engineers, who continued the development of the state highway system until 1927, when the Arizona Highway Department was created. The Biennial Report of each State Engineer from 1912 to 1926 is included in the Arizona References.

Additional references for Arizona may be found via the following links

- **Good Roads Everywhere A History of Road Building in Arizona - Arizona Department of Transportation**
- **Arizona Transportation History - Arizona Department of Transportation**
- **Beale's Report to the Secretary of War**
- **Beale's Wagon Road - Wikipedia**
- **Report of the State Engineer 1909-1914**
- **Second Biennial Report of the State Engineer 1914-1916**
- **Third Biennial Report of the State Engineer 1916-1918**
- **Fourth Biennial Report of the State Engineer 1918-1920**
- **Fifth Biennial Report of the State Engineer 1920-1922**
- **Sixth Biennial Report of the State Engineer 1922-1924**
- **Seventh Biennial Report of the State Engineer 1924-1926**
- **Cool Springs to Oatman - Road Trip USA**
- **National Scenic Byways & All-American Roads Arizona - Federal Highway Administration**
- **Map of Historic Route 66 Arizona Eastern Section - Federal Highway Administration**
- **Map of Historic Route 66 Arizona Western Section - Federal Highway Administration**
- **Arizona Route 66 Corridor Management Plan - Arizona Department of Transportation**
- **Database of Historic Bridges in Arizona - Jim Ross**

Key Professionals related to Arizona roadway development may be found via the following link

Route 66 in Arizona (route66nhcel.net)

California

Route 66 in California – General Background
In 1907, California legislators created the Division of Highways and in 1910, California voters approved an $18 million bond issue for the construction of a state highway system. The framers of the State Highway Act of 1909 contemplated that the State should construct two main or trunk roads throughout the length of the State, one along the coast and one through the Sacramento and San Joaquin valleys. The act specifically declared that these trunk lines were to be laid out by the "most direct and practicable routes," and that the county seats of such counties east or west of the said trunk lines were to be connected by laterals. On August 7, 1912, the California broke ground on its first highway construction project, the section of El Camino Real between South San Francisco and Burlingame with the intent to complete the main routes between San Diego, San Francisco and Sacramento in time for the Panama-Pacific International Exposition planned for 1915 in San Francisco, and the Panama–California Exposition, also planned for 1915 in San Diego.

Anticipating the need for road improvements across the Mojave Desert to accommodate traffic on the National Old Trails Road bound for the Panama Canal celebrations, the County of San Bernardino held a special election on Oct. 20, 1914, and voters approved surfacing the road 16 feet wide with crushed limestone aggregate and asphaltic binding from the crossing of the Colorado River at Topock, Arizona, to San Bernardino. The Chief Engineer, E. Q. Sullivan, of Division VIII, Division of Highways in San Bernardino, who drove the route in 1923 described it as two ruts in the sand and two rows of chuck holes in areas of hard ground; the trip taking over two days each way. The ravages of weather, wind, and traffic had totally obliterated the paving, except for a ten-mile stretch near Essex.

When it was designated as U.S. Highway 66 in 1926, the Division of Highways further improved the route with bridges across the many washes and upgraded the paving to a high-type asphaltic concrete surface. After it was decommissioned on June 27, 1985, the route from Topock to San Bernardino was taken over by the County of San Bernardino. Currently, the County is rebuilding the bridges between Barstow and Needles, and much of the road is closed to traffic as described in the link below, "National Trails Highway – Route 66."

The Arroyo Seco Parkway from Los Angeles to Pasadena, California's first freeway, was marked as U.S. Highway 66 from the time it was opened to traffic on December 30, 1940, until October 19, 1963, when U.S. Highway 66 from Needles to Santa Monica was decertified by AASHTO. In 1999, the American Society of Civil Engineers designated the Parkway as a National Historic Civil Engineering Landmark, as described in the link below, labeled "Arroyo Seco Parkway."

The Colorado Street Bridge in Pasadena also carried U.S. Highway 66 until 1940, when U.S. 66 was re-routed to the Arroyo Seco Parkway. In 2013, the bridge's Centennial, as well as the Centennial of the Los Angeles Section of ASCE, the bridge was designated as an ASCE State Historic Civil Engineering Landmark, having been designated as a Local Historic Civil Engineering Landmark in 1974.

Only two segments of U.S. 66 remain as a California State highway; a 3.02-mile segment in the City of San Bernardino, and a 3.22-mile segment in the Cities of LaVerne, Pomona, and Claremont.

References for the above General Background may be found via the following links
An Introduction to the Panama-Pacific International Exposition California Historical Society
Panama Pacific International Exposition American Group West
About the Panama-California Exposition American Group

Key Decision Point Coming for the Panama Canal Center for Central & Economic Studies
National Trails Highway – Route 66 San Bernardino County Department of Public Works.
Arroyo Seco Parkway Los Angeles Section ASCE History & Heritage Committee
Colorado Street Bridge Los Angeles Section ASCE History & Heritage Committee
Old Trails Bridge Los Angeles Section ASCE History & Heritage Committee

Additional references for California may be found via the following links

- **U.S. Numbered Highway 66 in Los Angeles - by Jim Powell, Founder, Route 66 Association of Missouri**
- **National Trails Highway – Route 66 - San Bernardino County Department of Public Works**
- **California Route 66 Corridor Management Plan - California Historic Route 66 Association and the California Desert District of the Bureau of Land Management**
- **Arroyo Seco Parkway - California's First Freeway - ASCE Region 9 History & Heritage Committee**
- **Colorado Street Bridge - ASCE Region 9 History & Heritage Committee**
- **Old Trails Bridge - ASCE Region 9 History & Heritage Committee**
- **Cajon Pass - Wikipedia**
- **State Route 66 - cahighways.org**
- **National Trails Highway at 10 Bridges Project-Final EIR/EA - Caltrans/San Bernardino County**
- **Database of Historic Bridges in California - Jim Ross**

Key Professionals related to California roadway development may be found via the following links

- Austen B. Fletcher California's First Chief Highway Engineer, 1911 to 1923
- C.H. Purcell California's Chief Highway Engineer 1928 to 1942
- Spencer V. Cortelyou Division Chief, Division VII, California Division of Highways, 1915 to 1949
- E. Q. Sullivan Division Chief, Division VIII, California Division of Highways, 1923 to 1950