

INTRODUCTION TO NEW MEXICO SECTION OF NHCEL NOMINATION FOR ROUTE 66

The American Society of Civil Engineers (ASCE) has a program to recognize historically significant local, national, and international civil engineering projects, structures, and sites. Recognition is being selected as a National Historic Civil Engineering Landmark (NHCEL). The purpose of the program is to increase public appreciation of civil engineering contributions to the progress and development of society. Historical preservation of historic civil engineering contributions includes documentation of landmarks for inclusion into encyclopedias, guidebooks, and maps.

Traditionally the NHCEL program recognizes projects, but the inclusion of Highway Route 66 expands the scope of recognition and provides an avenue for other major infrastructure projects to be recognized for their contributions to society.

Route 66 is the most popular highway in the US. Bobby Troup, in his hit song, "Route 66" talks of "Getting your kicks on Route 66." John Steinbeck in "The Grapes of Wrath" called it the "Mother Road of Flight" as it depicted the flight of citizens westward from the Midwest as they escaped the horrors of the "Dust Bowl" in the 1930s. Some "Dust Bowl" statistics on the internet are helpful in assessing the significant volume of traffic that passed through New Mexico during the 1930s. The Dust Bowl appeared to be at its worst in 1934 and it has been reported that roughly 440,000 people left the Dust Bowl State of Oklahoma. About 250,000 of them left in the 1935-1940 time frame to go to California. The unpaved and paved Route 66 had to accommodate these migrations, and the travelers weren't interested in traveling any further than necessary as is documented in "The Grapes of Wrath." This introduction will provide some insights into how the New Mexico part of Route 66 has contributed to the benefit of society.

Route 66 in New Mexico was started in August of 1926 as a 506 mile alignment of existing dust or gravel covered roadways going from Glenrio, a small town located astraddle the Texas/New Mexico border, to the Navajo Indian Reservation located on the Arizona state border to the west. This route had crossed the Pecos River 3 times, the Rio Grande, from 1 to 3 times depending on local traffic needs, and a Puerco River (puerco is pork in Spanish but nominally expressed as dirty in New Mexico when describing a river) in two locations. The Rio Puerco in the east flows from Northern New Mexico into the Rio Grande south of Albuquerque. The Puerco River, located west of the Continental Divide, flows west into Arizona and joins the Little Colorado River upstream from the Grand Canyon.

As to travelers experiences, the original Route 66 alignment went through:

- A civil war battle site near Pecos, NM,
- The City of Santa Fe with a historical Spanish plaza,
- La Bajada hill, which has a drop of about 800 ft from the rim to the mesa. It had 23 hairpin turns in the 1920s,
- Albuquerque on a north-south alignment on 4th Street,
- Road stretches where snow-covered mountains exceeding 12,000 ft in elevation were evident,
- Dry arroyos and flat-lava covered mesas
- Viewing Sandia Peak, which had risen 3 miles from bedrock in geological time,
- Pueblos with Spanish Missions that were over 300 years old,

- Beautiful sandstone Red Rocks in the western part of the state,
- Occasions of Spanish Fiestas and Indian Ceremonials, and
- Streets and businesses where the clientele and some employees were speaking Spanish or various Native American dialects.

The first paved alignment of Route 66 came 11 years later, and it was only 399 miles long. Politicians, government agencies, technicians, and civil engineers had made their contributions to the shortening of this historical highway. Key personnel are listed in the New Mexico Section Website that is identified later in this document.

The shorter route bypassed Santa Fe, Bernalillo, Los Lunas, and some Native American Pueblos, much to the disappointment of small businesses in those locations. The new alignment went east-west along Central Avenue through Albuquerque and this rerouting transformed the city from being a linear city with a north-south major axis to a cruciform shaped city with north-south and east-west axes. Central Avenue, which was 20 ft wider than other downtown streets, was the logical street for handling the significant amount of transcontinental traffic that would eventually swamp the downtown area.

The savings in length over these 11 years was accomplished with two cut-offs: the Santa Rosa and the Laguna. The Santa Rosa Cut-off went from a point 7 miles west of Santa Rosa directly west towards Moriarty, which was a distance of 69 miles. Most of this distance was ranch land in 1926 when the new roadway was first cleared and graded. Above Moriarty, the cut-off joined US 470 and went another 45 miles into Albuquerque, terminating at the intersection of Central Avenue and 4th Street. This cut-off saved 90 miles of travel for Route 66 travelers. The Laguna Cut-off went from 4th Street and Central along Central Avenue across the Rio Grande to a point west of Atrisco, where it was aligned up Nine Mile Hill to eventually join the original Route 66 alignment near the village of Correo, some 32 miles westward towards Laguna. By bypassing Los Lunas, the Laguna Cut-off saved 17 more miles for Route 66 travelers.

The shortened alignment of Route 66 would cross the Pecos, Rio Grande, and Rio Puerco waterways only once, but with differing degrees of difficulty. The Pecos had its headwaters in Northern New Mexico and the watershed was not large. It did not provide abnormal challenges to bridge designers. The Rio Puerco also had headwaters in Northern New Mexico. The Rio Puerco had large sand deposits where the Route 66 alignment was planned, and this provided a challenge to bridge designers. In the end a 250 ft long Parker through-truss bridge was designed and constructed. This bridge, which was built in 1933, is a NHCEL, and it is listed in the National Register of Historic Places. Information about this bridge is linked later in this document.

The Rio Grande provided a much greater engineering challenge. The Rio Grande comes from the mountains of Colorado and has a large drainage area. Until 1973, no dams had been constructed between the headwaters and Albuquerque. To make things worse, downtown Albuquerque is located in a flood plain of the river. The downtown area is located between the current channel and a former channel, which was located about 2 miles to the east. In 1874, downtown Albuquerque was under a few feet of water from a major flood event. Hydrologists worked to construct a retaining system to handle the flood waters. In the end, levees and drainage ditches constrained the Rio Grande and a 1350 ft. long bridge, with 54- 25 ft. spans having a 20 ft. wide roadway and 6 ft. sidewalk, was successfully built and used. The bridge, finished in 1930, was composed of a concrete deck, steel girders, and timber piles.

There was one more major engineering hurdle that needed to be addressed to complete the shortcut, the separation of the Atchison, Topeka, & Santa Fe Railway (AT&SF) from the east-west Route 66 traffic in Albuquerque. This was accomplished by the Work Progress Administration (WPA) providing the funds, AT&SF engineers designing the structure, and the New Mexico Highway Department supervising the construction. The bridge was completed in 1937 and was the final structure that was needed to make the Santa Rosa-Laguna Shortcut fully functional. It should be noted that the AT&SF engineers raised the tracks 7 feet to provide underpass dimensions that facilitated east-west Route 66 traffic through downtown Albuquerque.

It is useful to discuss the status of Route 66 during the 11 years that it was going through the transition from the longer route to the shorter one. Initially, the Santa Rosa Cut-off to Albuquerque was passable, but it was not a good road for a number of years. The two parts of the cut-off had different needs. The segment from Santa Rosa to Moriarty, NM 6, went through ranches, and the new road cut through some cattle pastures, which had to be sealed with gates on the road surface. It took a while for the highway department to install cattle guards along this stretch and to add gravel to stabilize the surface. The stretch from Moriarty to Barton, along US 470, was considered a wagon road in 1926. With the US identification for the road, federal monies could be used for construction costs and this was done. Limited records indicate that traffic increased over this shortcut as the years went by and improvements were made.

The Laguna Cut-off, NM 6, really got going in 1930 when the Central Avenue Bridge was completed and travelers could get through downtown Albuquerque and across the bridge. It took until 1931 for the federal government to decide to make the Santa Rosa-Laguna Shortcut a federal highway and bypass the original route through Santa Fe. When this happened the final alignment was decided and Federally sponsored construction monies were devoted to making the shortcut a part of Route 66. With the completion of the Rio Puerco Bridge in 1933, transcontinental travelers could take the full shortcut across the state on an all-weather basis, and this became a popular route even though it wasn't completely paved until 1937.

Migrations of this magnitude contribute to the lore associated with Route 66. After WWII transcontinental travel increased rapidly and the magic of Route 66 grew. Route 66 became known for many of the features mentioned previously and some were lost with the rerouting and others gained. New features were:

- Growth of motels to complement or in many cases replace hotels,
- Addition of curios and kitchens to towns and travel stops with catchy road signs,
- Expansions of food, beer, and wine dispensaries,
- Openings of State and National Parks featuring good scenery and/or exposure to historical treasures,
- Use of Neon on roadway signs,
- Providing good scenery for photographs with greatly improved photographic devices,
- Exposing Hollywood filming locations to travelers, and
- Providing opportunities for purchase of hand-made Indian Jewelry, rugs, and beaded belts.

The website for the **Route 66-The Mother Road** nomination is: <https://www.route66nhcel.us/>. Included in that home-page website is a Nominating Team Section. Scroll down the Nominating Team entry and you will find my name. At the bottom of the entry by my name is a New Mexico Section listing and under that is a link box. Clicking on this box opens links supporting the New Mexico Section portion of the nomination of Historic Route 66 to be a National Historic Civil Engineering Landmark. A click and you will get a map showing Historic Route 66 in New Mexico. Near the top of the page are the following 8 links:

- **Cover**
- **New Mexico Introduction:** This document,
- **New Mexico Table of Contents;** Additional links to:
 - Introduction
 - Interactive Map of Route 66 in New Mexico
 - New Mexico Section Resolution of Approval
 - Publications and Presentations
 - National Register of Historic Places Listings
 - Key Personnel: Listing of ASCE members, technicians, and politicians impacting Route 66
 - Master Table of Contents.
- **Master Introduction,**
- **Master Table of Contents,**
- **State Maps Index:** Additional links to towns are available in the State Maps Index box,
- **Bridge Database:** Additional links to bridges on Historic Alignments Maps are provided by Jim Ross. The route through New Mexico is divided into segments, and each segment contains a data base of Historic Alignments with bridges on them, which are expressed in 7 pages. For instance, Page 7 links to defining bridges on the original Route 66 alignment through Santa Fe. Click on a bridge number to display a description and photo of a bridge. The Rio Puerco Bridge is described in detail on Page 4.
- **New Mexico Route 66 Association:** Additional link to Association Website. Dedicated to the education, promotion, and preservation of the New Mexico Historic Route 66 Scenic Byway and the economic revitalization along its 604 mile stretch throughout the state since 1989.
 - Publisher of the New Mexico Route 66 Magazine,
 - Operators of New Mexico Route 66 Association Museum & Visitor Center in Tucumcari, NM., and
 - Sponsors of many road trips across the state.