

DRAFT CENTRAL AVENUE BRIDGE NOMINATION

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A highway bridge was constructed in 1930 on Central Avenue in Albuquerque, NM that spanned the Rio Grande River. As will be seen, the role of levees in flood control of the Rio Grande is an important part of the design and construction of the bridge. The Central Avenue Bridge eventually became a key part of Route 66 history. The presence of the bridge became its most important feature. This nomination will provide the history that explains why this bridge was so important to Route 66 development and eventual history.

The Santa Rosa-Laguna Shortcut is that section of US 66 that was shortened by 107 miles due to the independent construction of the Santa Rosa and the Laguna Cut-offs.² The two cut-offs were constructed after August of 1926, when Route 66 was officially designated and aligned through New Mexico and, up to October of 1937, when Route 66 was officially rerouted along the new shortcut. The initial alignment of Route 66, coming from east to west, was to go through Tucumcari to Santa Rosa, then north to Romeroville, which was near Las Vegas, then to Santa Fe, then south to Bernalillo, Albuquerque, Los Lunas, then west towards Laguna, then to Grants, Gallup, and finally the state line. The original route had a distance of 506 miles through the state. The final alignment would go from Santa Rosa directly through Albuquerque and follow a new cut-off towards Laguna, where it would conform to the original route west towards Grants.

This document provides background information regarding the role of the Central Avenue Bridge in the completion of the Laguna Cut-off. The completion of this bridge by the State of New Mexico was the final hurdle that led the U. S. Bureau of Public Roads to recognize the Santa Rosa-Laguna Shortcut as the future alignment for Route 66. This event made the shortening of Route 66 by 107 miles a reality in 1937. It is hoped that this document provides sufficient stimulus to those reviewing potential nominations for a listing in the National Register of Historic Places, so that a formal nomination can be made.

Seven milestones have been defined to describe the creation and implementation of the Santa Rosa-Laguna Shortcut. These are defined in detail in the nomination document for that shortcut. Table 1 lists these milestones. This document discusses activities related to Milestones 3 and 4

Table 1 Milestones associated with implementation of Santa Rosa-Laguna Shortcut into U S 66 alignment

No.	Date	Activity
1	June 9, 1925	NM Legislature approval of Santa Rosa Cut-off as NM 6 and Clyde Tingley's proposal for the Laguna Cut-off
2	Jan. 3, 1927	Recognition of the initiation of US 66 as a Federal Highway, Governor R. C. Dillon's acceptance of Governor A. T. Hannett's accelerated construction of Santa Rosa Cut-off, and NM State Highway Commission approval of Laguna Cut-off for addition to NM 6

3	June, 1930	Completion of N M construction of Central Avenue Bridge over the Rio Grande as part of Laguna Cut-off
4	October 1931	Completion of final alignment of Laguna Cut-off beyond Central Avenue Bridge and acceptance of NM 6 as a certified public road mileage that could receive Federal Funds
5	1933	Completion of Rio Puerco Bridge as part of Laguna Cut-off
6	July 11, 1937	Completion of Central Avenue Underpass as final structure in Santa Rosa Cut-off
7	Oct. 14, 1937	Acceptance by the U. S. Bureau of Public Roads of the paved roadways, bridges and underpass of NM 6 as the official reroute of U S 66

Some of the details associated in going from Milestone 2 to Milestone 4 are useful in submitting this nomination. After 1926, NM 6 became a shorter route of cross-state travel. As the Santa Rosa Cut-off was improved, travelers used the route in increasing numbers, but there was no shortcut west of Albuquerque. Some delay occurred in getting the Santa Rosa and Laguna Cut-offs together along Central Avenue in Albuquerque. A key consideration was how to cross the Rio Grande because an existing bridge, the Barelmas Bridge, existed about a mile south of Central Avenue. The Barelmas Bridge was convenient to the original north-south alignment of Route 66, but not to NM 6, and it was old and needed replacing. Retail stores catered to tourists coming through Albuquerque and there was fear that a new alignment of Route 66 would have serious impacts on those older businesses.^{1a} The shortest route for NM 6 was to: use Central Avenue, to construct a new bridge near Old Town, and to build a short road up the hill on the west side to eventually intersect a convenient alignment over Nine-Mile Hill that went into the Rio Puerco valley. Out-of-state highway planners wanted the shortest and most efficient way through the city, and they continually provided this advice to the State Highway Commission.

A consideration in the locating of NM 6 in Albuquerque was that it was expected that the route would go along the wider Central Avenue. Central Avenue had a right-of-way of 80 ft. while other downtown streets only had a 60 ft. width.³ This feature alone made it possible to widen Route 66 as needed. A desirable outcome was that Route 66 traffic would go near Old Town and Central Avenue did this. Unfortunately, Central Avenue, as a through street, terminated at the Rio Grande. A ford had been there. Earlier bridges had been built and had washed out.⁴ A bridge was not present at that location in 1930.

Between 1927 and 1929, officials from the city and the State Highway Commission worked to arrive at a plan for Route 66 traffic through the city. One of the attractions for constructing a bridge on Central over the Rio Grande was to make a road to the new Albuquerque Airport headed by Western Air Express. In December of 1929, Governor Dillon conferred with officials of Western Air Express and supported the alignment and improvement of the Laguna cut-off from the new bridge as far as the airport.^{1b} This decision essentially locked in the shorter route along Central Avenue for the Laguna cut-off.

The State Highway Commission approved and funded a new bridge across the Rio Grande in December of 1929.⁵ Armstrong and Armstrong of El Paso won the bid.^{1c} Construction of the Central Avenue Bridge was underway in March of 1930.^{1d} One of the provisions of the contract was that all labor used in construction of the bridge shall be local New Mexico labor. It is interesting that the bid was for the Central Avenue Bridge, but the State Highway Department called it Bridge 1557, Old Town Bridge, on the construction drawings.⁶ At the time of construction, the road over the bridge connected with existing highways running north and south on the west side of the river.

Figure 1 shows a photo of the 1930 bridge. The new bridge construction was advancing in May of 1930.^{1e} At that time, the pile driver has completed its span across the river and the piles had been laid. The timber piles, sixty feet in length, were driven about 45 ft. into the riverbed and capped with huge timbers in a manner common for such river crossings. Then, heavy steel was laid horizontally along the length of the bridge. A steel and wooden framework was erected on which the concrete flooring could be placed. There were 54 spans of this bridge with a 25 ft distance between them for a total bridge span of 1350 ft.⁶ This long length of the bridge will be explained later.



Figure 1 Central Avenue Bridge in 1947 (Compliments of Albuquerque Museum)

Figure 2 shows a photo of the finished bridge roadway. The bridge had a 20ft. wide roadway and a 6 ft. wide sidewalk.⁶



Figure 2 Central Avenue Bridge circa 1930 (Compliments of Albuquerque Museum)

Milestone 3 was the completion of the Central Avenue Bridge over the Rio Grande in the summer of 1930. The state and City of Albuquerque had agreed on the construction of the Central Avenue Bridge, which was about 2 miles north of the Barelás Bridge. The bridge was built with state funds and made the intersection of 4th Street and Central Avenue the starting point of the Laguna Cut-off. Two facts were known in the middle of 1930. First, Federal funds were not involved in road building and bridge construction for NM 6. Second, the route survey for the start of the Laguna Cut-off started at the Barelás Bridge and continued westward towards Laguna because this was the only Albuquerque located bridge in existence in 1927.^{1f}

A new alignment for the Laguna Cut-off was needed from the Central Avenue Bridge to U.S. 66. The route favored by Route 66 officials, who were wanting a travel friendly route for out-of-state travelers, was to construct a route from the new bridge to a point some four miles away that was on the original cut-off survey in 1927. The route could support travel to the West-Side Airport and be a boon to airplane travelers. The problem was that the route would bypass existing retail outlets, such as in Atrisco, and local retailers could feel neglected and deprived of possible tourist revenues. Some jealousy resulted when Old Town retailers would get tourists while Atrisco retailers would not.^{1g} In the end, the state chose the shorter route from the Central Avenue Bridge to a point about 5 miles west of the Barelás Bridge, which was on the Laguna Cut-off survey line established in 1927. This intersection point is the current intersection between Bridge Boulevard and Central Avenue on the west side. The new NM 6 would take this shortcut and then continue in the alignment originally defined to the west.

In March of 1931, the Albuquerque Chamber of Commerce was pushing to secure the Santa Rosa-Laguna shortcut and promoted the acceptance of NM 6 as a Federal Aid Project.^{1h} In July of that year, the State Highway Commission officially requested that the U. S. Bureau of Public Roads designate the Santa Rosa and Laguna cut-offs as certified public road mileage.¹ⁱ Because the Central Avenue Bridge was completed and the right-of-way and alignment of the Laguna Cut-off to the NM 6 route was completed,

the U. S. Bureau of Public Roads was convinced the Santa Rosa-Laguna Shortcut was achievable. The Bureau formally committed funds for future NM 6 grading, paving and other development efforts on October 31, 1931.^{1j} This action is taken as achieving Milestone 4. This decision was the key statement leading to the re-routing of Route 66 in the state.

One of the first things that was funded with a FAP was the Rio Puerco Bridge on the Laguna cut-off, Milestone 5.⁸ The Rio Puerco had always been difficult to cross and extra measures had to be taken to establish a reliable highway crossing. This was accomplished by erecting a Parker through-truss bridge that had a 250 ft. clear span. This bridge was listed in the National Register of Historic Places in 1999.⁸

Figures 1 and 2 show that the Central Avenue Bridge was quite long. The designers of the bridge had to take serious flood control measures into account because there was a major effort by the Middle Rio Grande Conservancy District (MRGCD) to use levees to control the channel through Albuquerque.⁷ The Rio Grande begins high in the San Juan Mountains of Colorado. Due to snowmelt, the river flows much higher every spring. In 1930, there were no dams on the river, and the spring runoff would barrel south through New Mexico, resulting in major floods. In 1874, just before the railroad came, the flooding was so severe that the entire region, where downtown Albuquerque now stands, was under water. Old Town Albuquerque was an island in the Rio Grande flood plain.⁴ This condition required that major attention should be applied to bridge design that would carry a major transcontinental highway through a challenging flood zone.

A feature of the Rio Grande in Albuquerque is that downtown exists on a floodplain that once was the river channel. A deviation of the Rio Grande occurred some 1000 to 2000 years ago.⁹ Originally, the river went down the east side of the valley in the general vicinity of where the railroad tracks exist in downtown Albuquerque. The railroad was located to the east of the channel on higher ground. Seasonal flooding caused the river to divert to the west above the community of Alameda, about 8 miles north of downtown Albuquerque. The new channel flowed west about a mile and then was turned south by the bluffs. This detour went for about 10 miles; then the river came back to the original channel near Baretas, about 2 miles south of downtown. The major change in the floodplain for the Rio Grande impacted over 17 square miles.

After the railroad came in 1880, citizens realized the danger of flooding and contributed monies to a county fund to construct a dike near Alameda to reinforce the westward turn in the river.⁴ The dike successfully withheld a major flood in 1884. Citizens continued to be concerned about Rio Grande flooding and helped start the MRGCD in 1925. It is responsible for the stretch of river from the Cochiti Dam in Sandoval County in the north to the Elephant Butte Reservoir in the south.

The MRGCD created a plan in 1927 to address flood protection and channel improvement in Albuquerque.⁷ This initial part of the plan was to construct levees spaced from 1,500 to 2,000 ft apart, which would outline the Rio Grande. Within this span, there would be an inner flow channel that was 600 to 750 ft in width. The function of the wide channel would be to pass the high floods, which may occur in intervals of 15 to 20 years and prevent overflow to adjacent lands. The inner low flow channel would carry the annual floods and would be expected to help with silt buildup.⁹

Higher levees were placed in Albuquerque as additional protection from floods. Drainage ditches would be located next to the levees. The material removed from those ditches would provide fill for the levees that may be 8 to 10 feet above the low water elevation of the river. The levee and ditch would have a

minimum berm of 20 ft to keep the functions separate. Mechanisms would be instituted to protect the levees from scour. The drainage ditches would also help reduce the elevation of the high ground-water table. Levees and drainage ditches can easily be seen at any of bridges crossing the Rio Grande. Figure 3 shows photo of a levee and drainage ditch located just north and east of the present Central Avenue Bridge abutment. The levee and drainage ditch go back to the 1930s era. By 1935, the MRGCD had built almost 200 miles of levees along the river banks and a system of jetties and checks to protect against floods.



Figure 3 Levee and Drainage Ditch at the Northeast End of the Central Avenue Bridge.

MRGCD construction drawings indicate that the new Central Avenue Bridge in 1930 was 1326 ft. long, and the distance between drainage ditches, located on both sides of the river was 1674 ft. The State Highway Department shows that the 1930 bridge was 1350 ft long and that it was composed of fifty-four 25 ft spans. The Central Avenue Bridge was the first bridge in Albuquerque that was designed by the State Highway Department in concert with the MRGCD.

The Central Avenue Bridge function has changed with time, and different bridge structures have been built to accommodate the changing needs. Bridge 1557 was designed to accommodate additional through-traffic in Albuquerque that would be generated by Route 66 traffic. Some early traffic counts at the east and west state lines indicate that the interstate traffic increased at those locations by over a factor of 3 in the 1937-1941 time period.² Even with the depression, people were traveling. Traffic exploded after WWII. The State Highway Department realized it had a traffic count problem in Albuquerque, and a separate parallel bridge was constructed in 1952. This was Bridge 5226.⁶ Bridge 5226 had eighteen 75 ft long spans composed of structural steel beams and a concrete deck. The piers and abutments were concrete supported by timber piles. Bridge 1557 carried westbound traffic and Bridge 5226 carried eastbound.

This dual bridge arrangement doubled the traffic capacity of the Central Avenue Bridge and lasted for 31 years. The bridge was not subject to significant amounts of transcontinental traffic after about 1970, when Interstate 40 was completed through Albuquerque, but local traffic needs increased significantly. After WWII, Albuquerque made significant population expansions to the north and west. This particularly increased in the 1970's and 1980's. A major shopping center for the west side of Albuquerque opened in 1996 indicating this growth. As it was, in 1970, Albuquerque had four main bridges across the Rio Grande: Baretas (Bridge boulevard), Central Avenue, Interstate 40, and Alameda. The Central Avenue Bridge took a lot of traffic and needed to be expanded.

In 1983, the State replaced both of the existing bridges with a new bridge structure that was composed of two separate bridge deck units. Figure 4 shows a photo of the two separate bridge deck units of this bridge. Both of the bridge decks rest on concrete piers. The current Central Avenue Bridge spans 1200 ft with 16 segments that are 75 ft. long. The overall bridge is shorter than the 1952 dual-structure bridge as the Rio Grande finally got a flood control dam above Albuquerque, Cochiti Dam. Each deck unit has three 12 ft. wide traffic lanes, an 8 ft. wide emergency stopping lane, and a 5 ft wide sidewalk.



Figure 4 View of Intersecting Joint between Bridge Deck Segments

Figure 5 is a photo of the of the river part of the current Central Avenue Bridge. Three of sixteen spans are devoted to main channel flow and the other spans are held in reserve for heavy flooding. The bridge exists between levees and drainage ditches as originally configured in 1930. The photo shows the integration of the Central Avenue Bridge into the MRGCD flood control system.



Figure 5 Photo of Rio Grande Bridge (Norman Falk Photo)

The nomination of the Central Avenue Bridge for the National Register of Historic Places is highlighted by the following:

1. The Central Avenue Bridge over the flood-prone Rio Grande was essential for transcontinental highway traffic to travel through New Mexico.
2. Every vehicle that went through Albuquerque on Route 66 from 1937 to 1983 traveled over two versions of the Central Avenue Bridge.
3. The new bridge has continued to provide for Central Avenue traffic over the Rio Grande for another 37 years after the decommissioning of Route 66.
4. The construction of the Central Avenue Bridge in 1930 was the final state funded structure that motivated the federal officials to reroute Route 66 and save 107 miles of travel.
5. Out-of-state Route 66 officials supported the construction of the Central Avenue Bridge.
6. Engineers with the MRGCD built levees and the State Highway Department successfully built bridges to accommodate an extremely severe flood threat.
7. Visual evidence of levees next to the long bridges on Central Avenue have existed for over 90 years.
8. The construction and implementation of the bridge in 1930 was the final event that helped federal officials accept the Santa Rosa-Laguna shortcut in New Mexico.
9. The construction of the Central Avenue Bridge was a necessary element in the largest rerouting project of Route 66.
10. The construction of the Central Avenue Bridge serves as an excellent example of how engineers can plan, design, and construct structures in a challenging setting that meets society's transportation needs.

References

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