

# Chain of Rocks Bridge

STLO18

## GENERAL DATA

structure no.: none                      city/town: St. Louis  
county: St. Louis MO                      feature inter: Mississippi River  
          Madison IL                      cadastral grid:  
   highway route: abandoned U.S. Highway 66  
   highway distr.: 6  
   current owner: City of Madison, Illinois

## STRUCTURAL DATA

superstructure: steel, 20- and 12-panel, rigid-connected cantilevered through truss, with rigid-connected Warren through truss approach spans  
substructure: concrete abutments, wingwalls and piers

span number: 2; 8                      condition: fair  
span length: 700.0';350.0' alterations: closed to traffic, 1970  
total length: 5350.0'                      floor/decking : concrete deck over steel stringers  
roadway width: 40.0'                      other features: upper chord and inclined end post: 2 built-up channels with cover plate and double lacing; lower chord: 2 built-up channels with lacing; vertical: 2 channels with lacing, built-up I-beam; diagonal: 2 channels with lacing; lateral bracing: 4 angles with lacing; strut: 4 angles with bracing; floor beam: I-beam; guardrail: steel angles

## HISTORICAL DATA

erection date: 1927-29  
erection cost: \$2.5 million  
designer: Baxter L. Brown, Consulting Engineer, St. Louis MO  
fabricator : American Bridge Company, New York NY  
contractor: Union Bridge and Construction Company, New York NY

references: "Seven New Mississippi River Highway Bridges," *Engineering News-Record*, 31 July 1930, pages 181-84; Susan Croce Kelly and Quinta Scott, *Route 66* (Norman, Oklahoma: University of Oklahoma Press, 1988), page 76; Mary Charlotte Aubry Costello, *Mississippi River Bridge by Bridge* (By the Author, 1995), pages 66-67; Michael Wallis, *Route 66: The Mother Road* (New York: St. Martins Press, 1990), page 53; *St. Louis Globe-Democrat*, 5 November 1927, 2 December 1927, 2 March 1928, 17 August 1928, 25 June 1929, 21 July 1929, 18 March 1932, 17 May 1941, 25 August 1957; Peter Hemon, "Bridge's History a Troubled One," *St. Louis Post-Dispatch*, 15 April 1991; David G. Wrone, "Old Bridge a Secluded Teenage Hangout," *Bellefontaine-Jennings Journal*, 14 April 1991; field inspection by Clayton Fraser, 10 June 1994.

sign. rating: 77  
evaluation: NRHP eligible (outstanding large-scale truss on nationally significant highway crossing)

inventoried by: Clayton B. Fraser    2 August 1994

# HAER INVENTORY

Missouri Historic Bridge Inventory

**NAME(S) OF STRUCTURE**

Chain of Rocks Bridge  
MHTD: none

STLO18

**DATE(S) OF CONSTRUCTION**

1927-29

**LOCATION**

abandoned U.S. Highway 66 over Mississippi River;  
St. Louis; St. Louis MO / Madison IL County, Missouri

**USE (ORIGINAL / CURRENT)**

highway bridge / abandoned

**RATING** NRHP eligible (score: 77)

**CONDITION**

fair

**OWNER**

City of Madison, Illinois

span number: 2; 8  
span length: 700.0'; 350.0'  
total length: 5350.0'  
roadway wdt.: 40.0'

superstructure: steel, 20- and 12-panel, rigid-connected cantilevered through truss, with rigid-connected Warren through truss approach spans  
substructure: concrete abutments, wingwalls and piers  
floor/decking: concrete deck over steel stringers  
other features: upper chord and inclined end post: 2 built-up channels with cover plate and double lacing; lower chord: 2 built-up channels with lacing; vertical: 2 channels with lacing, built-up I-beam; diagonal: 2 channels with lacing; lateral bracing: 4 angles with lacing; strut: 4 angles with bracing; floor beam: I-beam; guardrail: steel angles

Route 66 between Chicago and Los Angeles was formally designated a United States Highway in November 1926 by the Secretary of Agriculture, as part of the country's newly designated interstate highway system. The largest city between the highway's two termini, St. Louis also presented the widest river crossing along its length—over the Mississippi River. As originally routed, the highway crossed into St. Louis over the McKinley Bridge [STLC16]; around 1934 it was later switched over the MacArthur Bridge [STLC15]. Both of these spans funneled traffic into St. Louis's warehouse district, however, further congesting the already-congested city streets downtown. In the late 1930s the route was again shifted, this time over the Chain of Rocks Bridge, which, at 40 feet, had a deck ten feet wider than MacArthur. Chain of Rocks brought travelers into the city from the north, past the popular Chain of Rocks amusement park, called "one of the prettiest places in the city." This latter span carried Route 66 traffic until its closure in 1970.

The Chain of Rocks Bridge had been built in the late 1920s to provide highway access between Madison, Illinois, and north St. Louis. Reportedly the sixth vehicular bridge over the Mississippi River in the area, it was sponsored by private money and paid for by tolls. In 1927 the Chain-of-Rocks and Kingshighway Bridge Company, a consortium of local capitalists led by Tom and John Scott, received a Congressional charter to build a highway bridge over the Mississippi River near the city's Chain of Rocks water pumping station. Designed by St. Louis consulting engineer Baxter L. Brown, the structure would cost \$1.25 million. As delineated by Brown, the Chain of Rocks Bridge consisted of five continuous, rigid-connected trusses that formed ten spans, the longest of which extended 700 feet. These were supported on massive concrete piers some 55 feet above the high water mark and were approached on both sides by a series of simply supported trusses and, on the north side, a four-mile-long fill. The bridge was to be located immediately upstream from the intake tower for the water works. Originally planned with a straight roadway over its one-mile length, its configuration was changed under orders of the War Department after riverboatmen complained of the difficulty in steering around both the bridge and the tower. The

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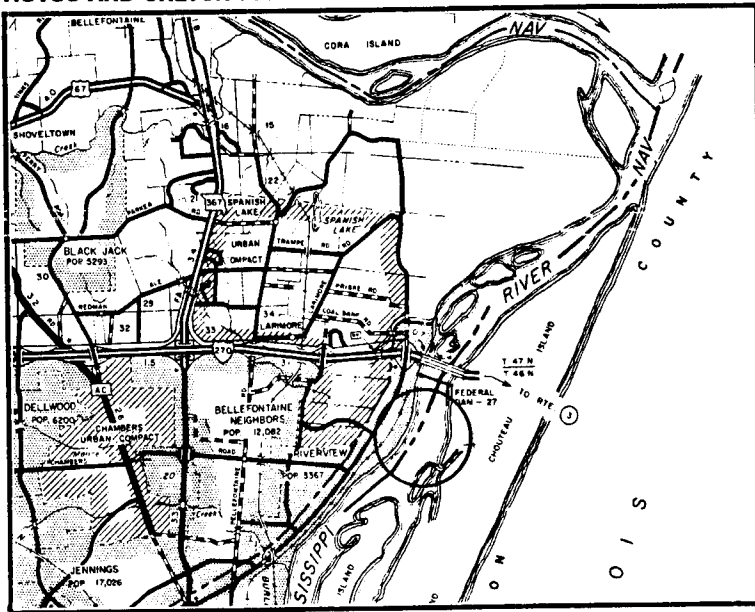
re-designed bridge incorporated a 30° bend in its roadway near mid-span. Despite the assurance that the turn would be "protected by special signs and signals, so that traffic will not be appreciably slowed down," the bent bridge formed a bottleneck that became legendary. The contract to build the concrete substructure and erect the steel superstructure was awarded to the Union Bridge and Construction Company of New York; the American Bridge Company was hired to fabricate the trusses. Actual construction began in 1927; by March 1928 the steelworkers were ready to begin erection of the superstructure on the partially complete substructure. When the piers were completed in August 1928, the engineers predicted a January 1st opening. Subsequent high waters on the Mississippi delayed this for another half-year, however. Eventually costing about \$2.5 million to construct, the Chain of Rocks Bridge was opened ceremoniously to traffic on July 20, 1929. Three years later the City of Madison issued \$2.3 million in bonds and purchased the structure from the bridge company. The city continued collecting tolls until August 1957, at which time the bridge was opened for free passage. In 1970 it was closed to traffic altogether. Since that time, the bridge has been a target of graffiti by gangs, the prop for the movie "Escape from New York," and in 1991 the scene of a grisly double murder. Its future is presently clouded.

As the "Main Street of America" that extended from Chicago to Los Angeles, Route 66 has proved vital in the development of American commerce and culture. "For forty-nine years that highway was a factor in millions of trips, vacations, and relocations," wrote historian Susan Croce. "It provided a living to countless men and women, ran down main streets of the hometowns of millions more, and figured in a billion personal experiences. It brought wealth and recognition to people like Bobby Troup and John Steinbeck. It brought destruction and death to others who did not respect its twists and turns and peculiarities." Forming the highway's crossing over America's largest river, the Mississippi, the Chain of Rocks Bridge has played a pivotal role in the highway's history. The bridge is technologically important as an outstanding example of large-scale highway bridge construction in the 1920s. With its graceful, long-span trusses cantilevered over tapered concrete piers and the awkward bend in the roadway, the structure is both noteworthy and distinctive. It is today a well-preserved, nationally important remnant of early highway design and construction—one of Missouri's most important bridges.

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**NAME(S) OF STRUCTURE**

Chain of Rocks Bridge

**PHOTOS AND SKETCH MAP OF LOCATION****LOCATION MAP**TAKEN FROM MISSOURI HIGHWAY AND TRANSPORTATION DEPARTMENT  
GENERAL HIGHWAY MAP

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**SOURCES**

"Seven New Mississippi River Highway Bridges," *Engineering News-Record*, 31 July 1930, pages 181-84; Susan Croce Kelly and Quinta Scott, *Route 66* (Norman, Oklahoma: University of Oklahoma Press, 1988), page 76; Mary Charlotte Aubry Costello, *Mississippi River Bridge by Bridge* (By the Author, 1995), pages 66-67; Michael Wallis, *Route 66: The Mother Road* (New York: St. Martins Press, 1990), page 53; *St. Louis Globe-Democrat*, 5 November 1927, 2 December 1927, 2 March 1928, 17 August 1928, 25 June 1929, 21 July 1929, 18 March 1932, 17 May 1941, 25 August 1957; Peter Hernon, "Bridge's History a Troubled One," *St. Louis Post-Dispatch*, 15 April 1991; David G. Wrone, "Old Bridge a Secluded Teenage Hangout," *Bellefontaine-Jennings Journal*, 14 April 1991; field inspection by Clayton Fraser, 10 June 1994.

**INVENTORIED BY**

Clayton B. Fraser

**AFFILIATION**

Fraserdesign, Loveland CO

**DATE**4 August 1994

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