

USH 67 (Beardstown) Bridge
Over Illinois River
(S.N. 009-0001/Sequence No. 24G)
City of Beardstown
Cass County
Illinois

HIER No. CS-2025-1

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic Illinois Engineering Record
State Historic Preservation Office
Springfield, Illinois

Prepared by the Illinois State Archaeological Survey
on behalf of the Illinois Department of Transportation

April 2025

HISTORIC ILLINOIS ENGINEERING RECORD
HIER No. CS-2025-1

U.S. Highway 67/IL 100 Bridge
(FIVE-SPAN CANTILEVERED THROUGH TRUSS BRIDGE WITH TWELVE POST-
AND-BEAM APPROACH SPANS)

Location: USH 67 over the Illinois River
City of Beardstown, Cass County, Illinois

USGS Quadrangle: Beardstown, 7.5 minute, Illinois
Latitude 40° 01' 02" N Longitude 90° 26' 54" W

Universal Transverse Mercator Coordinates:
Zone 15 717763 Easting 4432590 Northing

Present Owner: Illinois Department of Transportation

Present Use: Vehicular Bridge (IDOT Structure No. 009-0001)

Significance: The U.S. Highway 67 bridge across the Illinois River is a seventeen-span structure. It is oriented on a northwest/southeast axis and comprised of eight approach spans to the northwest and four such spans to the southeast, in between which is a five-span, cantilevered, Warren Through Truss section with a two-span segment to the northwest and a three-span segment to the southeast. Prior to the 1955 opening of this bridge, traffic crossed the Illinois River on a five-span bridge with three Pennsylvania trusses as well as one swing truss and one Pratt truss. Unfortunately, given its lack of clearance over the water, the old 1899 bridge was often flooded, a circumstance that caused structural damage and the resulting need for costly repairs which subsequently shutdown traffic across the river until those repairs were made. The traffic deck of the new, 1955 bridge was about forty-seven above the river's high water level, a significant improvement to the regional transportation system since it was not subject to whims of the flowing water below. In addition to that historical importance, the bridge is also a fine example of a late-period cantilever bridge-type in Illinois. Despite the fact that its original, open-grid traffic deck and concrete sidewalk were replaced by a new concrete deck during the bridge's 1984/5 rehabilitation, the integrity of the structure's original concrete piers, as well as that of its steel superstructure, appears unimpaired. Consequently was the U.S. Highway 67 bridge found, in consultation with the State Historic Preservation Office, to be eligible for the National Register of Historic Places for its local/regional significance.

PART 1. HISTORICAL INFORMATION

A. Physical History:

1. Date of Erection: 1952-1955
2. Designer: State of Illinois, Department of Public Works & Buildings, Division of Highways
3. Original and subsequent owners: Illinois Department of Transportation
4. Builder or contractor: Great Lakes Dredge & Dock (substructure), Allied Construction (steel, superstructure), Sangamo Construction (traffic deck)
5. Alterations and additions: The most imposing alteration to the bridge occurred in its 1984/5 rehabilitation when the original, open-grate steel deck and its adjoining concrete sidewalks were removed and replaced with a concrete deck.

B. Historical Context:¹

Bridge Development in Illinois

The earliest permanent bridges in Illinois include a few stone arches built in the 1830s when the National Road was extended west from Maryland. At least one other arch bridge was built on the Chicago-Galena Road in the same period. Accounts of early travelers suggest that rudimentary ferries sometimes facilitated passage over larger streams in the region. Timber structures crossing small watercourses also accommodated travel. Little is known of the pile trestles or half-submerged floating platforms used. All were subject to risks and washouts.²

As pioneers moving west established settlements, technicians were attracted to the frontier to erect bridges, many of them covered. Between 1820 and 1900, an estimated two to three hundred covered bridges were built in Illinois, only a handful of which are

¹ The “Bridge Development in Illinois” and “Steel Bridge” context sections were initially prepared in circa 1990 by John R. Nolan of the Illinois Department of Transportation (IDOT). Most of that material has subsequently been reviewed against the sources cited and then edited, expanded, modified or rewritten as appropriate.

² Keith A. Sculle and John A. Jakle, “From Terre Haute to Vandalia, Illinois,” in *A Guide to the National Road*, ed. Karl Raitz (Baltimore, MD: The Johns Hopkins University Press, 1996): 277; Milo M. Quaife, *Chicago’s Highways Old and New* (Chicago: D.F. Keller & Co., 1923): 187.

thought to remain today.³

Railroads helped drive the need to improve upon early timber structures. They required by the late 1850s stronger bridges that encouraged the development of iron fabrications. Those were followed by others made of steel and which came to use wide flange beams as structural components. The use of steel contributed to the expansion of railroads, settlement and industrialization in a growing America.⁴

Steel Bridges:

Cast iron was first used for bridge construction in England in 1776. The resulting structure spanned the River Severn and was 102 feet long. The material was then used for other bridges on the island, as well as at least one in Germany, into the early years of the nineteenth century. Bridges of cast iron established a viable alternative to those of wood and stone. But it was the subsequent development of wrought iron, considered superior to that which was cast, that initiated bridge building in the modern era. Wrought iron's period of dominance was limited by the development of steel and the 1862 Bessemer process which removed impurities from the steel, thus improving its strength. Early United States bridges built of steel included the Eads Bridge in St. Louis (completed in 1874) and the Chicago & Alton Railroad Bridge across the Missouri River at Glasgow, Missouri (completed in 1879). Steel emerged as the dominant bridge building material in the last decades of the nineteenth century.⁵

Stone, brick and concrete arch bridges had to be constructed on site. It was impossible to build such a structure in a factory, disassemble it, transport it to its intended destination and then reassemble it. Yet that, in varying degrees, is what happened with iron and steel bridges. Approaches and abutments, stone or concrete, were still built on site, often by local labor. The bridges themselves were not. Constructing the components for bridges, and then assembling those components, became a big business in the last quarter of the nineteenth century. Companies large and small were established to meet the growing demand for bridges across the country, the larger of which developed operations with a

³ Russell M. Garrard, "Early Bridges in Central Illinois," in *Heritage of Mid-Illinois Engineering* (Springfield, IL: Capital City Chapter of the Illinois Society of Professional Engineers, c.a., 1976): 15.

⁴ Walter V. Voss, "How New Materials Increased Man's Building Ability," in *Transactions of the American Society of Civil Engineers: Centennial Transactions* (New York: American Society of Civil Engineers, 1953): 829-830.

⁵ "The Developments of the Nineteenth Century in Bridge Design and Construction," *Engineering News*, Vol. XLIV, No. 24 (13 December 1900): 409-410; Daniel L. Schodek, *Landmarks in American Civil Engineering* (Cambridge, MA: MIT Press, 1987): 118-124; "Chicago and Alton Railway Bridge, Howard County, Missouri," Written Historical and Descriptive Data, Historic American Buildings Survey, National Park Service, U.S. Department of the Interior, no date, page 2, From Prints and Photographs Division, Library of Congress (HABS No. MO-1465).

variety of function-related shops that included designing, fabricating necessary parts, machining those parts, riveting them and so on. Bridges were at least partially assembled in the factory to make sure all parts fit properly, after which they were disassembled and sent to the site for final assembly by a crew of experienced builders, be they employees of the originating company or those of companies that simply specialized in putting together the bridges of others.⁶

The State of Illinois claimed almost sixty bridge building companies that operated between 1849 and 1900, the vast majority of them being located in Chicago. Many were short-lived and either went out of business or were acquired by one of those larger. A moment in which the American bridge-building industry experienced a seismic shift occurred in 1900 when industrialist and financier J.P. Morgan created a new corporation. He acquired and combined twenty-four individual companies, including both the American Bridge Works and the Lassig Bridge and Iron Works in Chicago, and established the American Bridge Company, a behemoth that soon dominated bridge design and construction in the United States.⁷

Notwithstanding the creation of Morgan's new company and the evolving maturation of the bridge building industry, early roadway structures of steel were often deficient. There had been a growing and significant effort to improve railroad bridges in the country in the post-Civil War years of the nineteenth century, but that effort had yet to reach those modest structures on the nation's growing network of roadways. One problem was that local road commissioners often lacked the expertise to make appropriate bridge-related decisions. As well, when requests for bridge proposals were issued, they often lacked the specifics necessary to adequately describe the structure needed and the amount of traffic it might have to carry. Bridge companies were competitive. With few specifications offered, they often proposed structures that might be only nominally capable of accommodating needs at a given location. Yet those shortcomings were easy to overlook since the bridges erected were of *steel*, a term that implied – though often erroneously – strength and longevity.⁸

The State of Illinois began to address the uncertainties experienced by local governments as they sought bridges sufficient to safely meet growing needs. A good example

⁶ Jeffrey A. Hess and Robert M. Frame, *Historic Highway Bridges in Wisconsin, Volume 2, Part I: Truss Bridges* (Madison, WI: Wisconsin Department of Transportation, 1998): 65-85.

⁷ Victor C. Darnell, *Directory of American Bridge-Building Companies, 1840-1900*, Occasional Publication No. 4 (Washington, D.C.: Society for Industrial Archaeology, 1984): 7-13.

⁸ Henry S. Jacoby, "Recent Progress in American Bridge Construction," *Engineering News*, Vol. XLVIII, No. 3 (17 July 1902): 44; *First Annual Report of the Illinois Highway Commission for the Year 1906* (Springfield, IL: State Printer 1907): 55, 56.

of the state's efforts is found in its publication *Modern Bridges for Illinois Highways*, published initially in 1910 with an expanded second edition issued in 1912. The publication explained that “whenever the township commissioners...have under consideration the construction of a particular bridge, and desires the assistance of the Highway Commission in preparing the plans, such assistance is furnished without expense to either county, township or municipality.” Indeed, the state was committed to a highway system with bridges both well designed and constructed, be they concrete or steel (truss).⁹

Cantilevered Bridges:

A cantilever is essentially a beam that is supported at and projects from only one of its ends – much like a diving board. An example of a bridge embodying a cantilever dates to the fourth century and was constructed in Japan. Such structures were used in the centuries thereafter in India, Tibet, Norway, and Mexico, though how often is uncertain. Their use increased significantly, however, in the late nineteenth and early twentieth centuries.¹⁰

Top chords of a cantilevered bridge are in tension while bottom chords are in compression. Since the structure is balanced on piers, the amount of material needed for construction is less as it extends beyond the piers and over the object being spanned. As a result, the superstructure over the piers is heavier and more elaborate than it is at the center of each span or at either end.¹¹

Cantilevered bridges are statically-determinant structures. That is they employ “a frame in which...bending moments and reactions can be determined by the laws of statics alone,” which is to say that bending movements can be established with three simple calculations. That is an advantage compared to statically-indeterminant fabrications where additional calculations must be made to address a greater number of structural components such as continuous beams or girders and the undefined internal forces they embody. “Statics” is the study of “forces and bodies at rest,” an element of structural engineering. Statically-determinant bridges have several assets, one of which is their ability to compensate for various stresses that may otherwise result in the unexpected settling of a bridge abutment or pier, for example. Another is that, for spans of significant

⁹ *Modern Bridges for Illinois Highways, Second Edition Revised and Enlarged* (Springfield, IL: State of Illinois Highway Commission, Bulletin No. 9, 1912): 8.

¹⁰ Henry Grattan Tyrrell, *History of Bridge Engineering* (Chicago, IL: 1911): 257-259.

¹¹ “Cantilever Bridge,” viewed at <https://www.britannica.com/technology/cantilever-bridge> on 20 March 2025.

length, those that are cantilevered do not require as much material as do other rigid bridges when they are built beyond their piers, as previously noted. Additionally, given their balance, do cantilevered spans not require falsework for construction. That is to say shipping on a busy waterway can continue while a bridge is erected over it.¹²

The construction and use of cantilevered bridges grew through the late nineteenth century. Thomas Pope proposed in *A Treatise on Bridge Architecture* building in 1811 an 1,800-foot cantilevered span crossing New York's Hudson River Valley. It was never erected, but in 1867, in Germany, Heinrich Gerber constructed a small highway bridge that was "probably" the first such modern structure. About two years later James Buchanan Eads used the cantilever principle as he constructed without falsework the steel arches of his bridge across the Mississippi River at St. Louis. A particularly notable cantilevered bridge was built across Scotland's Firth of Forth in the early 1890s. Its overall length was 8,400 feet while the length of its cantilevered spans was 5,360 feet. The bridge cost about \$16,000,000 and used 51,000 tons of steel.¹³

A consequential number of cantilevered bridges were built in the United States in the first half of the twentieth century, a later incarnation of which was the 1955 Tappan Zee Bridge across the Hudson River in New York. Its total length was 16,013 feet while its cantilevered spans extended 1,212 feet. It carried traffic for sixty-two years before it was replaced in 2017 by a twin span, cable-stayed structure. Construction of the Beardstown Bridge was completed in the same year as the Tappan Zee, though the former will have survived almost ten years longer than the latter. Engineering and bridge historian Henry Petrosky explained, when considering the demolition of the Tappan Zee bridge, that "...the very same feature of the cantilever form that made it so attractive a century or so ago – that it could support itself during construction – is now a feature that makes it relatively easy to disassemble obsolete cantilever bridges, such as...the Tappan Zee." That approach will soon to be used at the Beardstown Bridge.¹⁴

¹² "Statically Determinate & Indeterminate Structures," viewed at <https://www.structuralbasics.com/statically-determinate-structures/> on 20 March 2025; John S. Scott, *A Dictionary of Civil Engineering* (Baltimore, MD: Penguin Books, 1958; Revised, 1965): 297, 298; Parsons Brinckerhoff and Engineering & Industrial Heritage, *A Context for Common Historic Bridge Types* (Washington, D.C., National Cooperative Highway Research Program, Transportation Research Council, and National Research Council, 2005): 3-142; C.F. Findlay, "Cantilever Bridges," in *Transactions of the Canadian Society of Civil Engineers*, Volume 3 (Montreal, Canada: John Lovel & Son, 1889): 55.

¹³ Tyrrell, *Bridge Engineering*, 259, 276; Richard Shelton Kirby & Philip Gustave Laurson, *The Early Years of Modern Civil Engineering* (New Haven, CT: Yale University Press, 1932): 162-163;

¹⁴ Parsons Brinckerhoff, *A Context*, 3-143; Henry Petroski, "The Rise and Fall of Cantilever Bridges," in *American Scientist* 106, no.6 (November/December 2018): 336-339.

Cass & Schuyler Counties

The U.S. Highway 67 bridge spans the Illinois River and links Schuyler County on its northwest side to Cass County immediately on the southeast. Both counties were heavily agricultural. Schuyler County was organized in 1825 when it was said “that the soil was excellent and a large part of it was under cultivation.” Indian corn, oats, hay, wheat, and potatoes were among the crops raised. Cass County was established in 1837. It was consequentially smaller than Schuyler and said in 1858 to have excellent soil. Hay, corn, oats, and wheat were some of the county crops that proliferated. The community of Rushville was the Schuyler County seat of government while that of Cass was originally Beardstown though, after several elections, it was moved in 1872 to Virginia, about seventeen miles to the east southeast. Both Rushville and Beardstown had railroads by ca. 1872, though the two cities were not directly connected by rail. They were tied together, nevertheless, by the late 1920s with the designation of Highway 67 which passed through each. That connection was a prominent benefit to Beardstown, which developed as a notable regional, agricultural support shipping and receiving community.¹⁵

Farming remained the primary agricultural activity in both counties. By 1880 Cass County had 1,382 farms with an average size of 159 acres. Schuyler County then had 1,929 farms with an average size of 131 acres. Swine, milk cows, and horses were among the animals most often found on the farms in both counties. Twenty years later, in 1900, Cass County hosted 1,432 farms averaging a size of 151 acres while Schuyler County hosted 2,162 farms averaging a size of 122 acres. The number of farms had dropped in each county by 1930. Cass County then had 1,070 farms on 203,904 acres while the county’s Beardstown Township, -- which included the bridge site on the east side of the river – had 64 farms on 11,512 acres. Schuyler County overall then had 1,655 farms on 248,305 acres while Bainbridge Township claimed 152 farms on 25,893 acres. Clearly, farming was a dominant economic activity in each county. And Beardstown, with its rail, roadway, and river connections, was the primary shipping point for moving goods and produce both in and out of the immediate region.¹⁶

¹⁵ J.M. Peck, *A Gazetteer of Illinois in Three Parts* (Philadelphia, PA: Grigg & Elliot, 1837): 94, 95, 133, 134; George W. Hawes, comp., *Illinois State Gazetteer and Business Directory for 1958 and 1959* (Chicago, IL: George W. Hawes, pub., 1858): 31, 202; *Illinois State Gazetteer and Business Directory, for the Years 1864-5* (Chicago, IL: J.C.W. Baily, 1864): 58, 59, 90, 91; William Henry Perrin, ed., *History of Cass County, Illinois* (Chicago, IL: O.L. Askin & Co., 1882): 50, 51, 113; Newton Bateman, Paul Selby, & Howard Dvson, eds., *Historical Encyclopedia of Illinois, and History of Schuyler County* (Chicago, IL: Munsell Publishing Company, 1908): 681-683.

¹⁶ United States Census Office, *Report of the Production of Agriculture as Returned at the Tenth Census* (Washington, D.C.: Government Printing Office, 1883): Tables 1-5, pp. 44 & 46, Tables 8-10, pp 149-50; William R. Merriam, Director, *Twelfth Census of the United States Taken in the Year 1900: Agriculture – Farm, Live Stock and Animal Products* (Washington, D.C.: United States Census Office, 1902): Table 10, pp. 72 & 74; *Fifteenth Census of the United States: 1930-Agriculture Volume I, Farm Acreage and Farm Values by Townships or Other Minor Civil Division* (Washington, D.C.: Bureau of the Census

The City of Beardstown:

The State of Illinois was established in 1818. Among its many counties was Cass, the west and northwest boundaries of which were defined by the Illinois River flowing from the northeast to the southwest and the Mississippi River. In Cass County was what would become the city of Beardstown, itself founded in 1820. Thomas Beard, the hamlet's namesake, came in 1818 to the state's Alton/Edwardsville area, immediately north/northeast of St. Louis. He relocated in 1820 to what would become Cass County and established a small village on the east bank of the Illinois River that soon adopted his name. Thus was the settlement of Beardstown begun.¹⁷

The community's growth over the next nine years was slow. Yet it was substantial enough that Beard and Enoch C. March platted the town in 1829. And in the ten years following a number of additions supplemented the original plat, a good sign that the townsite was attracting settlers.¹⁸

Beardstown's location was fortuitous. It offered water, timber, and coal, all of which helped to facilitate manufacturing. The area's soil was also rich which promoted agriculture in general, and the early planting in 1829-1830 of cherry, apple and pear trees in particular. By 1858, the growing city's population was about 2,000. It was called "a thriving town" and was on a varied landscape that appealed to settlers. Growth continued, likely due, at least in part, to the region's evolving highway network. What was perhaps the main road in Cass County extended from the city of Ashland in the southeast, across the county, through the settlements of Philadelphia and Virginia City, and on to Beardstown on the river to the northwest. Indeed, as the only town of significance on the west side of the county, and with travel beyond hampered by the river and the need to cross it, Beardstown was said to be "like ancient Rome [in that] all roads led to it." Growth continued. Two railroads reached Beardstown about six years after the Civil War. One was the Rockford, Rock Island and St. Louis (later the Chicago, Burlington & Quincy) and the other was the Pana, Springfield & Northwestern (later the Ohio & Mississippi Railroad). The former established a shop complex in the

Library, 1931): Chapter 4, Illinois & Michigan, pp 145, 162. All census data at <https://agcensus.library.cornell.edu> and accessed on 13 March 2025.

¹⁷ Perrin, *History of Cass County*: 115; William Epler, "Some Beginnings in Central Cass County, Illinois," in *Journal of the Illinois State Historical Society*, January 1917 (Vol 9, No. 4): 470.

¹⁸ Perrin, *History of Cass County*, 108, 115. More information regarding additions to the city can be found in the following source: Newton Bateman, Paul Selby & Charles A.E. Martin, eds, *Historical Encyclopedia of Illinois and History of Cass County*, Volume 2 (Chicago, IL: Munsell Publishing Company, 1915): 780, 804.

community that retained more than 1,200 employees. By 1878 the city claimed about 2,500 residents and the primary products it shipped were grain and livestock.¹⁹

Beardstown grew as an important regional trade center. It was home in the early 1880s to three agricultural implement dealers, two sawmills, four blacksmith shops, four drug stores, and eleven grocery stores among many other retailers. By the end of the decade its manufacturing interests included a brewery, flour mills, two sawmills, grain elevators, and an iron foundry, again among others. Atypical for a community business was the Beardstown Fish Company which harvested black bass from the Illinois River. It also collected mussel shells from which shirt buttons were cut at three local factories. Attesting to the city's growing affluence was that fact that Beardstown also had an opera house with a seating capacity of 800. Beer, livestock and grain were among the primary items shipped from the city in 1888.²⁰

Crossing the Illinois River in the 19th Century:

The Illinois River was both an asset and an impediment for Beardstown. It needed to be crossed as settlers advanced west through the state toward and beyond the Mississippi River, a movement enhanced by the federal government making available to veterans of the War of 1812 land for settlement between the two rivers. Thomas Beard soon sensed a need and started a ferry across the Illinois. It was licensed by Schuyler County on 05 June 1826 for \$6.00 a year and located immediately across the river from Beardstown and Cass County. Beard's first ferry was propelled by men pushing long poles that reached the river bottom and moved the craft forward. That method of propulsion changed in 1836.²¹ The ferry was a notable asset as Beard's town continued to grow.

Thomas Beard died in 1849 when he was fifty-five years old. It is uncertain who ran the boat thereafter, but river crossings via what apparently continued to be called "Beard's Ferry" lasted for a total of sixty-two years. It was replaced in 1888 when the first bridge,

¹⁹ Perrin, *History of Cass County*, 108, 113; Epler, "Some Beginnings in Central Cass County," 473; Hawes, *Illinois State Gazetteer for 1858 and 1859*: 12; Bateman, et. al., *Historical Encyclopedia of Cass County*, 780, 808; *Illinois State Gazetteer and Business Directory*, 1878, Volume I (Detroit, MI: R.L. Polk & Co., 1878): 128-129.

²⁰ Perrin, *History of Cass County*, 114; *Illinois State Gazetteer and Business Directory*, 1888, Volume VI (Detroit, MI: R.L. Polk & Co., 1888): 174-175; Bateman, et.al., *Historical Encyclopedia of Cass County*, 808.

²¹ Rev., P.C. Croll, "Thomas Beard, the Pioneer and Founder of Beardstown, Illinois," in *Transactions of the Illinois State Historical Society for the Year 1917*, Publication No. 23 (Springfield, IL: Illinois State Historical Society, 1917): 117; Perrin, *History of Cass County*, 108; Bateman, et. al., *Historical Encyclopedia of Cass County*, 673-674, 781. Explained in Bateman was the fact that Beard "obtained a horse power for his boat" from Pittsburg in 1836. It is difficult to ascertain exactly what this cryptic verbiage suggests. Perhaps there was some kind of propulsion mechanism that was actually horse-driven. Or possibly Beard acquired an early steam engine and the quote is a reference to the power it generated.

a wooden structure, was built across the Illinois River at Beardstown. Heavily used, that bridge lasted only ten years.²²

Crossing the Illinois River in the First Half of the 20th Century:



Figure 1: Pictured in this 1914 postcard is the 1898 bridge. Its first three spans were Pennsylvania Through-Trusses, which are the primary components pictured. The swing span is in the distant far right. The bridge's susceptibility to high water is apparent in this image ("State Street Bridge, Beardstown, Ill," Postmarked 10 September 1914, Copy of postcard in possession of ISAS, University of Illinois, Urbana, IL).

Replacing in 1898 the structure of 1888 was one of steel (see Figure 1, above). The new bridge consisted of five spans arranged so that there were three fixed, Pennsylvania Through-Truss spans to the south, a swing span, and then one fixed Pratt Through-Truss span to the north, the Schuyler County end of the structure. Construction was planned and undertaken by the Beardstown Bridge Company. The structure cost \$26,911.00 and ownership passed from the company to the city upon completion. Fabrication of the bridge was reportedly accomplished by the Wabash Construction Company.²³

²² Croll, "Thomas Beard," *Transactions*, 125; Harold Tyson, *Images of America: Beardstown* (Charleston, IL: Arcadia Publishing, 2013): 16; Bateman, et. al., *Historical Encyclopedia of Cass County*, 781.

²³ Illinois Historical Aerial Photography, 1937-1947, Image #SD-12-1009, 07 June 1938. Viewed at <http://maps.isgs.illinois.edu/ilhap/> on 05 February 2022; Bateman, et. al., *Historical Encyclopedia of Cass County*, 781; "Helped Build Bridge in 1898," *Illinoian Star* (Beardstown, IL), 21 September 1955: 1. It was the last publication cited that attributed construction to the "Wabash Construction Company." A review of the www.bridgehunter.com website, however, identifies no such entity. It does identify the "Wabash Bridge & Iron Works" of Wabash, Indiana, as a bridge manufacturer at the turn of the twentieth century. Although the website notes none of the company's bridges as being in Illinois, it is possible – given the similarity

The new bridge was a significant improvement over that of 1888. Inherent to the structure's design, however, were equally significant deficiencies, perhaps the greatest of which was its lack of clearance over the river. The bridge, in other words, was often flooded by the river (along with the city of Beardstown) and unusable many times throughout its history. It was also a frequent, though likely unintended, target for barges and their tow boats. The resulting collisions removed the bridge from service for repairs with some regularity.

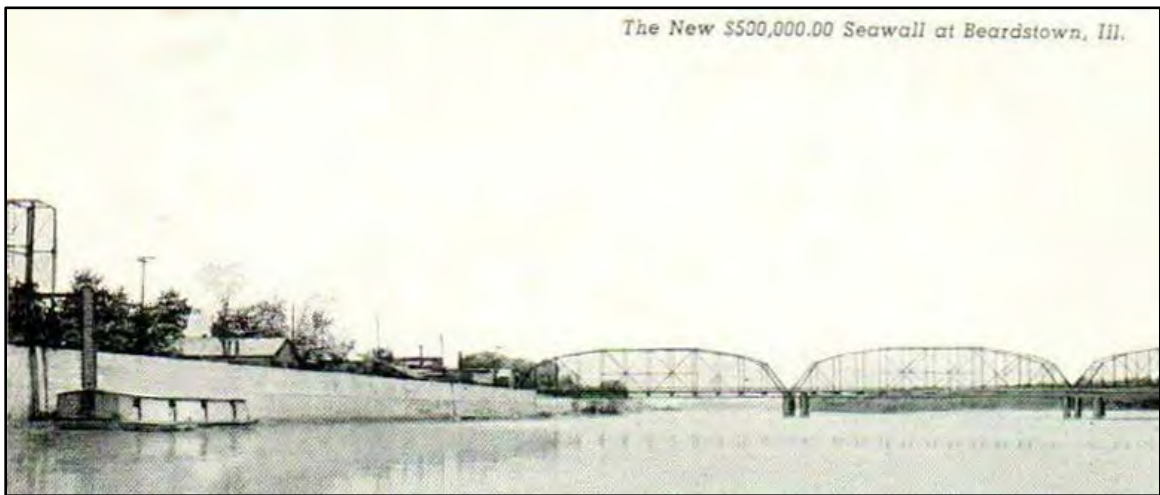


Figure 2: The city's new sea wall is pictured in the left half of this image as are the first few spans of the 1898 bridge in the background right. It was this sea wall on top of which the additional three feet of height was constructed in 1943 to save the city from flooding ("The New \$500,000 Seawall at Beardstown, Ill.," Postcard #IA2438, Chicago: Curt Teich Postcard, undated/unmailed, Copy in possession of ISAS, University of Illinois, Urbana, IL).

It is uncertain exactly how many times the 1898 bridge, as well as downtown Beardstown, were flooded. Still there were years of consequential floods that are thought to include 1908, 1912, 1913, 1916, 1922, 1926, 1943.²⁴ The flood stage in 1926 reached 26.3 feet, a record at the time. Yet the 1943 flood beat it by a foot-and-a-half when the river crested at 27.8 feet. That year women, children, and others were evacuated from the city. Water rose at a rate of an inch an hour and it was reported that "whistles and bells would be sounded warning residents to flee" if necessary. Citizens and soldiers worked together to raise by an additional three feet the height of city's new 27.75-foot-tall sea wall. And they were successful. The river reached a record stage, but the seawall was not breached.

in names and the time in which it was operating – that it was responsible for the 1898 structure.

²⁴ Tyson, *Images of America: Beardstown*, 18, 22, 29, 31, 48, 49, 51, 55, 63, 66, 72; Harold Tyson, *Images of America: Beardstown Revisited* (Charleston, SC: Arcadia Publishing, 2018): 11, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 33, 35, 36, 38, 107, 118, 122, 125.

“Plywood, plastic, sandbags, and a lot of hard work kept the water out of town,” according to local historian Harold Tyson. That episode has been called Beardstown’s “dry flood.” Of course, the 1898 bridge was flooded despite the saving of the city.²⁵



Figure 3: The work of the “Ferdinand” is illustrated in this image. Note that the left (south) end of the north span, seen in the upper right portion of the picture, is off its pier and in the water. The bridge was closed and a ferry carried traffic across the river for about three weeks. Ferries were often used when the bridge was closed for an extended period (Harold Tyson, *Beardstown Revisited* [Charleston, SC: Arcadia Publishing, 2018]: 99).

Flooding was not the only threat to the 1898 bridge. It was also hit by tow boats and barges many times through its history, several examples of which occurred in its final decade of service. A US Navy vessel slammed the bridge in July 1944 and damaged the swing span so badly that it needed replacing, a process that took the bridge out of service for four months. Indeed, at the time, that was considered “one of its worst beatings” ever. The structure also had an awful spring in 1950. Several thousands of dollars of damage occurred in March when a Blaske Barge Line tow boat collided with a pier designed to protect the span, which it did in this case. Two months later two empty barges were blown into the center span by strong winds. A “walloper”, it was called. Thus was summoned the Illinois Steel Bridge Company, the contractor frequently called for repairs to the old fabrication that had “been rammed by almost all kinds of craft” over time. About a week after the accident the structure reopened to cars and trucks weighing no more than six tons. About six weeks later a tow boat and six barges hit the swing span and threw it out of alignment. Traffic was halted and the bridge closed as

²⁵ “Rushing Rivers Batter Levees in Rising Flood,” *Chicago (IL) Tribune*, 21 May 1943: 13; “Floods Gather Force; 100,000 Flee Lowlands,” *Chicago (IL) Tribune*, 22 May 1943: 1; Tyson, *Beardstown Revisited*, 19, 30.

Peoria's Connell Dredge and Dock Company dealt with the problem.²⁶

About two years later, on 6 April 1952, the Bull Towing Company's craft "Ferdinand" hit the 150-foot-long north span of the bridge which was knocked off its southern pier and into the river (see Figure 3). The length of time needed to raise the span and repair it was initially uncertain since there was early talk of detours using the bridge at Meredosia, twenty-two miles to the south, or the bridge at Havana, thirty-five miles to the north. Temporary ferry service for pedestrians and passenger autos was even considered. New pilings needed to be driven and five days were anticipated for the span's raising and re-anchoring thereafter. Happily for Beardstown all work was completed and the bridge reopened on Friday, 18 April.²⁷

Another significant accident occurred at 3:25 AM on 15 October 1954. A boat of B & M Towing, Houston (TX), was moving oil barges up river and hit about 100 feet of the bridge's protective timbers before striking the swing span and knocking it off center by ten or twelve feet. Illinois Steel Bridge reviewed the damage and estimated repairs. An eight-vehicle car ferry was also needed. A \$33,647.02 contract was awarded to Chicago's FitzSimmons & Cornell Dredge & Dock Company to repair the bridge within 30 days or pay a \$400 fine for each day needed thereafter. A concentrated effort was made and the structure reopened on 17 November. It served Beardstown residents and other travelers for eleven more months, after which a new bridge was opened.²⁸

The Beardstown Bridge of 1955:

The need for a new bridge became apparent over the years. Governor Adli Stevenson

²⁶ "Will Open Beardstown Bridge Bids," *Quincy (IL) Herald Whig*, 23 November 1951: 1; "Bridge Hit Again," *Quincy (IL) Herald Whig*, 04 March 1950: 3; "Beardstown Bridge Struck by Barges, Closed to Traffic," *Jacksonville (IL) Daily Journal*, 6 May 1950: 8; "Steel Bridge Co. to Repair Span at Beardstown," *Jacksonville (IL) Daily Journal*, 11 May 1950: 9; "River Bridge at Beardstown Now Open to Traffic," *Jacksonville (IL) Daily Journal*, 13 May 1950: 10; "Beardstown Toll Bridge Damaged by Boat, Closed," *Chicago (IL) Tribune*, 23 June 1950: 10; "Begin Repairs on Cass Toll Bridge," *Jacksonville (IL) Daily Journal*, 27 June 1950: 8.

²⁷ "'Ferdinand' Charges Beardstown Bridge; Span Falls in River," *Jacksonville (IL) Daily Journal*, 6 April 1952: 18; "Crippled Span at Beardstown to be Raised Soon," *Jacksonville (IL) Daily Journal*, 8 April 1952: 7; "Beardstown Bridge Opened Friday, 2 Weeks After Crash," *Jacksonville (IL) Daily Journal*, 19 April 1952: 3. Local historian Harold Tyson attributes the accident to 05 April 1950. This is thought incorrect largely based on the fact that newspaper articles clearly use the 1952 date in their reporting as observed in this footnote. Tyson, *Beardstown Revisited*, 99.

²⁸ "Beardstown Bridge Kayoed Again for Month: Toll Takers Rescued as Road Sinks," *Quincy (IL) Herald Whig*, 15 October 1954: 1; "Beardstown Ferry Starts on Saturday," *Quincy (IL) Herald Whig*, 22 October 1954: 1; "Beardstown Bridge is Opened to Traffic," *Quincy (IL) Herald Whig*, 17 November 1954: 1; "More Damage Discovered on Bridge," *Jacksonville (IL) Daily Journal*, 28 October 1954: 3; "River Bridge at Beardstown to be Opened Soon," *Jacksonville (IL) Daily Journal*, 12 November 1954: 11.

noted in July 1950 that a successor to the 1898 structure was a priority when money was available, and for that he provided a \$1 million appropriation in 1951. But more money was needed, estimated costs for the project then being \$3 million. There was also talk about the location of a new crossing. One suggestion was to place it on the southwest side of Beardstown. Another option was putting it on the city's northeast side and anchoring it by Beardstown's Wall Street, northeast of the Chicago, Burlington and Quincy Railroad's bridge across the river.²⁹

Discussions about and plans for a new bridge continued. In early February 1951 Mayor George Ring and other Beardstown residents attended a state budget meeting and spoke for replacing their problematical old toll bridge. Legislation authorizing \$3.25 million for a new structure was introduced before the legislature shortly thereafter, which both the Illinois House and Senate approved by the end of April. It was sent to Governor Stevenson in mid-May.³⁰

The governor did not sign the legislation. He was partial to a new Beardstown bridge, though not the methodology chosen by the House and Senate to achieve it. The governor found the legislature's involvement in the process to be "disturbing and dangerous" as well as "legislative log-rolling." He explained that it was the duty of the state Highway Department to advocate for the bridge and propose a plan to pay for it based on the availability of funds, not on a spending authorization from the legislature. Stevenson then explained that the legislation took from the Department "...the discretion it should exercise in formulating a program of highway improvements on the basis of traffic counts..." He further offered support for the new Beardstown bridge if money was appropriated from the Highway Department's budget which was soon to be getting an additional \$68 million per year from gas taxes and fees for truck licenses. Illinois, the governor concluded, "...has suffered too much in the past from construction of highway projects on a political rather than a traffic basis." Or, put another way, roadways had historically been more the purview of politicians than engineers and planners – which was not as it should be.³¹

²⁹ "Consider Proposal to Move Bridge at Beardstown," *Jacksonville (IL) Daily Journal*, 11 July 1950: 12; "Free Bridge is Now in Use," *Illinoisian-Star* (Beardstown, IL), 13 September 1955: 1.

³⁰ "Delegation from Beardstown Asks for New Bridge," *Jacksonville (IL) Daily Journal*, 09 February 1951: 3; "Seek New Bridge for Beardstown," *Quincy (IL) Herald Whig*, 08 February 1951: 1; "Propose Return to Road Grants," *Quincy (IL) Herald Whig*, 14 February 1951: 1; "House Gets Bill on Rezoning, New Bridge," *Jacksonville (IL) Daily Journal*, 14 February 1951: 12; "Senate Approves Bill to Build \$3,250,000 Bridge at Beardstown," *Jacksonville (IL) Daily Journal*, 19 April 1951: 14; "Senate Votes Bridge for Beardstown," *Quincy (IL) Herald Whig*, 19 April 1951: 1; "House Approves \$3,250,000 Bridge for Beardstown," *Quincy (IL) Herald Whig*, 25 April 1951: 18; "Okay Funds for Beardstown Span," *Quincy (IL) Herald Whig*, 16 May 1951: 1; "State Probe of Seditious Acts Beaten," *Quincy (IL) Herald Whig*, 17 May 1951: 7.

³¹ "Governor Will Veto Bridge Funds," *Quincy (IL) Herald Whig*, 03 May 1951: 1; "Kills Peoria, Kankakee Bridge Bills," *Quincy (IL) Herald Whig*, 16 June 1951: 1; "Bus, Truck Fee Boost Near Vote," *Quincy (IL) Herald Whig*, 26 April 1951: 1;

Funding-related issues for the new bridge were resolved and planning progressed. Early thoughts were that the new bridge would be 3,624 feet long and have an approximate clearance of about fifty-five feet over the river. Construction was projected to take three years, 50% of which was to be paid for by the federal government. The other 50% was to be paid through state funds generated by the gas tax increase and new truck licensing fees. The new bridge was to be southwest of the city, about one-quarter mile downriver from the 1898 structure. Enthusiasm for the new bridge was palpable in Beardstown since 43% of the city's commerce came from Schuyler County residents across the river. There was also a downside for the city of Beardstown. The 1898 bridge collected tolls which it continued to do in 1955, the beneficiary of which was the community. The new bridge was to be free, meaning the city would lose between \$75,000 and \$100,000 of toll-generated income annually which would need to be made up. The loss of tolls notwithstanding, the first contract was announced in the 11 December 1951 newspaper. It was for \$1,853,436 and awarded to the Great Lakes Dredge and Dock Company for the construction of the bridge's substructure.³²

Work on the substructure was scheduled to start with spring's arrival in 1952. And for that purpose Great Lakes Dredge and Dock had equipment on site by 13 April. Yet spring's high water pushed back the start of construction several weeks, though it was known to be underway by the latter half of May. The company's plan was to construct sixteen piers between the southeast and northwest abutments. Each was originally to be anchored on piles that were of pre-cast concrete, fifty-five feet long, eighteen inches wide, and weighing ten tons.³³

Despite that generally straightforward goal, a significant problem moving ahead was the availability of steel and the prices that would be paid for it. The difficulty resulted from a strike that affected steel deliveries to the bridge site, and thus the pace of construction, as well as the prices that were paid for the steel. For example, Allied Structural Steel of Chicago had proposed in August 1952 to deliver needed steel for \$1.29 million if transported by barge or for \$1.32 million if moved by rail. US Steel and Bethlehem Steel each offered higher bids. The Division of Highways rejected all bids as too high and rebid the steel on 09 September. Substructure work, meanwhile, continued.³⁴

"Beardstown Bridge Bill Draws Veto," *Quincy (IL) Herald Whig*, 31 May 1951: 1.

³² "Award First Contract for Beardstown Bridge," *Jacksonville (IL) Daily Journal*, 11 December 1951: 7; "Will Open Beardstown Bridge Bids," *Herald Whig*, 23 November 1951.

³³ "Drive Test Piling for Beardstown Bridge," *Jacksonville (IL) Daily Journal*, 22 May 1952: 4.

³⁴ "Steel for State Bridge Received at Beardstown," *Jacksonville (IL) Daily Journal*, 02 August 1952: 6; "Bridge Bids Are Too High," *Illinoisian-Star* (Beardstown, IL), 27 August 1952: 1.

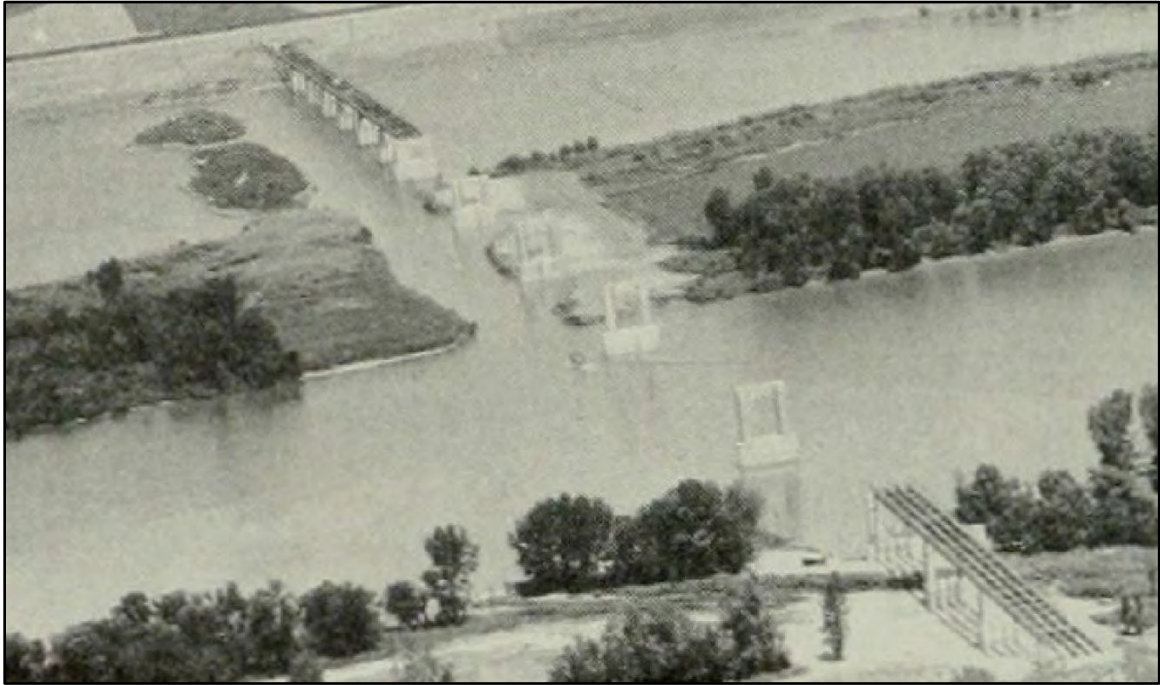


Figure 4: This construction photograph of the new Beardstown bridge reflects a view to the north and suggests, compared to the finished structure, how unimposing the piers looked (“Illinois History: Yesterday and Today, New Beardstown Bridge,” Viewed at <https://www.facebook.com/groups/1535922739885414/posts/3236498509827820/> on 14 February 2025).

The 1953 construction season arrived with all efforts moving forward and additional details being reported, along with a newspaper’s summary of the project to date. The bridge’s overall length was to be 3,655 feet. Its longest span, that extending across the river’s shipping lane, was to be 580 feet, the two spans to either side of which were to have an average length of 450 feet per span. There were also to be eleven approach spans, each with an average length of 125 feet. Great Lakes Dredge and Dock Company barges were in the process of driving into the river bottom 1,100 piles for the various piers, all of which required coffer dams for construction. Structural details by then had been refined to call for piles that were between thirty and fifty-five feet long as well as sixteen or eighteen inches square, each of which could be placed in about thirty minutes “through the use of ingenious tools.”³⁵ SMH Construction of Peoria produced the piles which came to Beardstown on barges sent down river. And the contract for steel for the superstructure was ultimately awarded to Allied Structural Steel for \$1.29 million, the rebid notwithstanding. With contracts in place for the bridge piers and the steel needed to build the superstructure, one final contract was left to award in 1953. It was reported on 02 September 1953 that 8.33 million pounds of additional structural steel were required, along with 8,920 pounds of cast steel, steel flooring of 9,788 square feet and

³⁵ There was no discussion or identification mentioned of what those “ingenious tools” might be.

navigational lighting, all of which were covered in the final contract for \$654,573 that was just awarded, again, to the Allied Structural Steel Company.³⁶

The arrival of 1954 was momentous for the Beardstown bridge. Most work to that point was substructure and pier-related. Cofferdams might be noticed on the river, but work on the pier foundations occurred therein, as well as the early concrete work for the piers themselves, was all below the surface and out of sight. The first substantial evidence of progress seen by Beardstown residents was likely as the piers, through their various concrete pours, finally began to rise above the river's surface. But even then, all that was observed were sixteen, well-spaced piers projecting from the river, all flanked by an abutment on each side of the river. There was really nothing yet that suggested the overall magnitude of the structure that would result. That started to change in 1954.

Representatives of Allied Structural Steel were in the community in March 1954 to plan for the arrival of machinery needed for the construction of the superstructure, some of which was to arrive before the end of the month. And the structural steel the company produced was to start arriving very soon thereafter, as were thirty to forty construction workers. A gentleman named R.K. Hoenig was the project superintendent with superstructure construction planned for completion sometime in the fall of the year. Three more contracts also need to be awarded though, compared to the substructure work and production of steel, they were not as consequential. Those final agreements were for constructing the bridge deck, painting the bridge and building the approaches to the new bridge. The bridge deck project, which included sidewalks, was awarded to Sangamo Construction, Springfield, for \$155,874. Also was some of the approach work on the Schuyler County side of the river given to S.J. Graves & Sons. They were to grade 1.27 miles of new road needed to tie the new bridge to Illinois Routes 100 and 103. Regarding the superstructure, construction was underway in May. It started on the Schuyler County side of the river and progressed to the southeast. Construction as far as pier 6 was reported on 10 May and continued thereafter. Subsequently reported on 20 July was the fact that construction would soon start on the Cass County side of the river, with the intention of both halves meeting mid-channel.³⁷

³⁶ "Site of New Beardstown Bridge," *Illinoian-Star* (Beardstown, IL), 09 May 1953: 1; "To Receive Bids for Beardstown Bridge Sept. 11," *Jacksonville (IL) Daily Journal*, 02 September 1953: 5; "Piers for New Bridge at Beardstown," *Illinoian-Star* (Beardstown, IL), 15 July 1953: 1; "Beardstown Bridge Contract Awarded," *Jacksonville (IL) Daily Journal*, 23 September 1953: 14; "Free Bridge Now in Use," *Illinoian-Star* (Beardstown, IL), 13 September 1955: 1; "Beardstown Bridge Led '53 Western Illinois Road Work," *Quincy (IL) Herald Whig*, 05 January 1954: 2. Note that it is difficult to unequivocally discern between two newspaper articles if the specific amount was \$654,573 or \$554,573.

³⁷ "Bridge Steel Due in 2 Weeks," *Illinoian-Star* (Beardstown, IL), 19 March 1954: 1; "Road and Bridge Work Contracts Let by State," *Quincy (IL) Herald Whig*, 17 September 1954: 16; "State to Open Bids on Concrete Road and Sidewalks on New Bridge Sept. 10," *Illinoian-Star* (Beardstown, IL), 28 August 1954: 1; "Award Contracts for Road Work," *Quincy (IL) Herald Whig*, 15 June 1954: 15; "Steel Erected on Six Piers of New State Bridge," *Illinoian-Star* (Beardstown, IL), 10 May 1954: 1; "New Bridge is Beginning to Take Shape," *Illinoian-Star* (Beardstown, IL), 20 July 1954: 1.

NEW BRIDGE
DEDICATION : CELEBRATION
TUESDAY, SEPTEMBER 13
Dedication ceremonies at the new bridge—the state's newest bridge across the Illinois River
1:00 p. m. (central standard time)

Gov. William G. Stratton
SCOTT FIELD AIR FORCE BAND BEARDSTOWN HIGH SCHOOL BAND

FREE SODA POP FREE ENTERTAINMENT FREE BALLOONS
at City Square
Afternoon and Night
Concert by SCOTT FIELD AIR FORCE BAND, 3:00–3:45 p. m.

WLS BARN DANCE STARS
AT 4:00 to 5:30 p. m. FEATURING
RED BLANCHARD GEORGIA ANN FERGUSON HAPPY TIME TRIO ARKY
WLS BARN DANCE STARS – 7:00 – 8:00 p. m.

8:00 to Midnite
STREET DANCE
AT CITY SQUARE
ALL FREE!

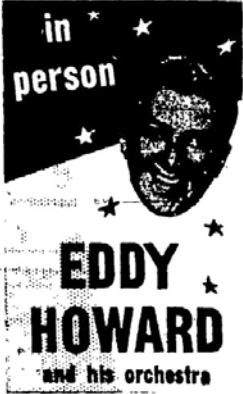


Figure 5: The opening and celebration of the new bridge was prominently advertised in Beardstown as well as its surrounding communities, including Jacksonville, about 30 miles to the southeast but also on USH 67 (“New Bridge Dedication: Celebration,” *Illinoian-Star* [Beardstown, IL], 12 September 1955: 4; “Beardstown,” *Jacksonville [IL] Daily Journal*, 10 September 1955: 10).

Progress on the bridge continued. The arrival of 1955 brought with it the announcement

that the superstructure, under erection by the Industrial Construction Company, would likely be completed in March. And it was. Major objectives yet to be finished then included pouring the concrete deck on the approach spans as well as painting the overall structure. The steel flooring was installed on the truss spans by mid-April, handrails followed and the concrete deck on the approach spans laid by Sangamo Construction as were the sidewalks on the truss spans. There were also plans to paint the new bridge as soon as the weather permitted.³⁸

All fell into place as 1955 progressed and the bridge was officially scheduled to open on 13 September (see Figure 5, Page 19). And its opening, with the old bridge having been so much a part of the Beardstown environment and the assumption that the new bridge would continue in that respect, was to be a well-celebrated event! Governor Stratton was selected as the primary speaker at the dedication. Yet the star of the opening was to be the new bridge itself. Its length was 3,624 feet comprised of five trusses and twelve approach spans. Its primary truss was 450 feet long with clearance of forty-eight feet over the river's highwater. The structure also had two, 13-foot traffic lanes and sidewalks. Accompanying the structure were the new, 22-foot wide local roads that tied the bridge to Illinois routes 100 and 103. Final cost for the project was about \$4.5 million.³⁹

The bridge was considered the "the first modern vehicular span" across the river at Beardstown in sixty-seven years. And the *Chicago Tribune* opined that "the new bridge is as modern as the old bridge is outmoded." It was located on U.S. Highway 67, a "grand trunk wide highway" route that extended from southern to northern Illinois and on which there was an objective to remove traffic impediments in general and around Beardstown in particular. Connected to several major state routes there, the layout of the bridge and its connecting roadways was to accommodate through-traffic as well as vehicles going into the community itself. It was anticipated that traffic on the bridge would be about 2,000 vehicles per day.⁴⁰

The new bridge was celebrated in its own right as a fine and modern way to cross the

³⁸ "To Finish Bridge Superstructure Early in March," *Jacksonville (IL) Daily Journal*, 25 February 1955: 15; "Beardstown Bridge Nears Completion," *Quincy (IL) Herald Whig*, 17 March 1955: 22; "To Start Laying Concrete Floor when Weather is Right," *Illinoian-Star* (Beardstown, IL), 13 April 1955: 1.

³⁹ "Governor to Talk at Beardstown Bridge Dedication Sept. 13th," *Jacksonville (IL) Daily Journal*, 02 September 1955: 10; "New Beardstown Bridge Will Be Opened Sept. 13," *Jacksonville (IL) Daily Journal*, 01 September 1955: 3; "Beardstown to Celebrate Opening of New Highway Bridge Tuesday," *Jacksonville (IL) Daily Journal*, 11 September 1955: 17; "Free Bridge Now in Use," *Illinoian-Star*, 1; Note that in two different newspaper articles one states lane width on the new bridge was 13 feet while the other notes 15 feet.

⁴⁰ "Free Bridge Now in Use," *Illinoian-Star*, 1; "Beardstown's New 4 Million Bridge Opened," *Chicago (IL) Tribune*, 14 September 1955: 15.

Illinois River. The structure was so appealing that on Sunday, two days before it was to formally open, motorists ignored the barricades at each end to get an early drive on the bridge. "Traffic over both new and old bridges was heavy as this city became a mecca for Sunday drivers to view the new bridge," reported the local *Illinoian Star* on Monday, 12 September. Interest in the new span likely inspired the local Chamber of Commerce to see the impending celebration as an opportunity to elevate the visibility of the city, thus did the Chamber pay for "the entire entertainment in a hospitality gesture to let visitors know the welcome mat is always out in Beardstown."⁴¹

Dedication of the new bridge was on Tuesday, 13 September 1955. There was a short parade to the dedication site, immediately after which Governor Stratton addressed the celebratory crowd at 1:00 PM. He observed in his speech that, regarding cost, the new bridge was one of the most expensive the state had ever built. He also noted how needed the structure was by illustrating how safety-deficient the old bridge was, explaining that in one year it had been involved in twenty-five collisions. Additionally did Stratton expand his subject and discuss that "...the new roadway, high above the busy Illinois River, demonstrates not only the growth in highway traffic, but the increase in barge traffic along the waterway...which will be expanded with the development of the St. Lawrence waterway." At the conclusion of his address a ribbon on the Beardstown side of the river was cut, after which a "cavalcade of cars" motored across the river where the ribbon on the Schuyler County side was cut.⁴²

Business complete, the celebratory party began and continued well into the evening. Included at 3:00 PM was a forty-five minute concert by the Scott Air Force Base Band.

Thereafter, from 4:00 to 5:30 were the Chicago radio station WLS Barn Dance Stars who offered another performance between 7:00 and 8:00 PM. The evening then concluded with a street dance until midnight, the music provided by Eddy Howard and his Orchestra. There was a large crowd and 1,000 seats were provided for folks who did not want to dance but rather just listen to the music. Clearly, after the passage of almost four years and the spending of about \$4.5 million, Beardstown was happy to celebrate the bridge and its completion.⁴³

⁴¹ "Stratton to Open New Bridge," *Illinoian-Star* (Beardstown, IL), 12 September 1955: 1; "Everything Was Free at The Beardstown Bridge Celebration," *Jacksonville (IL) Daily Journal*, 15 September 1955: 24; "Sunday Traffic is Heavy on New State Bridge," *Illinoian-Star* (Beardstown, IL), 12 September 1955: 1.

⁴² "State to Do More Work Here," *Illinoian-Star* (Beardstown, IL), 14 September 1955: 1; "Last Toll Bridge Awaits the Wreckers," *Jacksonville (IL) Daily Journal*, 15 September 1955: 25; "New 4 Million Bridge Opened," *Chicago Tribune*, 15; "Stratton to Open New Bridge," *Illinoian-Star*, 1; "Beardstown to Celebrate Opening," *Jacksonville Daily Journal*, 17.

⁴³ "Stratton to Open Bridge," *Illinoian-Star*, 1, 4; "Beardstown to Celebrate Opening," *Jacksonville Daily Journal*, 17.



Figure 6: Published in the *St. Louis Post Dispatch* the day after the new bridge opened, these two images summarize the passing of one era and the beginning of another. Illustrated on the left is the old bridge and its toll takers on their last day of work. And pictured on the right is the new bridge just opened, a free crossing that no longer required tolls (*St. Louis Post Dispatch*, 14 September 1955: Part 4, Page 1).

The new bridge was open and carrying traffic, a fact that enabled the old, 1898 bridge – the last operating toll bridge in the state – to be removed. And for that purpose a contract was awarded about a week later to the Mandel Brothers of Chicago. There was some question about additional work the Corps of Engineers wanted them to do in the river other than just removing the old bridge. Mandel was reluctant to take on the additional work as part of the contract, thus did removal efforts not start as promptly as Beardstown’s Mayor Tillitt had hoped. Demolition was underway by 11 December 1955. The old bridge was removed in sections, southeast to northwest, and moved on barges to the Schuyler County shore where they were likely dismantled.⁴⁴

The 1898 bridge was certainly problematical, especially during floods and periods of highwater as well as the number of times it was hit by passing barges and tow boats. That fact acknowledged, it was also a significant income producer for Beardstown. It is uncertain if the reference was to the original 1888 bridge or its 1898 successor, but a *Chicago Tribune* article noted that in its first year of operation the bridge took in \$1,600 when \$.25 was paid for a team of horses and \$.05 paid for a pedestrian or a cow. A modest start but in its last years the tolls collected at the bridge were typically \$75,000 to \$80,000 per year. Its most productive year was 1953 when tolls paid were \$104,421.40. The city lost a significant amount of revenue when the old bridge closed, consequently

⁴⁴ “Last Toll Bridge Awaits the Wreckers,” *Jacksonville Daily Journal*, 25; “Bridge Removal, Street Lights and Prisoners Are Topics Before Council,” *Illinoian-Star* (Beardstown, IL), 21 September 1955: 1; “Old Beardstown Bridge is Being Wrecked,” *Jacksonville (IL) Daily Journal*, 11 December 1955: 13.

did the community look to make back the lost income with a cigarette and wheel tax, in addition to installing parking meters. Even with those, the effort to replace tolls still came up about \$10,000 short.⁴⁵

Despite lost toll revenue, the 1955 structure reliably served Beardstown and the surrounding region for the next thirty years. By the early 1980s, however, components of the bridge were deteriorating. Perhaps most significant was its trafficway which carried vehicles across the river on an open-grate, steel deck – a reliable bridge component though one subject to deterioration from rust and corrosion especially when subjected to roadway salt in the winter. And beneath the deck were steel beams and stringers that supported it. All were subject to damage by water and salt.⁴⁶

Planning for repairs to the bridge was well underway by March 1984 and continued generally until work was complete. Much was considered. If any of the bridge's deteriorating structural system failed prior to construction, it would have to be closed at once. There were detours. The usual eleven mile trip from Beardstown, southeast of the river, to Rushville, across and northwest of the river, became a forty-five mile trip via the recently rehabilitated Meredosia bridge eighteen miles to the south. And, for hundreds of Rushville residents who worked in Beardstown, that roundabout drive needed to be made twice a day. A small ferry was implemented at Beardstown to assist locals, but it did not operate if the river was frozen. Many local businessmen were also concerned about their ability to keep stores open for the projected eleven months of construction. Indeed, the director of the local Chamber of Commerce observed in February 1985 that "some businesses are going to fold because of the bridge closing – ones that are marginal and depend on highway traffic."⁴⁷

Reconstruction was completed on 10 August 1985, one month early. Among improvements made was the installation of a new, solid concrete deck that replaced the old open-grate. But the overall project had a cost. A 10% to 50% loss in sales during construction was reported by many Beardstown merchants, for example. Still, finishing by mid-

⁴⁵ "Take It Easy on the Beardstown Bridge!", *Chicago (IL) Tribune*, 20 July 1955: 11; "Beardstown Bridge Nears Completion," *Quincy Herald Whig*, 22; "Beardstown's New 4 Million Bridge Opened," *Chicago Tribune*, 15.

⁴⁶ "Bridge Causes Big Woes in Illinois River Town," *Pantagraph* (Bloomington, IL), 17 February 1985: 5; "Planned Bridge Closing Poses Headache," *Daily Republican-Register* (Mount Carmel, IL), 12 March 1984: 1; "Bridge's Beams Reported to be Deteriorating," *Daily Illini* (Urbana, IL), 30 March 1984: 17.

⁴⁷ "Bridge's Beams Deteriorating," *Daily Illini*, 17; "Few Headaches from First Day of Ferrying 'cross the Illinois," *Taylorville (IL) Daily Breeze Courier*, 02 November 1984: 5; "Beardstown is Left with Bridge Too Far," *St. Louis (MO) Post-Dispatch*, 12 November 1984: 71; "Illinois River Bridge Closed for 11 Months," *Daily Republican-Register* (Mount Carmel, IL), 02 November 1984: 6; "River Woes: Beardstown Tries to Cope with no Bridge, no Ferry," *Southern Illinoisan* (Carbondale, IL), 17 February 1985: 21.

August 1985 helped area farmers who were making plans for getting their fall crops to market as well as their grain to elevators on the river. Marcia Howren, Director of the local Chamber of Commerce, offered perhaps the most succinct comments on completion. "We're tickled to death..."⁴⁸

The present bridge is the third structure to serve west central Illinois and the city of Beardstown.⁴⁹ It is now seventy years old and plans are being developed for its successor. But as plans for that new bridge are refined and implemented, it is worth noting that then eighty-five year old Oscar J. Finney attended in 1955 the current bridge's dedication. He had worked on the 1898 bridge bolting girders together as it was erected. No doubt recalling that old bridge on which he toiled in the context of the new structure then before him, Finney concluded that the new, 1955 bridge was "a masterpiece of construction."⁵⁰

PART II: ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural Character:

The Beardstown Bridge is a seventeen-span structure that carries U.S. Highway 67 over the Illinois River and was opened to traffic in 1955. Its overall length is 3,655'-0" and comprised of a 1,025'-6", post-and-beam-approach section to the northwest as well a similar 524'-8" section to the southeast, between which is a five-span, cantilevered truss component that extends for 2,104'-9". The bridge's traffic deck over the river's shipping channel is about 55'-0" above the average water level and accommodates commercial barge and boat traffic.

2. Condition of Fabric:

The bridge continues to serve traffic after more than seventy years of operation. Its character defining components remain (i.e., its concrete piers and five-span cantilevered component), but changes have occurred over time. Modifications include replacing the original, open-grate deck with one of concrete, removing

⁴⁸ "Beardstown Residents Cheer the Reopening of Town Bridge," *Belleville (IL) News-Democrat*, 10 August, 1985: 7; "Beardstown Burns Bridge to its 'Forgotonia' Past," *Southern Illinoisian* (Carbondale, IL), 11 August 1985: 3.

⁴⁹ This assumes that the wooden, 1888 bridge is counted in its own right and that it was not simply rehabilitated in 1898. Thus was the new 1898 steel, truss bridge the second structure at Beardstown while the subject, 1955 structure was the third.

⁵⁰ "Helped Build Bridge in 1898," *Illinoian-Star*, 1.

the sidewalks, and erecting new railings, all understood to have been done when the bridge was rehabilitated in 1984/5. The structure's deterioration continues, nevertheless. Its Sufficiency Rating in 2025 was 8.0.⁵¹

B. Description:⁵²

The Beardstown/USH 67 Bridge is a seventeen-span structure with three sections. The first is of eight approach spans extending to the northwest while the third claims four such spans reaching to the southeast. Between them is a five span, cantilevered, through-truss section with a two-span component to the northwest and a three-span component to the southeast. The bridge crosses the Illinois River, as well as the adjacent, flooded lowland to the northwest, on a northwest/southeast axis. The bridge's overall length is 3,655 feet and comprised of the northwest approach spans (1,025'-6"), the cantilevered truss spans (2,104'-9"), and the southeast approach spans (524'-8"). The outer-edge-to-outer-edge width of the cantilevered truss spans is 33'-6", while that of the approach spans is 31'-9". The bridge carries two, 11'-00" lanes with striped shoulders of 3'-00".

Unlike bridges that use one type of pier to support approach spans and another to buttress primary spans over a navigation channel, this structure employs one general type of pier, though with some variation span-to-span to accommodate anticipated demands on each. All piers rise from piles driven thirty to fifty-five feet into the ground or river bottom, the number of piles per pier varying from forty to 192. The piles for each pier were tied together and crowned with concrete Pile Caps, the thickness of which varied between three and fifteen feet. Considerations affecting the variables at each pier included location, soil composition, and the size (e.g., weight and height) of the pier.

The piers themselves consist of two parts (information and measurements for each of the sixteen piers is found in Figure 7, page 27). The Lower Pier is anchored to and rises from the Pile Cap and is of reinforced concrete. Its length is generally determined by the width of the traffic deck above, which is to say that the pier's length is perpendicular to that of the bridge. Its ends are rounded, which facilitates the passage of water. The length of each Lower Pier on this bridge varies from 34'-6" to 51'-3", those with a length between 34'-10" and 36'-0" being on the approach spans while those between 48'-2" and 51'-3" carry the cantilevered trusses. The width of the Lower Pier varies between 6'-6"

⁵¹ A composite index of a structure's deficiencies is represented by the Sufficiency Rating, which varies from 100 for a new or fully adequate bridge to 0 for a structure that is closed or collapsed. Bridges with a rating of less than 50%, as is that of the USH 67 bridge, are eligible for replacement funding.

⁵² Measurements used to describe this bridge were taken from the original plans, as well as from the structure itself. In the case of the latter, field measurements were limited to structural components that could be reached without aid of ladders, boats, or other equipment. The complex nature of the original plans, combined with the massive size of the bridge, limited the ability to glean individual measurements of specific components in some instances.

and 8'-0" for the approach spans and between 11'-0" and 15'-0" for the truss spans. Lower Pier heights are between 21'-5" and 37'-5". They are variable, at least to a degree, depending on the elevation and composition of the river bottom. What is notable is that a distant view of the bridge suggests the top of all Lower Piers is generally about the same height above water (see Photo 19 of 46 on Photographs Page 15). Thus does the Upper Pier generally accommodate most of the variation in height found among the sixteen piers.

The Upper Pier is conceptually different from the component below. Instead of a concrete mass carrying the dead and live loads of the structure as do the Lower Piers, the Upper Piers rely on generally squared, concrete columns for that. Early twentieth century bridge engineer/author, J.A.L. Waddell, explained that piers consisting simply of two squared or cylindrical columns could be used to support structures, but, "...only for cheap highway bridges over unimportant rivers where there is no danger from ice or drift." For bridges subject to more variables, including being situated on a prominent shipping route subject to both ice and drift among other factors, as is the Illinois River, Waddell recommended "a more satisfactory [type] of construction [that used] two cylinders or columns with a substantial diaphragm [that is between and connects the two columns], usually of reinforced concrete, forming what is sometimes termed a dumb-bell pier". Waddell continued that "...this type of pier can be made as satisfactory in every respect as the solid pier, and it is nearly always considerably cheaper."⁵³ Further savings were found by placing windows in the diaphragms, thus requiring even less concrete (see Figure 8, Page 28), which was the case with the Beardstown Bridge.

All sixteen of the bridge's Upper Piers used the dumb-bell configuration, though piers 1-4 do not have windows. Upper Piers 1-7 and 14-16, all used for the approach spans, were 29'-6" long and 4'-6" wide. The height of Upper Piers 1-7 reached from 8'-4" to 19'-8" while piers 14 to 16 descended from 27'-4" to 18'-7". The windows on Upper Piers 4-7 and 14-16 were all 16'-6" wide while their heights reached from 14'-8" to 19'-7" on Upper Piers 4-7 and from 27'-4" to 18'-7" on Upper Piers 14-16. Regarding those carrying cantilevered bridge spans, Upper Piers 8, 9, 10, and 13 were all 39'-3" long and 7'-0" wide. Upper Piers 8, 9, and 10 reached heights from 21'-7" to 34'-7", while Upper Pier 13 descended to 35'-8". Window widths on those four openings were 21'-3". The heights on Upper Piers 8, 9, and 10 ranged from 14'-1" to 30'-1". Window height on Upper Pier 13 was 26'-4". The final two Upper Piers, 11 and 12, were 40'-3" long, 8'-0" wide, and 39'-10" high, and 40'-5" long, 10'-0" wide, and 40'-2" high, respectively. The width of those two windows was 20'-3". Height of the Upper Pier 11 window was 33'-10" and that on the Upper Pier 12 was 34'-2".

⁵³ J.A.L. Waddell, *Bridge Engineering*, Volume 1 (New York, NY: John Wiley & Sons, 1916): 1023-1024.

Pier Number ¹	Number, Length & Type of Piles ²	Pile Cap ³	Lower Pier ⁴	Upper Pier ⁵	Window Size in Upper Pier ⁶	Total Height ⁷
1	65/30' (timber?)	38'-6" x 14'-6" x 3'-0"	34'-6" x 6'-6" x 26'-5"	29'-6" x 4'-6" x 8'-4"	No Window	37'-9"
2	84/30' (timber?)	38'-3" x 20'-6" x 3'-6"	34'-6" x 6'-6" x 27'-11"	29'-6" x 4'-6" x 7'-10"	No Window	39'-3"
3	65/30' (timber?)	38'-6" x 14'-6" x 3'-0"	34'-6" x 6'-6" x 31'-5"	29'-6" x 4'-6" x 10'-1"	No Window	44'-6"
4	52/45' (precast concrete)	43'-0" x 19'-0" x 7'-6"	34'-10" x 6'-10" x 30'-1"	29'-6" x 4'-6" x 12'-5"	No Window	50'-0"
5	40/45' (precast concrete)	43'-0" x 16'-0" x 8'-6"	34'-10" x 6'-10" x 32'-4"	29'-6" x 4'-6" x 14'-8"	16'-6" x 8'-8"	55'-6"
6	78/45' (precast concrete)	43'-0" x 22'-0" x 10'-0"	35'-6" x 7'-6" x 33'-8"	29'-6" x 4'-6" x 17'-4"	16'-6" x 11'-4"	61'-0"
7	52/45' (precast concrete)	43'-0" x 18'-6" x 9'-6"	35'-6" x 7'-6" x 34'-4"	29'-6" x 4'-6" x 19'-8"	16'-6" x 14'-8"	63'-6"
8	75/55' (precast concrete)	55'-3" x 19'-0" x 9'-6"	48'-2" x 11'-0" x 34'-5"	39'-3" x 7'-0" x 21'-7"	21'-3" x 14'-1"	69'-6"
9	128/55' (precast concrete)	55'-9" x 29'-0" x 12'-0"	48'-9" x 11'-6" x 33'-11"	39'-3" x 7'-0" x 27'-7"	21'-3" x 22'-11"	77'-6"
10	96/30' (precast concrete)	55'-9" x 22'-0" x 11'-6"	48'-9" x 11'-6" x 37'-5"	39'-3" x 7'-0" x 34'-7"	21'-3" x 30'-1"	87'-0"
11	135/40' (precast concrete)	58'-0" x 31'-0" x 12'-0"	51'-3" x 13'-0" x 36'-0"	40'-3" x 8'-0" x 39'-10"	20'-3" x 33'-10"	91'-10"
12	192/45' (precast concrete)	58'-0" x 41'-0" x 15'-0"	51'-3" x 15'-0" x 32'-10"	40'-5" x 10'-0" x 40'-2"	20'-3" x 34'-2"	92'-0"
13	96/45' (precast concrete)	55'-9" x 22'-0" x 10'-0"	48'-9" x 11'-6" x 31'-6"	39'-3" x 7'-0" x 35'-8"	21'-3" x 26'-4"	79'-3"
14	52/40' (precast concrete)	43'-0" x 19'-0" x 8'-6"	36'-0" x 8'-0" x 27'-11"	29'-6" x 4'-6" x 27'-4"	16'-6" x 24'-4"	66'-9"
15	78/40' (precast concrete)	43'-0" x 22'-0" x 8'-6"	36'-0" x 8'-0" x 23'-0"	29'-6" x 4'-6" x 22'-6"	16'-6" x 19'-6"	57'-0"
16	65/30' (timber?)	38'-6" x 14'-6" x 3'-0"	35'-6" x 7'-6" x 21'-5"	29'-6" x 4'-6" x 18'-7"	16'-6" x 13'-10"	47'-0"

Note that piers 8-13 are highlighted as they specifically carry the massive, steel, cantilevered bridge structure. Piers 1-7 and 14-16, on the other hand, carry the greater structure's approach spans.

¹ Pier numbers are consistent with the 1951 plans and extend from the northwest to the southeast.

² The number of piles driven for the bridge foundation is identified first, followed by the length and type of pile. The precast concrete piles were identified as such in the plans. Piers 1, 2, 3 and 16 were simply noted as "piles" with no reference to the type of material used. Since the precast concrete piles were so noted, it is assumed that the piles for the four other piers referenced are of timber.

³ The Pile Cap is the concrete mass laid on top of the piles for each pier and that ties all together, thus creating the concrete platform from which the bridge piers rise. The measurements shown in columns 3, 4 & 5 identify, in order, the **length**, **width**, and **height** of the feature noted. Column 6, the Window Size, simply notes the **length** and **height** of each opening.

⁴ The Lower Pier is of solid concrete and rises from the Pile Cap to a point well above the high water level (see photograph #19 of 46).

⁵ The Upper Pier rises from the top of the Lower Pier (see photograph #19 of 46). The increasing and decreasing height of the Upper Pier accommodates the increasing or decreasing height of the traffic deck as it passes over the waterway and shipping lanes below.

⁶ Despite carrying both a fixed dead load and variable live load, the design of the Upper Piers is intended to reduce the amount of concrete needed for the bridge. One way to do that was to use windows on the taller piers which left the columns on each side of the pier to carry the load.

⁷ The total height noted extends from the bottom of the Pile Cap to the top of the Upper Pier on which the bridge's bearings are located. Rising from those bearings is the bridge's steel superstructure.

Figure 7: This chart was compiled from plans on file at IDOT and deals with general information regarding various components and features of the subject bridge's piers (Plans for Proposed Federal Aid Highway, Federal Aid Route 4, Section 86-B-D-E-F-P, project U-264 [1], [2] & [3], Cass-Schuyler Counties [Springfield, IL: State of Illinois Department of Public Works and Buildings[:] Division of Highways, 1951]: n.p.).

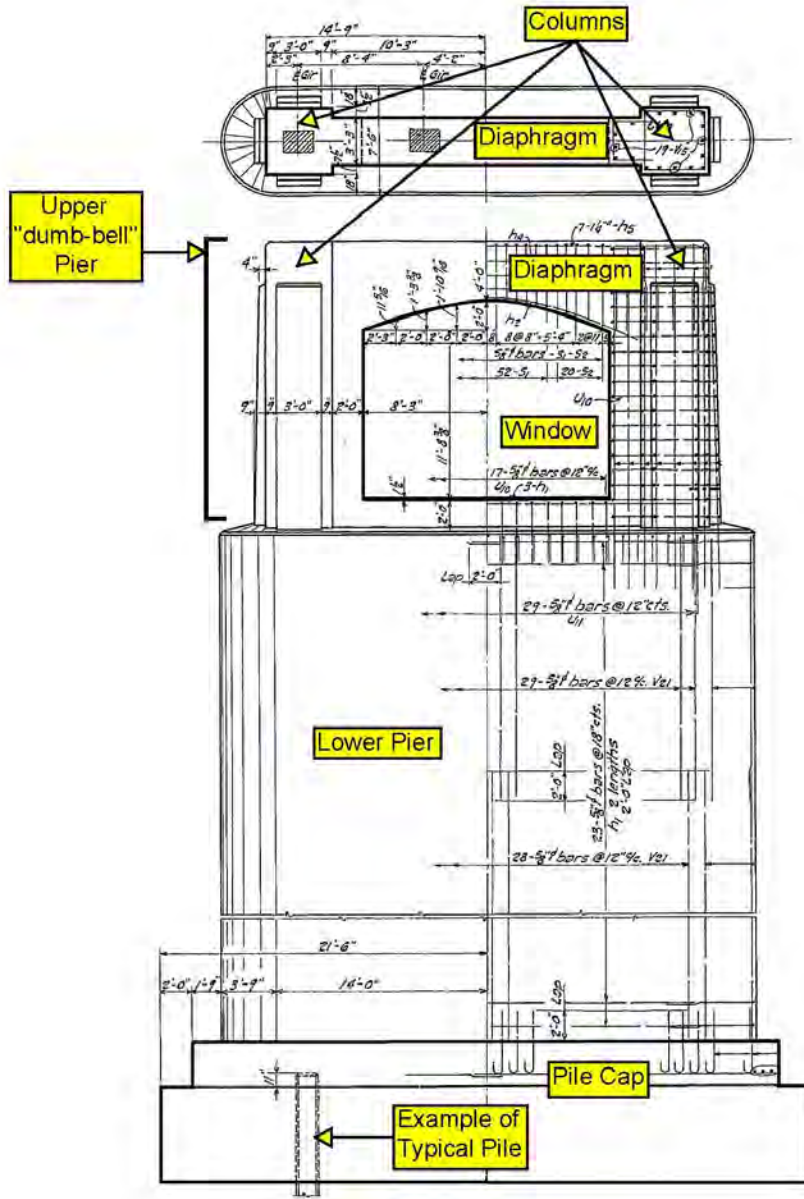


Figure 8: Pier No. 7 is shown as a general example of the sixteen supports needed to carry the Beardstown Bridge over the Illinois River. The structure's Upper and Lower components are apparent, as is the Pile Cap on which the pier was constructed. Additionally, note the "dumb-bell" image at the top, as well as the window. Both were utilized to limit the amount and costs of concrete needed.

In summary, the height (bottom of Pile Cap to top of Upper Pier) for each of the sixteen piers is as follows: Pier 1: 37'-9"; Pier 2: 39'-3"; Pier 3: 44'-6"; Pier 4: 50'-0"; Pier 5: 55'-6"; Pier 6: 61'-0"; Pier 7: 63'-6"; Pier 8: 69'-6"; Pier 9: 77'-6"; Pier 10: 87'-0"; Pier 11: 91'-10"; Pier 12: 92'-0"; Pier 13: 79'-3"; Pier 14: 66'-9"; Pier 15: 57'-0"; and Pier 16: 47'-0".

Extending southeast from the northwest abutment to Pier 8, and from Pier 13 to the southeast abutment, the deck of the approach spans is carried by four "I" beams running concurrently with the length of the deck and placed on 8'-4" centers. Deck beams on approach spans 1 and 17 are 4'-1½" deep with 1'-0" flanges. Those on spans 2-8 and 14-16 are 6'-6½" deep with 1'-3½" flanges. The spans are additionally strengthened and stiffened with cross frame braces built of angles and set between the beams, in addition to laterals affixed on the bottom of the beams. With spans 1 and 17 and their length of 74'-1½" as exceptions, the length of approach spans 2 through 5 was between 125'-1½" and 125'-4" while that of spans 6 through 8 and spans 14 through 16 was between 143'-7½" and 145'-0". The unique length of each span is noted in Figure 9 below.

Span Number & Description	Span Length
1 (Approach Span)	74'-1½"
2 (Approach Span)	125'-1½"
3 (Approach Span)	125'-3"
4 (Approach Span)	125'-3"
5 (Approach Span)	125'-4"
6 (Approach Span)	143'-8"
7 (Approach Span)	145'-0"
8 (Approach Span)	144'-4"
9 (Part of Two Span Cantilever Substructure)	360'-11"
10 (Part of Two Span Cantilever Substructure)	361'-7"
11 (Part of Three Span Cantilever Substructure)	421'-5"
12 (Part of Three Span Cantilever Substructure - Primary Navigation Channel)	540'-0"
13 (Part of Three Span Cantilever Substructure)	420'-10"
14 (Approach Span)	144'-5"
15 (Approach Span)	145'-0"
16 (Approach Span)	143'-7½"
17 (Approach Span)	74'-1½"

Note that spans 9-13 are highlighted as they specifically constitute the spans of the massive, steel, cantilevered bridge structure. Spans 1-8 and 14-17, in contrast, are the bridge's approach components.

Figure 9: Reported here is a brief description of each bridge span, in addition to the specific length of the span (Plans for Proposed Federal Aid Highway, Federal Aid Route 4, Section 86-B-D-E-F-P, project U-264 [1], [2] & [3], Cass-Schuyler Counties [Springfield, IL: State of Illinois Department of Public Works and Buildings[:] Division of Highways, 1951]: n.p.).

The primary structural components of the Beardstown Bridge are its five cantilevered spans arranged in two units. The first is a two-span configuration to the northwest (spans 9 & 10) while the other is a three span arrangement to the southeast (spans 11, 12, & 13), the center span of which accommodates the shipping channel of the Illinois River. Spans 9 & 10, or cantilevered Unit 1, each claim twelve panels. (Panels 1-12 are in span

9 and panels 13-24 are in span 10. Notice that the dimensions of all Span 9 components [the measurements described herein] are repeated in span 10, only in reverse order). The spans are framed by inclined end posts and top chords comprised of 18" channels and top and bottom plates with holes, the overall dimensions of which are 13" by 19", as well as a lower chord of two, 15" channels and 14" plates. Panel 1 is defined by a hip vertical of two, 12" channels connected by stay plates generally on 40" centers. Thereafter are there ten intermediate verticals prior to the tallest vertical in the unit, that towering over pier 9. They are all constructed of 12" channels and alternating 14" lacing or plates. The panels between, and defined by, the hip and intermediate verticals were all stiffened and strengthened by diagonals. Panels 2-8 each had one diagonal, though they alternated placement and created the image of a "W" every four panels. Note that at the center of the span, diagonals extended over two panels – instead of one. Thus was one diagonal used for Panels 9 & 10 and another for 11 & 12, though those diagonals were supported by supplemental and subordinate one-half diagonals in Panels 10, 11, and 12 (see Figure 10, page 31 for an illustration of various Span 9 components and their measurements).⁵⁴

Consistent with the pattern of structural members discussed for spans 9 & 10, spans 11, 12 & 13 are cantilevered Unit 2. It is framed by inclined end posts and top chords constructed of angles and plates with overall dimensions of 21½" by 14", as well as a lower chord of 18" channels and 16" plates. Regarding Span 11, its hip vertical defines Panel 1 and is a 16" deep "I" beam with an 8½" flange. Following that are twelve intermediate verticals, 10 of which are built of 12" channels and alternating 14" lacing or plates. Intermediate verticals 11 and 13 are both 16"-8½" "I" beams. Vertical 11, that which completes Span 11 and starts Span 12, and its two adjoining diagonals are of the same dimensions as the inclined end posts and top chords. Diagonals in panels two through six are of 12" channels and lacing or plates of 16", while those in Panels 8, 9, and 11 are of 18" channels and lacing or plates of 16". Subordinate, one-half diagonals are also located in panels 12 and 13. They utilize 12" channels and 16" lacing (an illustration of various Span 11 components and their measurements is found in Figure 11, page 32).

Span 12 has eighteen panels and, at 540'-0", is the longest component of the bridge. It is anchored by cantilever piers 11 and 12. Measurements on the northwest half of the bridge are consistent with those on the southeast half, only for the latter they are in reverse. Thus does this discussion address only the northwest half of the span. As noted previously, Vertical 11 is where Span 12 starts and is notable for its construction of angles and plates, as well as its 21" by 14" dimensions. Those measurements continue for the Span 12 top chord and are carried on through Vertical 12, as do the Lower Chord figures persist with 18" channels and 16" plates. Vertical 15 on Span 12 is a 16" deep "I" beam

⁵⁴ The dimensions of the various structural pieces noted are taken from both on-site measuring and the bridge plans, between which there are discrepancies. Thus may the actual structural-piece dimensions be off by an inch or two.

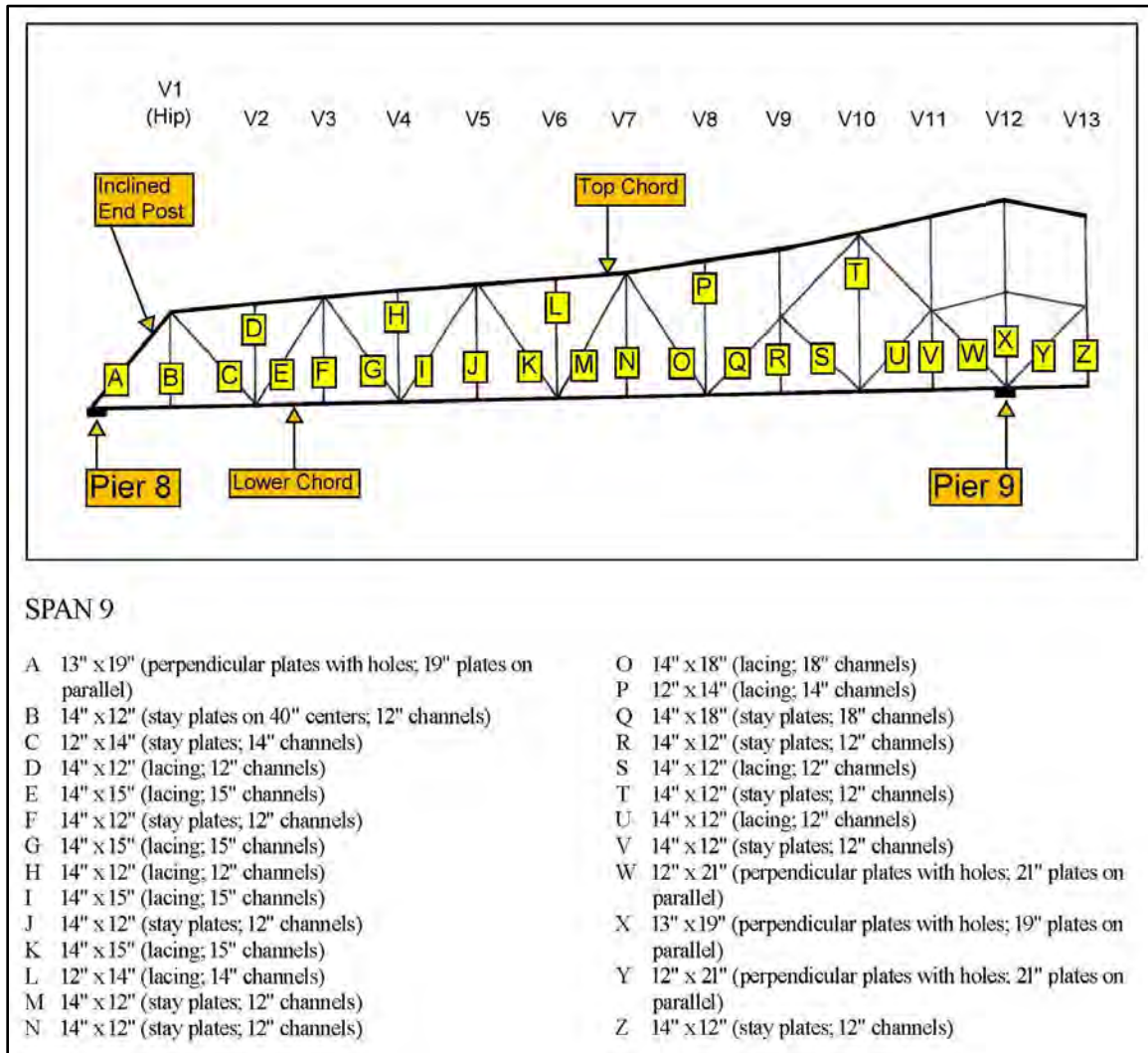


Figure 10: Span 9 is the northwesternmost of the two spans in cantilevered Unit 1. It is 360'-11" long. All measurements noted are identical in Span 10, only in reverse. The height of the hip vertical 1 (component B) is 35'-0", while that of the intermediate vertical 12 (component X) over Pier 9 is 74'-0".

with 8½" flanges, as is the hip vertical on Span 11, that defines Panel 15. Vertical 17, which defines panel 17, is also a 16" deep "I" beam with 8½" flanges. Between them is Vertical 16 of 12" channels and 16" plates. Thereafter, on verticals 18 through 23, do 12" channels with 16" plates or lacing alternate. As for diagonals, those in panels 15-18 (extending northwest to southeast) extend through two panels each. The diagonal in panels 15 and 16 is of plates with holes, channels, and angles. It has dimensions of 21" by 16" while that associated with panels 17 and 18 is 18" by 16" of plates, angles, and lacing. Again, subordinate, one-half diagonals of 12" channels and 16" lacing further strengthen panels 16 and 17. Diagonals in panels 19, 20 and 21 are all of 18" channels with plates, while that in Panel 22 utilizes 12" channels and 16" plates and that in Panel 23 is of 15" channels and 16" plates (identified in Figure 12, page 33 are the components

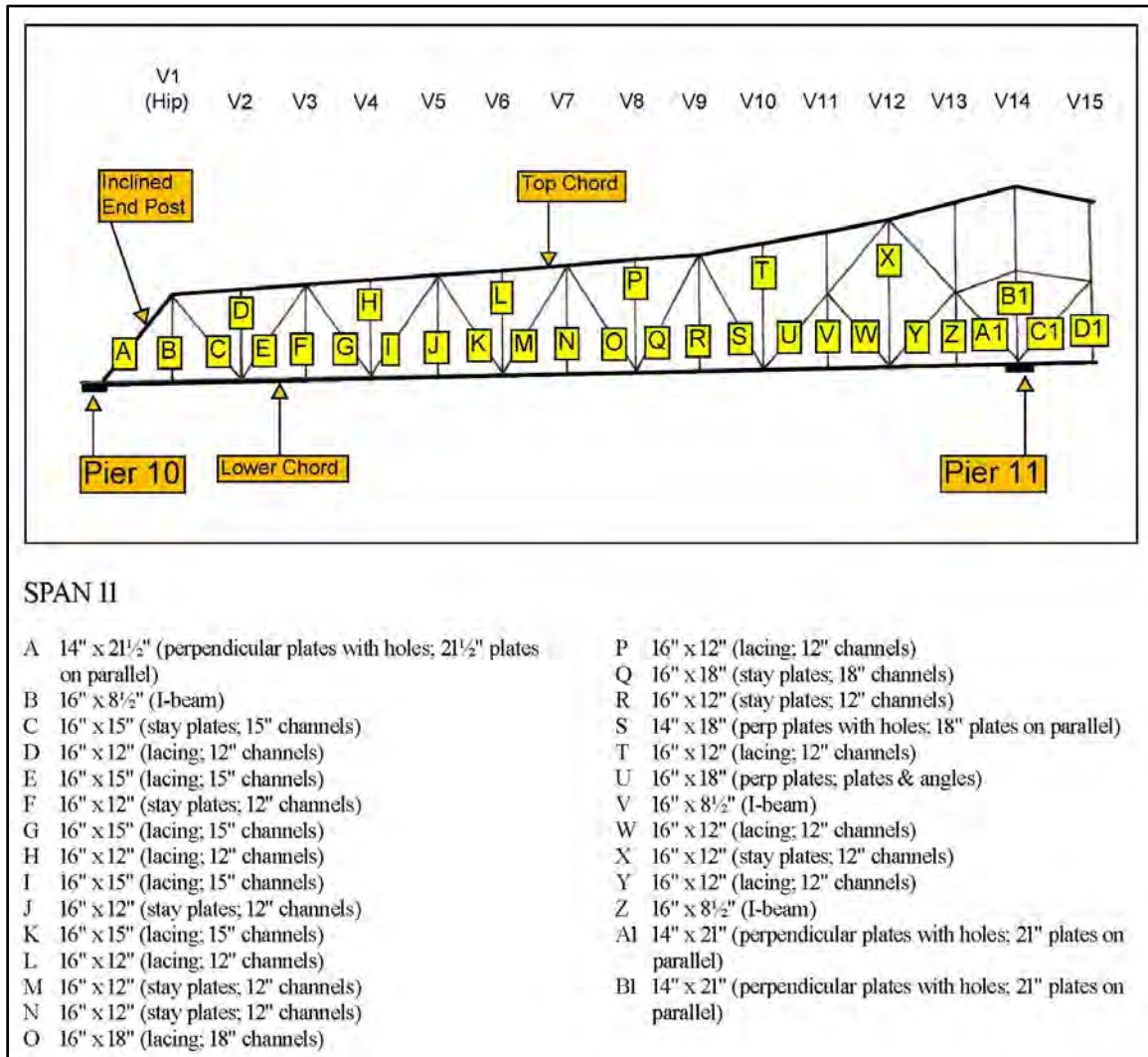


Figure II: Span II is the northwesternmost of the three spans in cantilevered Unit 2. It is 420'-5" long. All measurements noted are identical in Span 13, only in reverse. The height of the hip vertical 1 (component B) is 35'-0", while that of the intermediate vertical 14 (component B1) over Pier 11 is 80'-0".

and their measurements noted regarding Span 12).

Finally, for the traffic deck on spans 9 through 13, it was carried by sixty-nine deck beams generally set on 30' centers. They were also perpendicular to the lower chord of each truss, meaning that the beams were 30'-3½" long. They were tied to each lower chord/vertical connection. Perpendicular to the deck beams, and extending the length of each panel, were eight "I" beam deck stringers symmetrically arranged. Stringers 2 through 7 were set on 4'-2½" centers. Stringers 1 and 8 originally supported the sidewalk and were separated from stringers 2 and 7, respectively, by 2'-4½". The traffic deck is presently 28'-0" wide, inside-curb-to-inside-curb and has a three-course railing, the top chord of which is a squared, 4" x 4" chord that is 35" above the deck, 5" below which

is a 4" wide by 12" deep chord, 7" below which is the curb that is 11½" wide as it rises about 13" above the deck. The present deck and railing replaced the original deck, sidewalk, and railing of 1955 when rehabilitation work was completed in 1984/85.

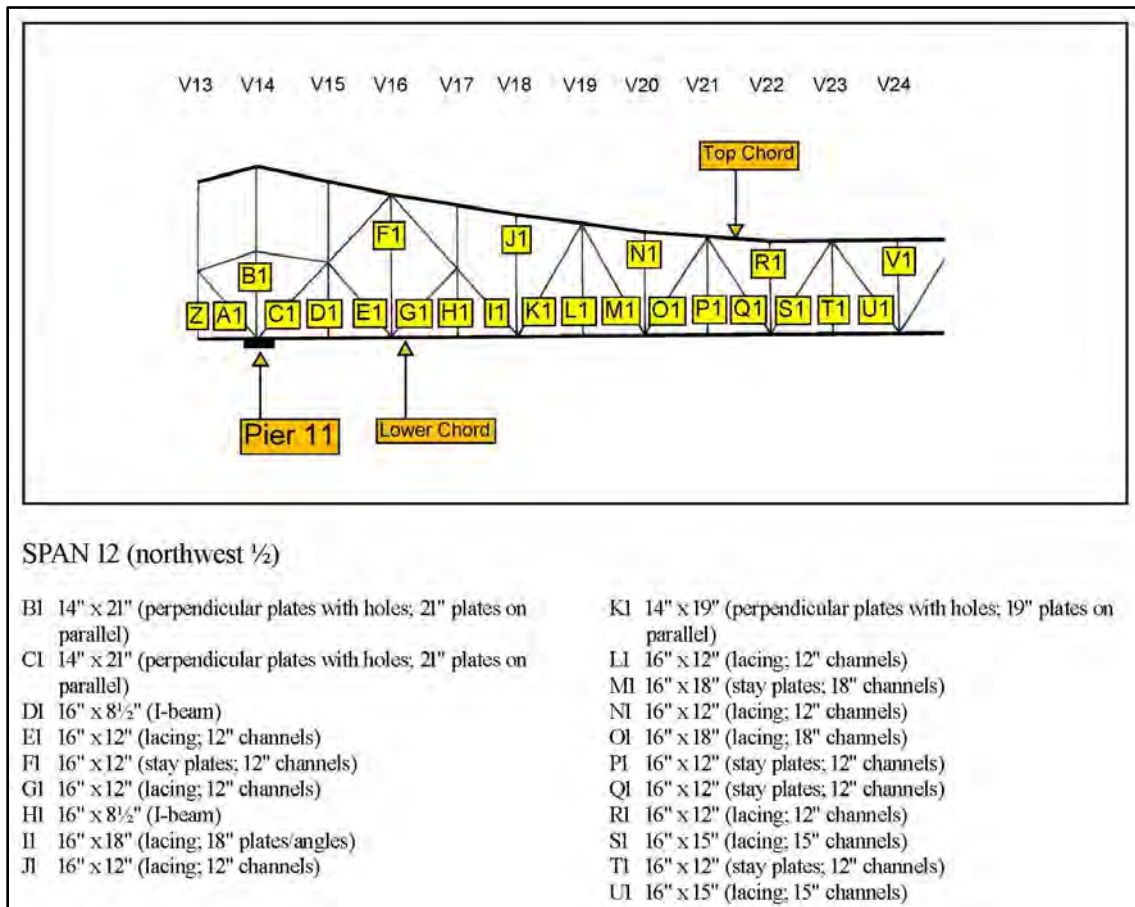


Figure 12: Shown is the northwestern half of Span 12 in cantilevered Unit 2. Span 12 is 540'-0" long. All measurements noted are identical in the southeast half of Span 12, only in reverse. The height of the vertical over Pier 11 (component B1) is 80'-0", while that at the center of the span, intermediate vertical 23 (component T1) is 41'-0".

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PART IV: METHODOLOGY OF RESEARCH

A. Research Strategy:

Research objectives were to place the bridge in its geographic, historic, and engineering contexts. A strategy was developed to accomplish those goals that investigated local, regional and statewide documentary sources. On-site observation and investigation of the bridge were also part of the research plan.

B. Research Process:

1. Visited bridge in October 2021 to review, photograph and measure it.
2. Consulted with the Illinois Department of Transportation. Digital sources reviewed include the HathiTrust Digital Library, newspapers.com, and newspaperarchive.com, all for data relating to the development of U.S. Highway 67 in general, and the construction of the U.S. Highway 67 bridge across the Illinois River in particular.
3. Completed research and prepared report draft.
4. Document draft internally reviewed.
5. Document draft reviewed by IDOT and SHPO.
6. Completed all revisions and submitted to IDOT.

C. Archives and Repositories Used/Consulted:

•Libraries and/or Other Repositories:

Department Library
Illinois Department of Transportation
2300 S. Dirksen Parkway
Springfield, Illinois 62764
(IDOT Annual Reports and various technical documents)

University of Wisconsin-Milwaukee Library
2100 E. Kenwood Boulevard
Milwaukee, Wisconsin 53211
(Books on Engineering History and Engineering Journals)

Illinois State Library
300 S. 2nd Street
Springfield, Illinois 62701-1796
(Plat Map, County Atlases, Illinois Transportation Map Collections)

University of Illinois Library
1408 W. Gregory Drive

Urbana, Illinois 61801
(Illinois State Gazetteers)

•On-Line Sources:

HathiTrust Digital Library
(Digitized Books, Gazetteers & Business Directories, Engineering Journals and
Other Resources)

newspapers.com
(Historic-period newspapers for surrounding communities)

newspaperarchives.com
(Historic-period newspapers for Beardstown, Illinois)

historicmapworks.com
(Historic-period county plat maps)

D. Research Staff:

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PART V: PROJECT INFORMATION

This HIER archival documentation is submitted in compliance with a stipulation of a Memorandum of Agreement (MOA) between the Federal Highway Administration, Illinois Division, and the Illinois State Preservation Officer, with final signature on 20 September 2021. The MOA was executed in compliance with CFR 36 800.6(b)(1)(iv) of the National Historic Preservation Act of 1966, as amended.

1938 Aerial Image of the Toll Bridge Location and Its Surrounding Community:



Figure 13: The bridge's agricultural and partially wooded vicinity is evident. Illinois Historic Aerial Photography: 1937-1947, Image SD-12-1009, 06 July 1938, Viewed at <http://maps.isgs.illinois.edu/ilhap/> on 30 March 2025.

USGS Map (1926/1944) Identifying Location of the 1899 Toll Bridge:

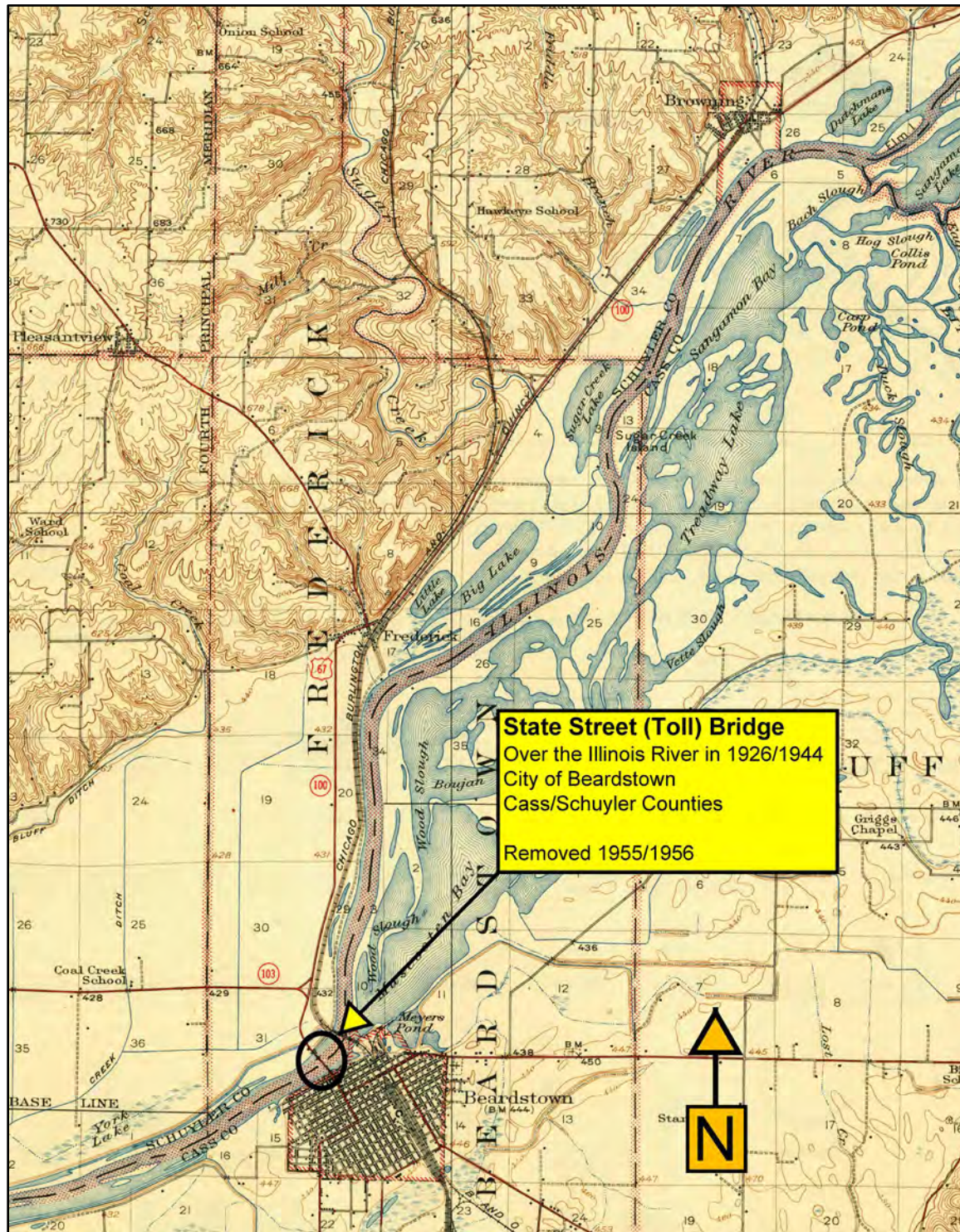


Figure 14: U.S. Geological Survey, *Beardstown Quadrangle* [map] 1926, 1:62500, 15 Minute Series (Reston, VA: United States Department of the Interior, USGS, 1926/1944).

USGS Map (1944/1959) Showing Location of the 1899 Toll Bridge and new 1955 Bridge:

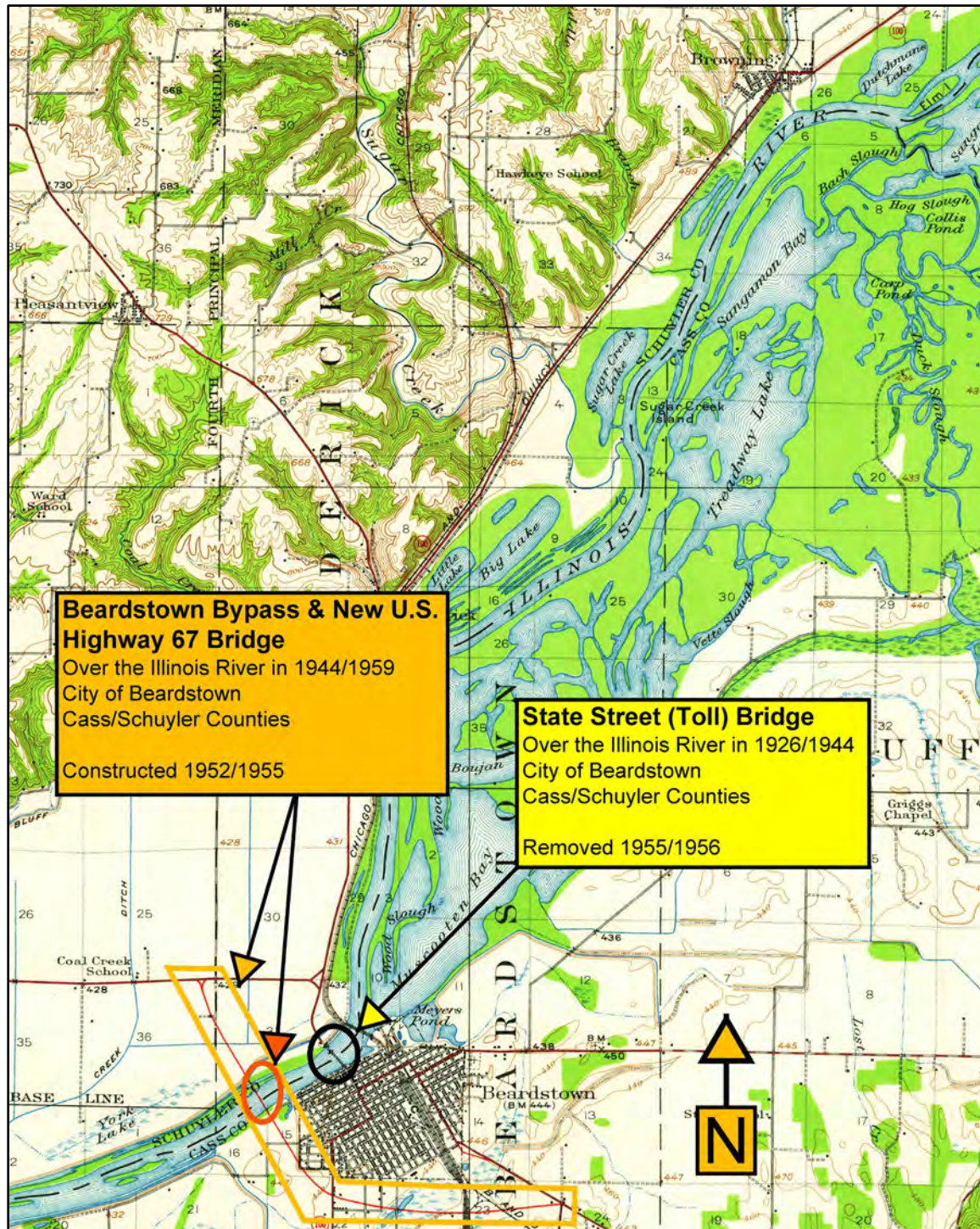


Figure 15: U.S. Geological Survey, *Beardstown Quadrangle* [map] 1944, 1:62500, 15 Minute Series (Reston, VA: United States Department of the Interior, USGS, 1944/1959).

USGS Map (1981) Showing Location and UTM Coordinates of the 1955 Bridge:

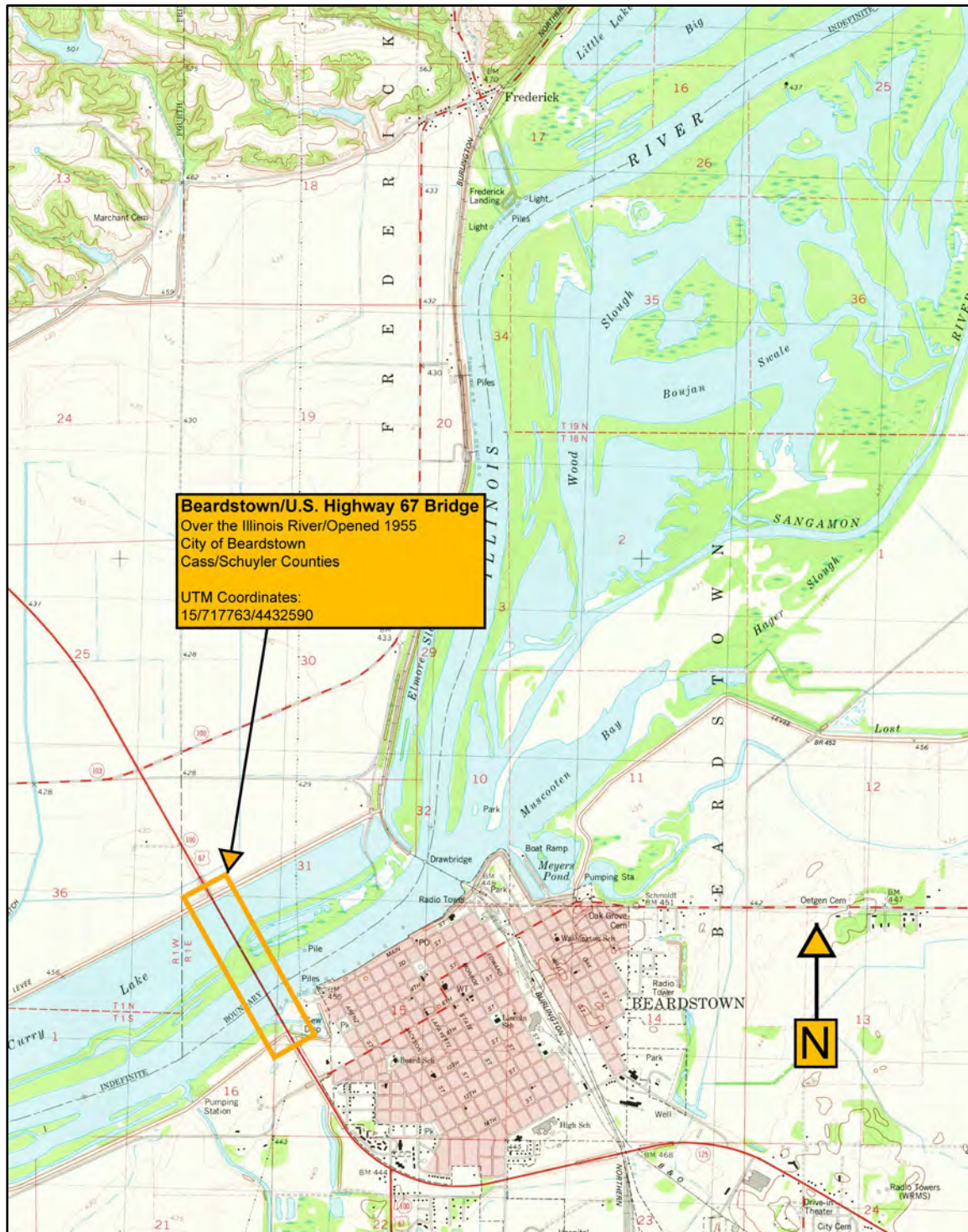


Figure 16: U.S. Geological Survey, *Beardstown Quadrangle* [map] 1981, 1:24000, 7 Minute Series Reston, VA: United States Department of the Interior, USGS, 1981).

HISTORIC ILLINOIS ENGINEERING RECORD

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Over Illinois River
City of Beardstown
Cass County
Illinois

HIER No. CS-2025-1

Documentation: 46 Exterior Photographs (2021)
 45 Data Pages
 03 USGS Maps (7.5 or 15 Minute)

John N. Vogel, Ph.D., Associate Degree - Professional Photography, Photographer
Mike Smith, M.A. & John M. Lambert, M.A., Drone Operators (Photographs #1 - #12)

HIER No. CS-2025-1.1	VIEW TO NORTHWEST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.2	VIEW TO NORTH. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.3	VIEW TO NORTHEAST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.4	VIEW TO EAST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.5	VIEW TO EAST SOUTHEAST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.6	VIEW TO SOUTHEAST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.7	VIEW TO SOUTHEAST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.8	VIEW TO SOUTH SOUTHEAST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.9	VIEW TO SOUTH. AERIAL VIEW OF BRIDGE AND ITS SETTING.

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HIER No. CS-2025-1.10	VIEW TO SOUTHWEST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.11	VIEW TO WEST NORTHWEST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.12	VIEW TO NORTHWEST. AERIAL VIEW OF BRIDGE AND ITS SETTING.
HIER No. CS-2025-1.13	VIEW TO NORTHWEST. BRIDGE AND ITS SETTING. SOUTHEAST APPROACH WITH STRUCTURE IN BACKGROUND.
HIER No. CS-2025-1.14	VIEW TO NORTHWEST. FROM EAST SIDE OF SPAN. BRIDGE AND ITS SETTING. SOUTHEAST APPROACH WITH STRUCTURE IN BACKGROUND.
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HIER No. CS-2025-1.45	NO DIRECTION. PLAQUE NOTING BRIDGE NAMESAKE, WILLIAM H. DIETRICH.
HIER No. CS-2025-1.46	NO DIRECTION. MARKER: ILLINOIS WATERWAY U.S.E.D. STATION 39+58.

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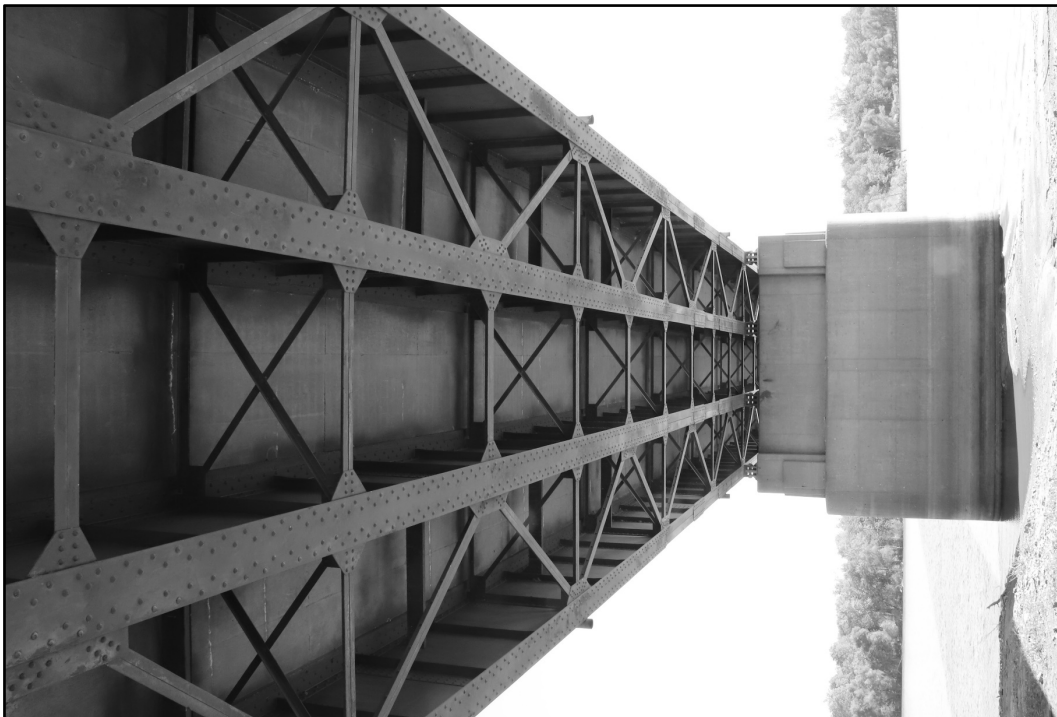


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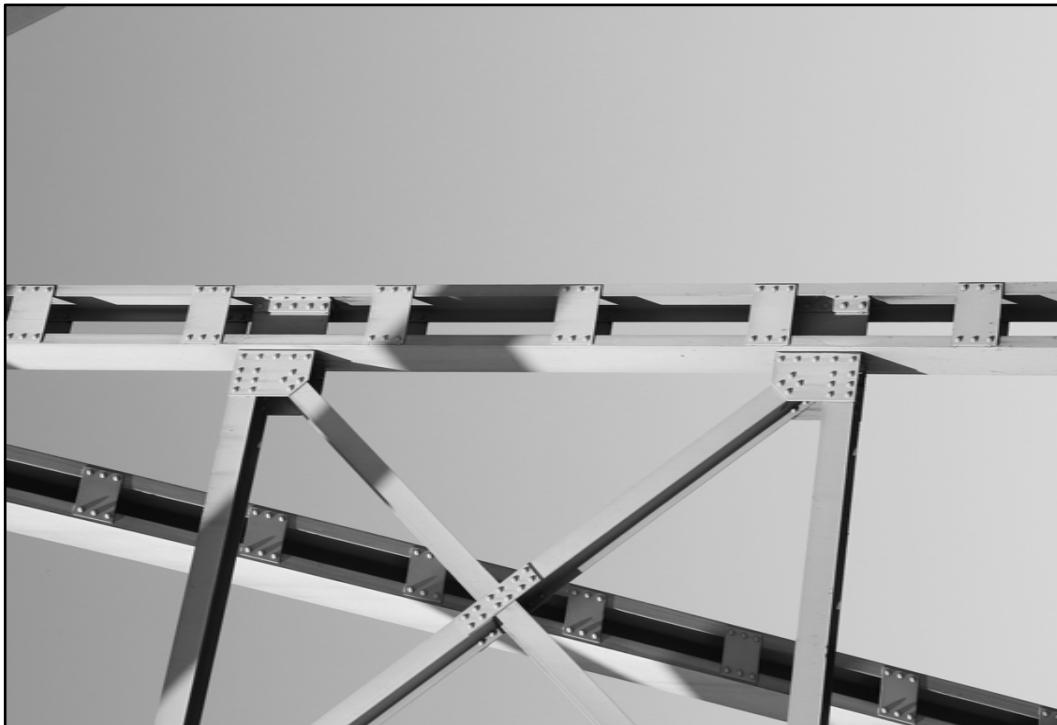


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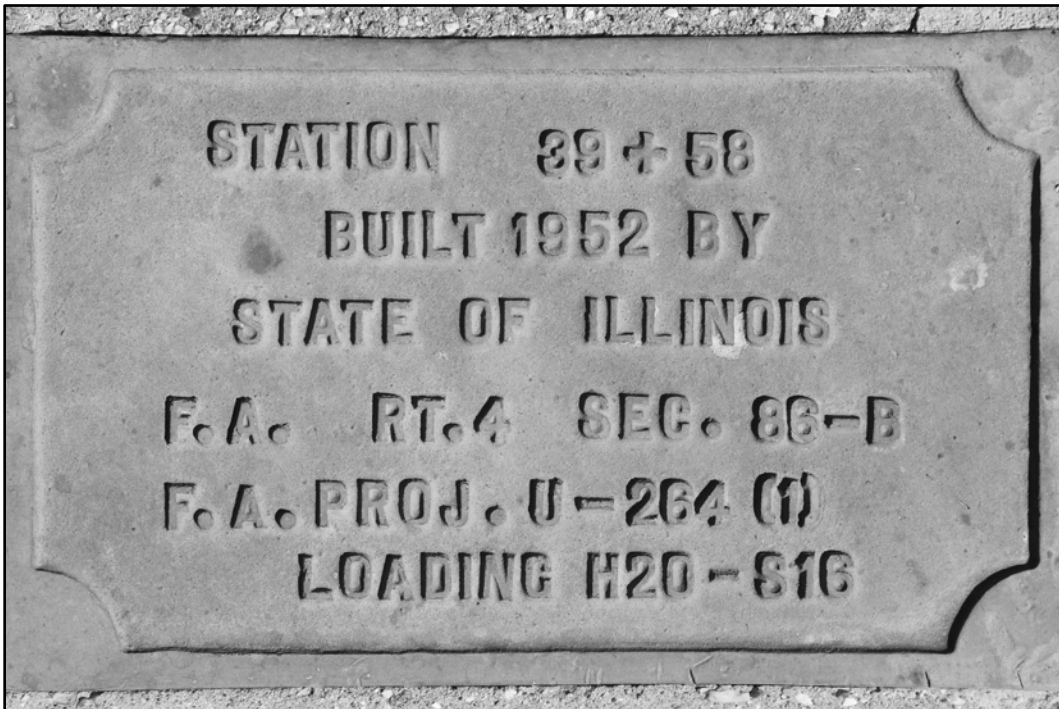


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