

United States Department of the Interior
National Park Service

Bridge No. 046-11-01316C

Name of Property

Clay County, Indiana

County and State

Name of multiple listing (if applicable)

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Section 8 Significance

Statement of Significance Summary Paragraph

State Bridge No. 046-11-01316C is eligible for the National Register of Historic Places under Criterion C, at the state level, as a multiple-span example of an important, revised, third-generation Indiana State Highway Commission (ISHC) standard plan. The bridge is the longer example of the two remaining Parker through trusses in Clay County. It is also an excellent example of one of the few remaining works of a major Indiana bridge-building firm, the Vincennes Bridge Company. The bridge demonstrates distinctive characteristics of a type, period or method of construction and it represents the work of a master bridge builder. Bridge No. 046-11-01316C demonstrates the ISHC's ability to modify standardized plans to meet the needs of a specific location and it appears to be one of only four remaining examples of an ISHC-designed and Vincennes Bridge Company-constructed Parker through truss still in use on an Indiana state highway.

Narrative Statement of Significance

Bridge No. 046-11-01316C was designed and built in the midst of the Great Depression. It was a time when, despite many people experiencing great hardships and poverty across the nation, road building continued. Sustained work on America's highways was due, in part, to a growing obsession with the automobile. One Hoosier historian notes that in the decade leading up to the Great Depression, one car existed in Indiana for every four residents.¹ During the Depression, Hoosier automobile registrations did not decline very much, and automobile fuel consumption stayed at pre-Depression levels with a rapid increase in the late 1930s. This fervor for motorized transportation, coupled with President Franklin Delano Roosevelt's New Deal programs to put people back to work, resulted in improvements to roadways during the Depression era.² Across the country, from 1930 to 1940, the amount of surfaced roadways nearly doubled from 694,000 miles to 1,367,000 miles.³

The ISHC utilized federal money from a variety of programs to continue road building during the Depression. In 1932, it created a three-part approach for managing federal relief programs:

- (1) adding local miles to the state system—almost 1,500 miles were added
- (2) doing more contract construction, and
- (3) creating day-labor projects.⁴

Design plans for Bridge No. 046-11-01316C indicate that it was part of "P.W.A. [Public Works Administration] Project No. 255."⁵ The PWA was created soon after President Roosevelt took office and it distributed nearly \$6 billion for construction projects in the 1930s on a 30 (federal)/70 (local) match basis. From March 1933 to September 1936, the timeframe in which this bridge was built, the PWA aided in construction of 60,361 miles of roads and 2,641 grade-crossing structures across the nation.⁶

Many roads and bridge crossings in Indiana, such as SR 46 in this area, were improved because of their upgrade from local road status to state highway status. As the ISHC obtained new

¹ James H. Madison, *The Indiana Way* (Bloomington: Indiana University Press, 1986), 268.

² Madison, 268-269.

³ M & H Architecture, *Indiana Historic Bridges Historic Context Study, 1830s to 1965* (Madison, WI: Mead and Hunt, Inc., 2007), 31. Prepared for the Indiana Department of Transportation. Available for download at the following URL: <http://www.in.gov/indot/2531.htm>.

⁴ M&H Architecture, Inc., *Indiana Historic Bridges Historic Context Study*, 33.

⁵ Indiana State Highway Commission, *Plans for Bridges of Spans Over 20 Feet for Proposed State Highway P.W.A. Project No.255 Section B, State Road No. 46 Section C & D*, November 17, 1933.

⁶ M&H Architecture, Inc., *Indiana Historic Bridges Historic Context Study*, 31-32.

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jurisdiction and responsibility for more local roadways each year, the need for maintenance and new construction projects continued to grow.

Although SR 46 was a route present on state highway maps from 1927 to 1929 from the Indiana-Ohio state line westward to the town of Spencer in Owen County, that is where the roadway stopped.⁷ The ISHC's annual report from 1930 stated that the following roadway had been taken into the system on September 25, 1930: SR 46 – From Terre Haute to Spencer; 40.82 miles.⁸ Additionally, the State Highway map for 1930 shows a route – identified as a continuation of SR 46 – going from Spencer through Bowling Green in Clay County to Terre Haute in Vigo County as an “authorized/proposed addition.”⁹ The 1931 map shows the road from Spencer to the Clay-Vigo County line as an “intermediate type,” likely gravel or stone with some sort of surface treatment. From the Clay-Vigo County line to Terre Haute the road is designated as a “high” type of roadway, one that is composed of concrete or a bituminous material.¹⁰

The survey work by the ISHC for the Bridge No. 046-11-01316C site over the Eel River was conducted from December 3 to December 8, 1931.¹¹ Much of the recorded information deals with flooding at the site and the recorded high water marks over the years. The testimony of several local residents was gathered in relation to the floods of 1875 and 1913, in which the water was several feet deep over the roadway to the west of the existing covered bridge. Most blamed the high floodwaters on the fact that “the Narrows” area of the Eel River about 1.5 mile downstream from the bridge had been blocked with driftwood causing the river to back up. The blockage was so dense that one long-time resident stated that one could walk across the river on the driftwood at “the Narrows” in 1875. Local residents were contemplating how to obtain dynamite, a scarce resource at the time, to eliminate the blockage. However, it finally broke free on its own accord before that measure was taken.¹² All of the flooding information was essential in determining an appropriate new bridge deck elevation to attempt to avoid rising floodwaters in the future.

Bridge No. 046-11-01316C is an example of a Parker through truss. Parker spans developed in the 1870s as an adaptation of the Pratt truss. Parker trusses consist of five or more slopes on the top chord, and typically spanned between 40 and 300 feet.¹³ This truss type was particularly well-suited to span long distances in many different locations. Thus, the Parker became the preferred choice for the through truss in Indiana, especially for ISHC designs. Although used as early as 1904, with that date being the earliest extant example in the state, they would reach wider circulation in the next several decades.¹⁴ By the 1920s, the ISHC had developed standard drawings for Parker trusses.¹⁵ Common

⁷Indiana State Highway Commission, *State Highway System of Indiana. September 30, 1927*. Accessed from <http://bl-libg-doghill.ads.iu.edu/gm-web/imdb/inhwy1927.pdf> on 26 May 2015; Indiana State Highway Commission, *State Highway System of Indiana. September 30, 1928*. Accessed from <http://bl-libg-doghill.ads.iu.edu/gm-web/imdb/inhwy1928.pdf> on 26 May 2015; Indiana State Highway Commission, *State Highway System of Indiana. September 30, 1929*. Accessed from <http://bl-libg-doghill.ads.iu.edu/gm-web/imdb/inhwy1929.pdf> on 26 May 2015.

⁸ *Year Book of the State of Indiana for the Year 1930* (Fort Wayne: Ft. Wayne Printing Co., 1930), 1146.

⁹ Indiana State Highway Commission, *State Highway System of Indiana. September 30, 1930*. Accessed from <http://bl-libg-doghill.ads.iu.edu/gm-web/imdb/inhwy1930.pdf> on 26 May 2015.

¹⁰ Indiana State Highway Commission, *State Highway System of Indiana. September 30, 1931*. Accessed from <http://bl-libg-doghill.ads.iu.edu/gm-web/imdb/inhwy1931.pdf> on 26 May 2015.

¹¹ Indiana State Highway Commission, *Surveyor's Field Notebook BR No. 512, “46-C-1316 Eel River,”* December 1931 – May 1932, 33 and Indiana State Highway Commission, *Plans for Bridges of Spans Over 20 Feet for Proposed State Highway P.W.A. Project No.255*.

¹² *Surveyor's Field Notebook*, 47-48 and 61.

¹³ M & H Architecture, *Indiana Historic Bridges Historic Context Study*, 65.

¹⁴ James L. Cooper, *Iron Monuments to Distant Posterity: Indiana's Metal Bridges, 1870-1930* (Indianapolis: DePauw

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truss lengths for ISHC-designed Parkers were 150', 175', and 200'.

Bridge No. 046-11-01316C is an example of the ISHC's revised version of the third-generation standard plan (#479A) for a 198-ft., riveted, Parker through truss for 24-ft. roadways.¹⁶ The bridge is constructed upon a concrete pier and concrete abutments on a 398-ft vertical curve. The truss depth varies from 21ft-6 in. at the portal to 33 ft. at midspan.

The overall length of the structure sets this bridge apart from the other extant Parker through truss in Clay County, State Bridge No. 042-11-03101A, which carries SR 42 over the Eel River approximately 5 miles north of Bridge No. 046-11-01316C. Bridge No. 042-11-03101A, also built by the Vincennes Bridge Company, was constructed in 1939 and is a one-span example at 175'. It was listed in the National Register in 2000.

The ISHC's annual report for 1934 acknowledged the significance of Bridge No. 046-11-01316C by listing it in the narrative "Report of the Engineer of Design" as one of seven "large bridges" that were included in contracts awarded that year.¹⁷ Bridges receiving this type of recognition in annual reports are rare and unique as most bridge contracts were simply listed in a table of aggregate data. The 1934 "Report of the Engineer of Construction" stated that 137 contracts for bridges over 20 ft. in length were awarded in that fiscal year. Out of the large group of bridge contracts awarded that year, it is noteworthy that the construction of Bridge No. 046-11-01316C was called out in a report that typically summarizes data on a state level with very few specific projects recognized.¹⁸

The Engineer of Construction, in his 1935 annual report, noted that: "During the past year we have demonstrated that bridges can be built on alignment curves with superelevation, as well as vertical curves, without sacrifice of careful workmanship and pleasing lines."¹⁹ Although no bridges were individually identified in conjunction with the above statement, because of its 398-ft vertical curve and its recognition as a "large bridge" in the previous annual report, it is likely that Bridge No. 046-11-01316C was one of the examples in mind.

Bridge No. 046-11-01316C was constructed by the Vincennes Bridge Company, a major Indiana bridge-building firm, whose work could be found in at least eight states. In Indiana, they primarily concentrated in its southern counties. The company was founded by brothers John and Frank Oliphant and Jacob L. Riddle in Vincennes in 1899 and it was active through 1951. The firm specialized in metal trusses, focusing on functional and economical designs. In contrast to other manufacturing firms in Indiana, the Vincennes Bridge Company offered full-service bridge-building services even when other manufacturers took on a role of subcontractor. The company retained crews that could build a bridge from bottom to top and it routinely bid against contractors for construction contracts.

The Vincennes Bridge Company bid on many ISHC contracts, as well as those for other state highway departments, as new projects for these developing entities became more prevalent in the 1920s.²⁰ The extent of the company's work is evidenced in its annual production that reached 1,200 bridges and its annual sales, which reached approximately \$1 million. Contract No. 684 for Bridge No. 046-11-01316C was awarded by the ISHC to the Vincennes Bridge Company on January 2, 1934 for a

University, et. al, 1987), 76.

¹⁵ M & H Architecture, *Indiana Historic Bridges Historic Context Study*, 65.

¹⁶ M&H Architecture, Inc., *Indiana Historic Bridge Inventory*, Database, entry for "State Bridge Number 046-11-01316A," 2010. Prepared for the Indiana Department of Transportation. Available for download at the following URL: <http://www.in.gov/indot/div/public/HistoricBridgeDatabase.mdb>.

¹⁷ *Year Book of the State of Indiana for the Year 1934* (Indianapolis: Wm. B. Burford, 1934), 650.

¹⁸ *Ibid.*, 651.

¹⁹ *Year Book of the State of Indiana for the Year 1935* (Indianapolis: Wm. B. Burford, 1935), 525.

²⁰ Cooper, 28.

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price of \$63,058.13.²¹ The contract was completed on April 10, 1935 with only \$58,112.32 in payments expended.²²

While many examples of the Vincennes Bridge Company’s work once dotted the Indiana landscape, very few confirmed examples remain extant today. An analysis of the *Indiana Historic Bridge Inventory* database (2010 data) indicates that approximately 22 identified/known examples of the company’s work remain, while eleven other examples can likely be attributed to the firm. Noted Indiana bridge historian James L. Cooper has observed that the Vincennes Bridge Company probably built more Parker through trusses in the state than any other Indiana firm.²³ However, of the 33 bridges mentioned above, only a handful (five) are Parker through trusses (Bridge No. 046-11-01316C included). Only four of these Parker through trusses carry state highways, making Bridge No. 046-11-01316C a rarity.²⁴

Today, Bridge No. 046-11-01316C remains basically unchanged from the bridge that the Vincennes Bridge Company built in 1935. Major repair work has been undertaken on the bridge three times since its construction. In 1977, the bridge deck was reconstructed and various structural members were repaired. The deteriorated condition of the superstructure has required two closures of the bridge in recent years. In 2011 the bridge was closed to traffic requiring the Indiana Department of Transportation (INDOT) to complete repair work to some gusset plates and floor beams. In 2012 it was closed again after in-depth inspections revealed additional concerns. Additional gusset plate repairs were undertaken to reopen the bridge.

Additional major rehabilitation work is needed at this time because nearly all steel members show some amount of rusting and/or minor section loss and the lower portion of all sway bracing has been removed due to continued collision damage. However, the trusses remain intact and demonstrate the bridge’s historical and engineering integrity/significance.

²¹ M&H Architecture, Inc., *Indiana Historic Bridge Inventory*, Database, entry for “State Bridge Number 046-11-01316A,” 2010 and *Year Book of the State of Indiana for the Year 1934*, 676.

²² *Year Book of the State of Indiana for the Year 1935*, 525.

²³ Cooper, 77.

²⁴ Although more than 33 extant examples of the Vincennes Bridge Company’s may be present in Indiana and simply not attributed to the firm, the number of ISHC-designed examples currently still on state highways is unlikely to change due to readily available and accurate state record-keeping.