TR 202 (CR 2325 E)
Over Panther Creek
(S.N. 102-3094/Sequence No. 11532A)
Greene Township
Woodford County
Illinois

HIER No. WD-2019-1

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

December 2019

HISTORIC ILLINOIS ENGINEERING RECORD
HIER No. WD-2019-1

TR 202 Bridge
(WARREN PONY TRUSS WITH VERTICALS & WARREN CANTILEVERED BEDSTEAD [DECK] TRUSS)

Location: TR 202 over Panther Creek
Greene Township, Woodford County, Illinois

USGS Quadrangle: USGS Benson, 7.5 minute, Illinois
Latitude 40° 45' 22" N Longitude 089° 05' 49" W

Universal Transverse Mercator Coordinates:
Zone 16 322954 Easting 4513648 Northing

Present Owner: Greene Township

Present Use: Vehicular Bridge (IDOT Structure No. 102-3094)

Significance: The TR 202 Bridge across Panther Creek is a two-span structure. Oriented on a north/south axis, the north span is a Warren Pony Truss with verticals. It is fabricated from steel plates, channels, rods and angles. The south span is a Warren Cantilevered Bedstead Truss generally built of angles. It is an uncommon bridge-type that was a product of the Indiana Bridge Company. The two bridge-types that comprise this structure were likely available and moved to the site in 1925 to replace a bridge lost in 1924 flooding. The Warren Pony Truss is a fine example of its type. The Warren Cantilevered Bedstead Truss, however, is a rare example of its type. This unique combination of bridges was determined in consultation with the State Historic Preservation Office to be eligible for the National Register of Historic Places.

PART 1. HISTORICAL INFORMATION

A. Physical History:

1. Date of Erection: 1925[1]

2. Designer: Unknown

[1] This date represents the year when the two spans were likely moved to the Panther Creek location to compensate for a bridge lost to flooding. Assuming this to be the case, the original date of construction for each span is unknown.

3. Original and subsequent owners: Greene Township

4. Builder or contractor: Indiana Bridge Company (south span)

5. Alterations and additions: The bridge has been altered little. It was closed in 2008 and is in a state of advanced deterioration.

B. Historical Context:[2]

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 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 water courses also accommodated travel. Little is known of the pile trestles or half-submerged floating platforms used. All were subject to risks and washouts.[3]

As settlers established permanent communities, "experienced mechanics" – either self-taught or from New England shipyards – were attracted to the frontier to erect covered bridges. Between 1820 and 1900, an estimated two to three hundred such bridges were built in Illinois, only a handful of which are thought to remain today.[4]

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. They were followed in the 1870s by those 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.[5]

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[2] The "Bridge Development in Illinois," "Steel Bridge" and "Pratt and Warren Truss Bridge" sections were and initially prepared in circa 1990 by John 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.

[3] 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.

[4] Russell M. Garrard, "Early Bridges in Central Illinois," in *Heritage of Mid-Illinois Engineering* (Capital City Chapter of the Illinois Society of Professional Engineers, circa 1976): 15ff.

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

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.[6]

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 often still constructed 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 variety of function-related shops that included designing, forging 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.[7]

The State of Illinois claimed almost sixty bridge building companies that operated

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[6] "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).

[7] Jeffrey A. Hess and Robert M. Frame, *Historic Highway Bridges in Wisconsin, Volume 2, Part 1: Truss Bridges* (Madison, WI: Wisconsin Department of Transportation, 1998): 65-67.

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.[8]

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 roadway network. One problem was that local road commissioners often lacked the expertise to make wise 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 addressing 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.[9]

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 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).[10]

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[8] 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.

[9] 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): 56.

[10] *Modern Bridges for Illinois Highways, Second Edition Revised and Enlarged* (Springfield, IL: State of Illinois Highway

Pratt and Warren Truss Bridges:

Pratt Truss bridges were first constructed of iron and patented in 1844 by Thomas and Caleb Pratt. Bridges of this type put vertically-placed members in compression (being pushed in at both ends) while diagonals were in tension (being stretched or pulled at both ends). Pratts use heavy vertical beams typically of channels, angles and lacing while diagonals were considerably more slender and generally comprised of steel rods, angles or bars. These bridges were designed for use as either Pony or Through-truss structures.[11]

Warren Truss bridges were developed in the same decade. Two British engineers patented in 1848 the truss system which had only diagonals that acted in both tension and compression. Indeed, the substantial diagonals form a pronounced "W" in the truss's web, typically a giveaway as to the bridge's type. A prominent variation of the type was a Warren Truss with Verticals in which the verticals were subordinate components that simply provided additional bracing for the structure. Warren Trusses, again both Pony and Through, were thought an economical bridge-type and still being erected in the 1970s.[12]

Bedstead Truss Bridges:

These structures generally evolved in the last decade of the nineteenth century and first of the twentieth century, and could be built of either Pratt or Warren pony trusses. Bedsteads, as well as the leg bridge, a similar structure below deck but that was intended for shorter spans and did not employ trusses above, were well received in the cost conscious Midwest. In Indiana bedsteads were said to be "neither eye-catching nor otherwise attention-getting, [but they] provided cheap and quite functional spans across hundreds of … streams in the early twentieth century." Additionally did they did not require stone or concrete abutments since their four end posts (one in each of the bridge's four corners) extended into the ground, down to a mud sill, and essentially became the bridge's substructure. Bedstead and leg bridges could also be constructed in a few days by a small crew and were "designed to sell rather than to serve."[13]

Commission, Bulletin No. 9, 1912): 8.

[11] T. Allan Comp and Donald Jackson, *Bridge Truss Types: A Guide to Dating and Identifying* (Memphis, TN: American Association for State and Local History, Technical Leaflet 95, 1977); n.p.; Hess and Frame, *Bridges in Wisconsin*, 12.

[12] Comp and Jackson, *Truss Types*, n.p; Parsons Brinckerhoff & Engineering and Industrial Heritage, *A Context for Common Historic Bridge Types*, (Washington, D.C., Transportation Research Board, 2005): 3-39 to 3-40.

[13] It was implied that Warren trusses might be more easily installed in the field since they could be partially assembled, either

These structures were typically used for 30 to 60-foot spans. Riveted connections were preferred though pin connections were sometimes used. The bridges had top and lower chords, as did any Pony Truss, which were riveted at right angles, unlike Pony Trusses with inclined end posts, to the vertical end posts, or legs, which were normally constructed of channels and plates. Lower chords were typically compression components in the panels of the truss adjacent to the end posts since tension on those posts was "assumed to [be] overcome" by the force of the earth fill behind the legs. Braced against the legs was a backing, typically of wood, sheet metal or perhaps concrete panels, that held the earthen fill used for the bridge's approaches (see Figures 1 & 2). The legs rose from a mud sill usually set three to four feet below the stream bed though, in areas prone to flooding, the legs could be planted eight to ten feet below the bed. Given the lack of abutments and the tenuous nature of a bedstead bridge's four leg foundation, limiting the dead load of the structure was important, thus were decks typically of wood which was lighter than concrete.[14]

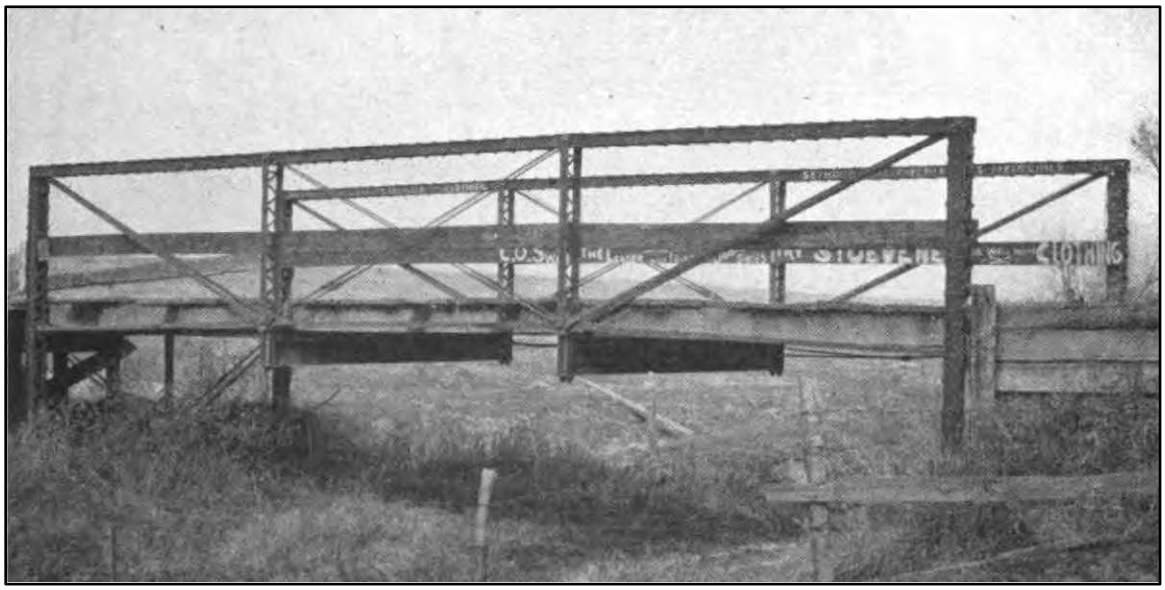

Figure 1: This Bedstead Truss bridge was illustrated an Illinois Highway Commission Report in 1906 (*First Annual Report of the Illinois Highway Commission for the Year 1906* [Springfield, IL: Phillips Bros., State Printer, 1907]: Plate 6, Following Page 56).

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by section or truss, in the shop. The only work at the site then was bolting the sections or trusses together and installing the floor beams. Daniel B. Luten, "Defective Bridge Construction in the Prairie States," *Engineering News*, Vol. 16, No. 16 (17 April 1902): 304-305; James L. Cooper, *Iron Monuments to Distant Posterity* (no city: no publisher, 1987): 80, 82, 94; Hans Nelson Brue, "The Development of Highway Bridges in Wisconsin," (Under Graduate Thesis, University of Wisconsin, 1916): 11.

[14] Luten, "Defective Bridge Construction," 304-305; Brue, "Highway Bridges in Wisconsin," 11; Cooper, *Iron Monuments*, 80.

Figure 2: This image illustrates a Bedstead Truss bridge in its most simple form, that is a span carried by nothing more than four end posts that extend down to a mud sill several feet below ground. Note that there are no restraints behind the legs to hold fill for the approaches since this structure used approach spans to either side of the legs. This is an abandoned bridge in Iroquois County, Illinois.

Hans Nelson Brue, in a 1916 engineering class thesis, admonished bridge builders to "never use steel in contact with the ground." But without abutments, there was no other alternative for the Bedstead truss. One problem resulting was that steel legs set in the earth or in water were subject to rust. Daniel Luten, in an *Engineering News* article, observed that Bedstead legs might retain their structural integrity for 20 or 30 years, but not indefinitely. More insidious according to Luten, since the association between cause and effect was obscured, was the rigid character of leg bridges as illustrated by the fixed connections of the legs to the trusses. Structures, he suggested, may not last twelve years due to the subterranean pressures combined with temperature-related expansion and contraction. "The structure," he observed, "will grow weaker and weaker under these forces but failure will be most apt to occur at times of high water or immediately after, when the earth filling is saturated and semi-fluid, exerting a maximum pressure against the legs. The destruction of the bridge is then charged to the high water, which it is argued, no one could have prevented."[15] In other words, the high water was blamed for a collapse when it was

[15] Arthur R. Hirst, *Culverts and Bridges: Road Pamphlet Number 4* (Madison: Wisconsin Geological and Natural History

actually the prior, though unseen, structural damage caused by expansion and contraction that set the bridge up for failure.

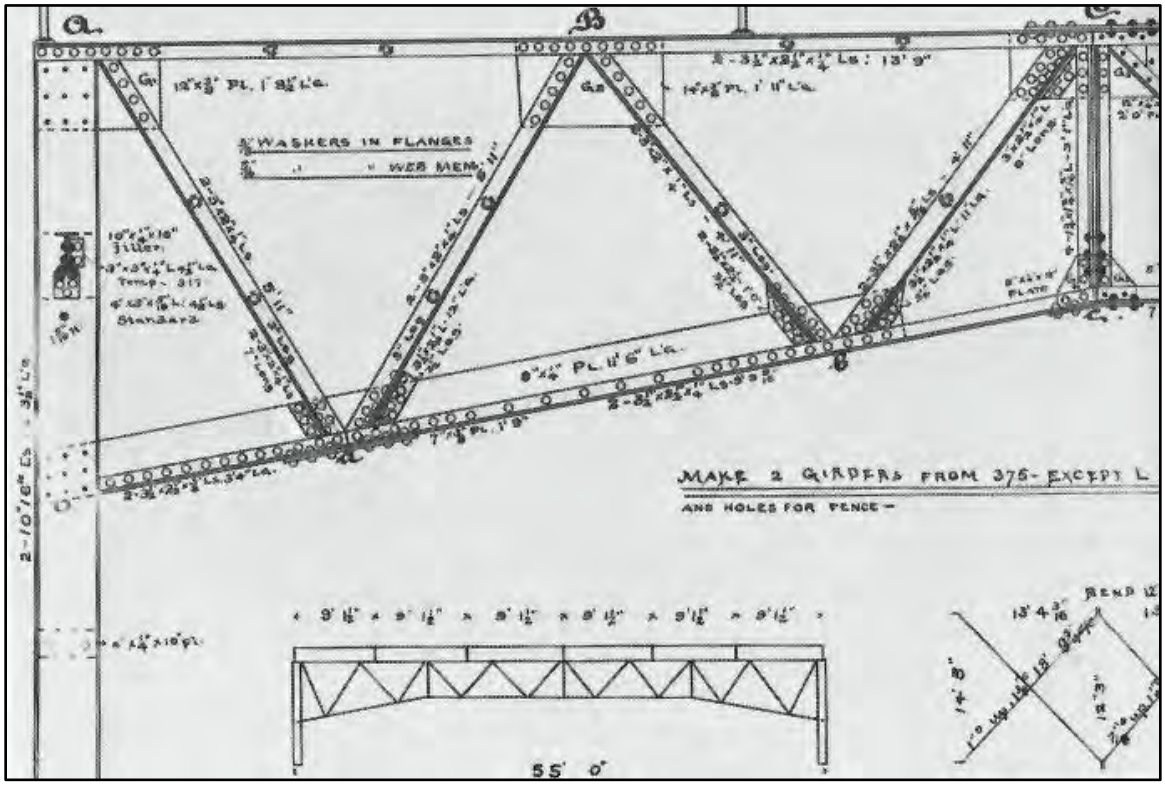

Figure 3: Illustrated in this picture is a diagram of the "cantilevered" Warren Bedstead truss constructed by the Indiana Bridge Company (James L. Cooper, *Iron Monuments to Distant Posterity* [no city: no publisher, 1987]: 96).

Finally, there was a variation on a Warren Bedstead truss that gained some acceptance in the Midwest around the turn of the twentieth century. It was called a "cantilevered" Bedstead (deck) truss bridge, though the use of the term "cantilevered" was something of a misnomer.[16] It is uncertain how many, if any, other firms manufactured this bridge-type, but it is known that the Indiana Bridge Company (IBCo) did. The IBCo sold them between about 1890 and 1920. An advantage of this type of structure was its nominal use of steel. It was also easy to assemble. Two types of the bridge were sold by the IBCo, either a three or four-section version, meaning a bridge that had either one or two

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Survey, 1907): 46; Luten, "Defective Bridge Construction," 305.

[16] In actuality a "cantilevered" bedstead truss is a more conventional truss than one that was actually cantilevered since all three or four parts of the truss (two end components anchored to the verticals at each end of the bridge and connected by one or two center components) form a single, rigid span. A true cantilevered bridge consists of cantilevered spans at each end of the structure that are tied together by a suspended span which the cantilevered spans carry. Cooper, *Iron Monuments*, 95-96.

center components. The three section bridge generally spanned 30 to 50-foot lengths while the four section bridge covered 55 to 70 foot lengths. An illustration of the IBCo framework for the "cantilevered" bedstead truss is found in Figure 3, Page 9, while a photograph illustrating the three section design is found in Figure 4, Page 11.[17]

The TR 202 Bridge over Panther Creek is a two-span bridge. The north span is a Warren Pony Truss and the south span is a Warren Cantilevered Bedstead (Deck) Truss.

Woodford County and Greene Township

Woodford County was established in 1841 and Greene Township created in 1855, though settlers had been arriving in the area since the late 1820s. The vicinity was well watered and claimed some timberland adjacent to the various streams and creeks. The vast majority of the township was undulating prairieland with what was said to have "deep and very rich" soil well suited for growing corn. Although the immediate area claimed two general stores and a post office prior to the 1854 arrival of the Illinois Central railroad in the easternmost part of the county, at least one of the stores and the post office subsequently moved to the new railroad town of Panola. Thus did Greene evolve as an entirely rural township though it was surrounded by communities immediately beyond its boundary with Roanoke to the west, Benson to the north, Panola to the east, El Paso to the southeast and Secor to the southwest. There were clearly many locations to which the farm families of Greene Township could travel to sell their crops and acquire necessary staples, but those travel needs created a demand for good roads.[18]

Local Roads and the TR 202 Bridge:

Interest in local roads grew after the county's townships were established and the care of those roads was assigned to them. Indeed, Greene claimed in 1878 almost 100 miles of graded roads within the township's boundary, one of which was a north/south conveyance one-quarter mile east of the Section 34/33 Section Line. That road was a predecessor to today's TR 202 and included a crossing over Panther Creek. By 1912 the land on the west side of the road, on both the north and south sides of the creek, was held by the Yerkes family while that to the east, again on both sides of the creek,

[17] Cooper, *Iron Monuments*, 95.

[18] B.J. Radford, *History of Woodford County: Giving a Brief Account of Its Settlement, Organization, Physical Characteristics and Progress* (Peoria, IL: W.T. Dowdall, 1877): 24; Roy L. Moore, *History of Woodford County: A Concise History of the Settlement and Growth of Woodford County* (Eureka, IL: Woodford County Republican, 1910): 70, 74; *The Past and Present of Woodford County Illinois* (Chicago: Wm. Le Baron, Jr. & Co., 1878): 349.

belonged to the family Schieber. The two held the land on either side of the bridge to at least 1940.[19]

Figure 4: This image of the subject bridge illustrates well a Cantilevered Bedstead Truss of the Indiana Bridge Company, a plan sheet for which is found in Figure 3, Page 9.

Traffic on the road separating the two properties was nominal, but it did grow. In 1937 it was less than twenty-four vehicles per day though volume increased to between twenty-five and forty-nine vehicles per day by 1947. Slowly growing volume not-withstanding, the road never carried any more than local traffic though the ability to cross Panther Creek at that location was important to local inhabitants as they ventured to Roanoke, Panola, El Paso or any of the other local trade centers.[20]

Not only did the Yerkes and Schieber families experience the nominally growing traffic on the road, but they witnessed the massive rainfall of Wednesday, 20 August 1924, when over 9½ inches fell. The storm appears to have covered much of central Illinois,

[19] *Past and Present of Woodford County*, 350; *Atlas of Woodford Co*(unty) *and the State of Illinois* (Chicago: Warner & Beers, 1873): XIX; *Standard Atlas of Woodford County, Illinois* (Chicago: Geo. A. Ogle & Co., 1912): 47; *Atlas and Plat Book of Woodford County, Illinois* (Washburn, IL: The Washburn Leader, 1920): 25; *Plat Book of Woodford County, Illinois* (Rockford, IL: W.W. Hixson & Company, ca. 1930): n.p.; *Plat Book of Woodford County, Illinois* (Rockford, IL: W.W. Hixson & Company, ca., 1940.

[20] *Traffic Map, Woodford County, Illinois* (Springfield, IL: Statewide Highway Panning Survey, Division of Highways, Department of Public Works & Buildings, 1937 [on file at the Illinois State Library, Springfield]); *Traffic Map, Woodford County, Illinois* (Springfield, IL: Statewide Highway Panning Survey, Division of Highways, Department of Public Works & Buildings, 1947 [on file at the Illinois State Library, Springfield]).

but it was devastating in east central Woodford County. Panther Creek was normally described as "a modest little stream, having its source in a series of small drainage ditches on the prairie a few miles northeast of Secor." Not so during the storm. A number of automobile and railroad bridges were lost and several local roads closed. It is this combination of the August 1924 storm and the fact that the current TR 202 bridge configuration was erected in 1925 that suggests the prior structure was lost to the storm and flooding waters of Panther Creek. Authorities simply took advantage of the fact that short span truss bridges were moved with relative ease when they selected two very different spans – a standard Warren Pony Truss with Verticals and a very unique Warren Cantilevered Bedstead (Deck) Truss – to replace the bridge lost.[21]

PART II: ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural Character:

The TR 202 Bridge is a two-span structure that was placed in 1925. Its overall length is 93'-0" which consists of a 51'-2" Warren Pony Truss span to the north and a 39'-7" Warren Cantilevered Bedstead Deck Truss to the south. Between the two spans is a 15'-8½" long and 27" wide pier that is situated 42'-0" from the south abutment. The structure carried TR 202 over Panther Creek.

2. Condition of Fabric:

The bridge was closed to traffic in 2008 and has been deteriorating since, a process exacerbated by periodic highwater and the floating debris that gets caught in the lower chords of the pony span or the deck arch of the cantilevered span. Additionally is the wood deck rotting, a fact emphasized by the number of places where the deck is completely gone.

B. Description:[22]

The north span is a Warren Pony Truss with Verticals that rises from the concrete

[21] "Flood, Storm Damage Heavy in State; Hardest Rains in Years," *The Pantagraph* (Bloomington, IL), 21 August 1924: 1; "Last Flood Left Much Damage to Repair at Secor," *The Pantagraph* (Bloomington, IL), 27 September 1924; 2.

[22] The measurements used to describe this bridge were taken from the structure itself during field investigations. Activities were limited to components that could be reached from the deck, slopes around and ground beneath the deck without aid of ladders, boats or other equipment.

abutment to the north and intermediate concrete pier to the south. It is 51'-2"long and has an overall width of 13'-10". The traffic deck is 11'-11" wide. The deck is carried by seven stringers that themselves are carried by the abutment and intermediate pier at each end of the span as well as by two intermediate, 12" by 5" "I" floor beams that are 13'-3"long. The bottom lateral bracing consists of 1" rods in the two outer panels and ¾" rods in the center panel. There are seven deck stringers perpendicular to the floor beams, the outer two of which are 6" by 2" channels while the intermediate five are 6½" by 4" "I" beams. The stringers are generally placed on 24" centers.

The lower chord in Panels 1 and 3 is of paired 2" by 2" angles tied together with spacers for an overall dimension of 9½" by 2". That in Panel 2 utilizes paired 2½" by 3" angles with spacers plates and general measurements of 10" by 3".

The bridge's inclined endposts, as well as its top chord, are 10" by 5" and comprised of channels, plates and stay bars. The depth of the structure (lower chord to top of top chord) is 7'-5½".

The panels of a Warren Truss, and thus the positions of the floor beams, are defined by the diagonals and where they connect to the lower chord. The panels are further defined, and the truss strengthened, by intermediate verticals that tie to that diagonal/lower chord connection and extend to the top chord. (The bridge has no hip verticals.) The diagonals in all three panels are comprised of two 2" by 2" angles placed back-to-back with stay bars overall dimensions of 9½" by 2". Intermediate verticals are 5½" by 1¾" channel.

All connections were historically riveted. Repaired connections have subsequently been bolted.

Regarding the south, Cantilevered Bedstead Truss, it extends from the intermediate concrete pier on the north to the concrete abutment on the south – a length of 39'-7". Its width is 11'-8". Despite the abutment and piers, the deck is carried by the four bedstead legs that are 8½" by 2" anchored back-to-back and set immediately in front of the pier and abutment, one in each of the spans four corners. Between the two legs at each end of the bridge are two supplemental 6½" by 3" "I" beam supports placed on 4' centers. Carried by those supplemental supports and riveted to the legs on either side is a horizontal "I" beam. Generally set on 13' centers are two deck beam combinations between the legs comprised of an 8" by 4" "I" beam on top of a 10" by 4½" "I" beam. All bottom lateral bracing is of ¾" rods. Set on the horizontal "I" beams at each end of the span,

as well as the intermediate deck beams, are seven deck stringers on approximate 24" centers that carried the deck. The outer two are 6" by 1¾" channels while the five between them were 6" by 6¼" "I" beams.

The deck truss itself is comprised of three 13' sections all bolted together as one unit. The two outer sections are 58" deep at each outer end and 36¼" deep at the inner end. Between those two is a third section that has a consistent 36¼" depth. The lower chord of sections one and three is two, 3" by 2½" angles placed back-to-back, while that in panel two uses two, 2" by 2½" angles back-to-back. The diagonals in sections one and three use 2" by 3" angles back-to-back. That in panel two employs 1¾" by 1½" angles back-to-back. The top chord is a 3" by 2½" pair of angles back-to-back for the length of the structure.

Consistent for the length of the two-span bridge is the timber deck with a lower course of approximately 3" by 10" timbers laid perpendicular to the structure's length and a top course of 3" by 9½" timbers that parallels it. The combined structure also has a railing for its entire length, the top chord of which is a 4" by 1½" channel the top of which is 30½" above the deck on the Warren Pony Truss component which also has a similar intermediate chord. The height of the railing's top chord varies a bit on the Bedstead Truss segment where it is as much as 32" above the deck and carried by nominal posts. It has no intermediate cord.

There are no bridge plates or ornamental features on either span.

PART III: SOURCES OF INFORMATION

A. Primary and Unpublished Sources:[23]

Atlas and Plat Book of Woodford County, Illinois. Washburn, IL: The Washburn Leader, 1920.

Atlas of Woodford Co[unty] *and the State of Illinois*. Chicago: Warner & Beers, 1873.

First Annual Report of the Illinois Highway Commission for the Year 1906. Springfield, IL: Phillips Bros., State Printer 1907.

[23] Also consulted for any relevant information were Illinois DOT Record Groups 242.28 and 242.4 at the Illinois State Archives. No pertinent or relevant information was identified in either Record Group.

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Traffic Map, Woodford County, Illinois. Springfield, IL: Statewide Highway Panning Survey, Division of Highways, Department of Public Works & Buildings, 1947 (on file at the Illinois State Library, Springfield).

B. Secondary and Published Sources:

"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).

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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 was also part of the research plan.

B. Research Process

1. Visited bridge to review conditions, photograph and measure it.

2. Searched resources in the University of Illinois Library (Urbana, IL), as well as at the Wisconsin State Historical Society (Madison, WI), Illinois State Library and Illinois State Archives. Digital sources consulted include the HathiTrust Digital Library and newspapers.com, all for data relating to the development of Woodford County in general, and the construction of the TR 202 bridge 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

University of Illinois Library
1408 W. Gregory Drive
Urbana, Illinois 61801
(Illinois State Gazetteers)

Wisconsin Historical Society
816 State Street
Madison, Wisconsin 53706
(Illinois State Gazetteers)

Illinois State Archives
Norton Building
State Capitol Complex
Springfield, Illinois 62756
(IDOT Record Group 242, Local Government Records Index and Maps)

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

•On-Line Sources:

HathiTrust Digital Library
(Digitized Books, Engineering Journals and Other Resources)

newspapers.com
(Historic-period newspapers, primarily *The Pantagraph* [Bloomington, IL)

historicmapworks.com
(Historic-period county plat maps)

D. Research Staff

1. Researcher/Preparer/Initial Editor:

John N. Vogel, Ph.D.
Illinois State Archaeological Survey
Prairie Research Institute
University of Illinois
23 Stadium Drive
Champaign, Illinois 61820
jnvogel@hrltd.org

2. Photographer:

John N. Vogel, Ph.D.
Illinois State Archaeological Survey
Prairie Research Institute
University of Illinois
23 Stadium Drive
Champaign, Illinois 61820
jnvogel@hrltd.org

3. Supplemental Research in Urbana & Springfield:

•(at University of Illinois-Urbana, Library)
Michael E. Smith, M.A.
Cultural Resource Specialist
Illinois State Archaeological Survey
Prairie Research Institute
University of Illinois
23 Stadium Drive
Champaign, Illinois 61820
mesmith4@illinois.edu

•(at Illinois State Library & Illinois State Archives, Springfield)
Laura E. Williams, M.A.
Historic Archaeological Research Specialist
Illinois State Archaeological Survey
Prairie Research Institute

University of Illinois
23 Stadium Drive
Champaign, Illinois 61820
lwill3@illinois.edu

4. Editor:

Elizabeth Roman, M.A.
Architectural Historian
Cultural Resource Unit
Bureau of Design & Environment
Illinois Department of Transportation
2300 S. Dirksen parkway
Springfield, Illinois 62764
elizabeth.roman@illinois.gov

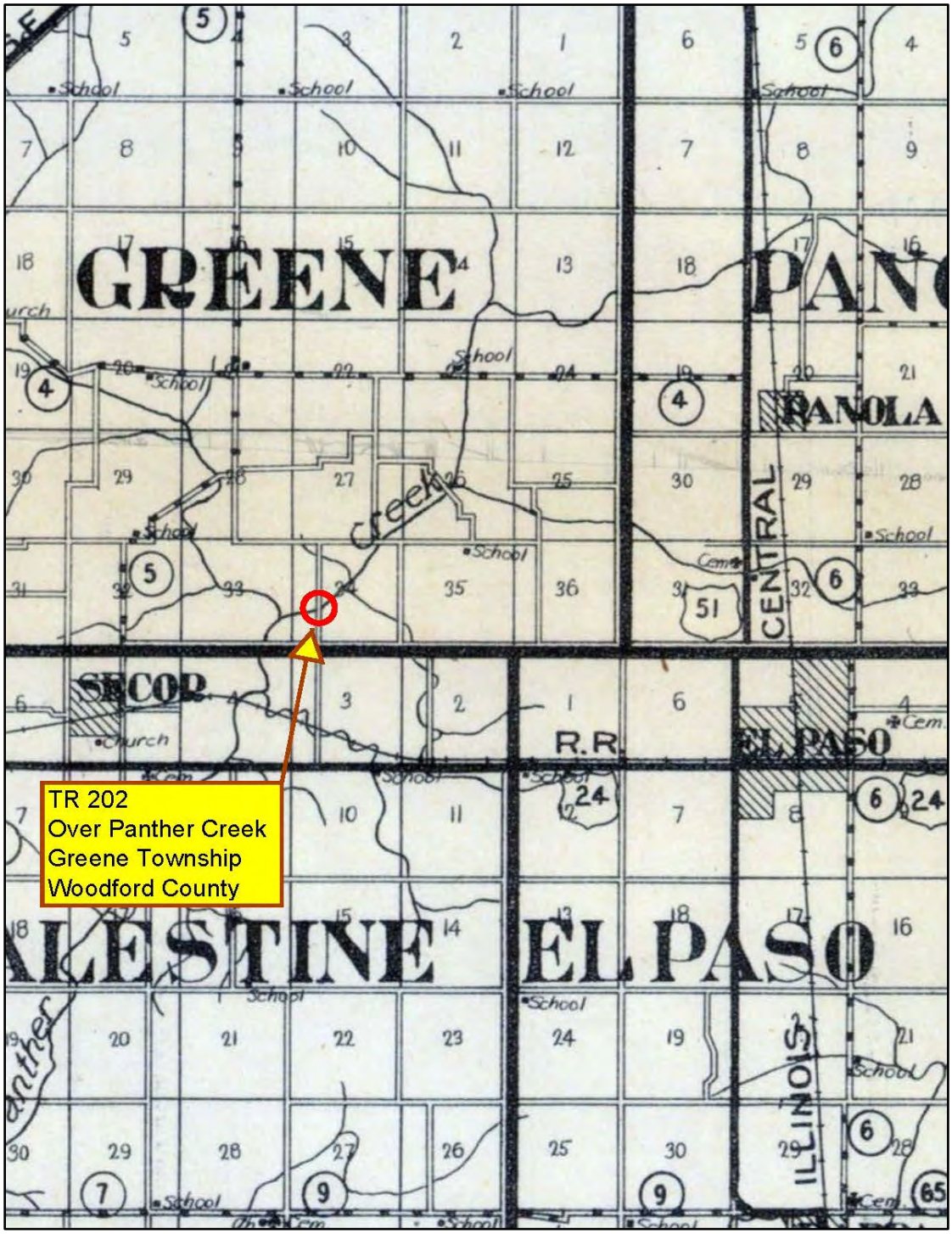
5. Additional Staff:

Brad Koldehoff, RPA
Cultural Resources Unit Chief
Bureau of Design & Environment
Illinois Department of Transportation
2300 S. Dirksen Parkway
Springfield, Illinois 62764
brad.koldehoff@illinois.gov

PART V: PROJECT INFORMATION

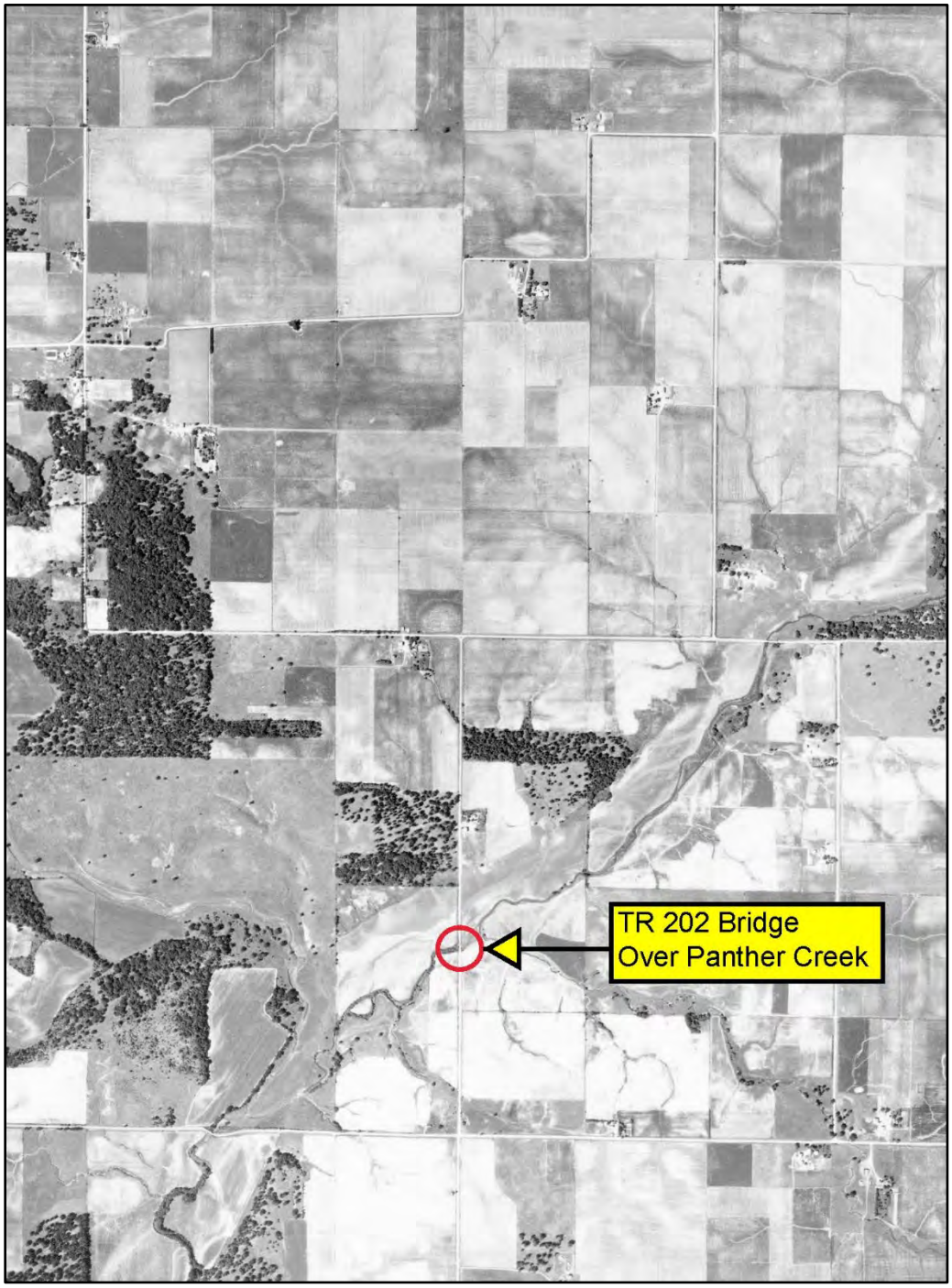
This HIER archival documentation is submitted in compliance with a stipulation of a Memorandum of Agreement (MOA) between the Federal Highway Administration, Illinois Division, and the Illinois State Preservation Officer, with final signature on 16 May 2019. The MOA was executed in compliance with CFR 36 800.6(b)(1)(iv) of the National Historic Preservation Act of 1966, as amended.

Circa 1930 Map Showing Bridge Location in the Context of Surrounding Communities:



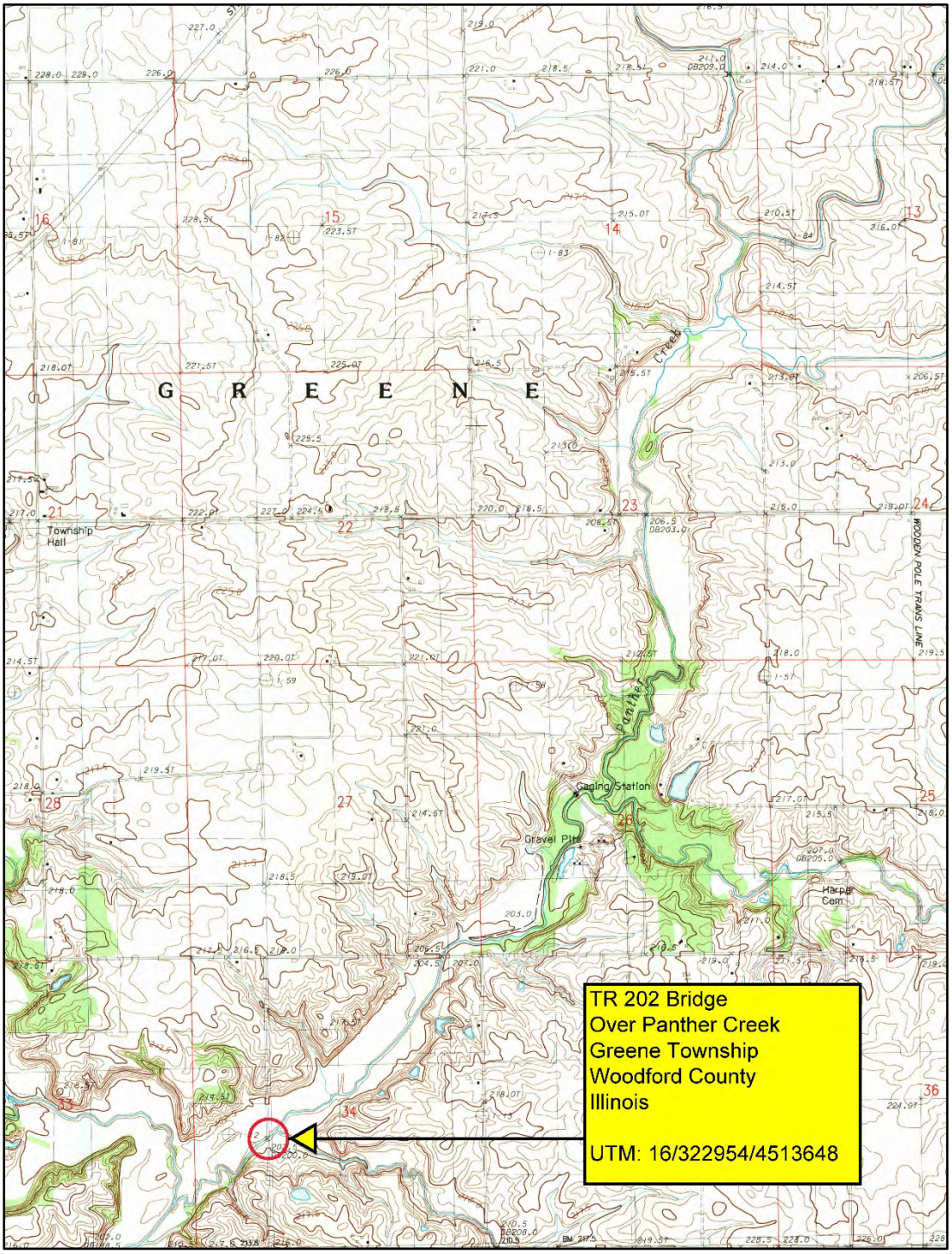
Plat Book of Woodford County Illinois (Rockford, IL: W.W. Hixson Co., circa 1930): n.p.

1939 Aerial Image of the Bridge Location and Its Surrounding Community:



The agricultural nature of Green Township is unmistakable. Illinois Historic Aerial Photography: 1937-1947, Image BXM-2-45, 14 July 1939, Viewed at http://maps.isgs.illinois.edu/ilhap/ on 28 October 2019.

USGS Map (1981) Identifying Bridge Location:



U.S. Geological Survey, *Benson Quadrangle* [map], 1981/Provisional Edition, 1:24000, 7.5 Minute Series (Reston, VA: United States Department of the Interior, USGS, 1981).

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Over Panther Creek
Greene Township
Woodford County
Illinois

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22 Data Pages
01 7.5 Minute USGS Map (1981)

John N. Vogel, Ph.D., Associate Degree - Professional Photography, Photographer

HIER No. WD-2019-1.1 DISTANT VIEW TO NORTH. BRIDGE AND ITS GENERAL SETTING.

HIER No. WD-2019-1.2 VIEW TO NORTH.

HIER No. WD-2019-1.3 VIEW TO NORTHWEST.

HIER No. WD-2019-1.4 VIEW TO SOUTH.

HIER No. WD-2019-1.5 VIEW TO SOUTH SOUTHEAST.

HIER No. WD-2019-1.6 VIEW TO EAST NORTHEAST.

HIER No. WD-2019-1.7 VIEW TO NORTHEAST.

HIER No. WD-2019-1.8 VIEW TO NORTHEAST. CANTILEVERED BEDSTEAD TRUSS SPAN.

HIER No. WD-2019-1.9 VIEW TO SOUTH. CANTILEVERED BEDSTEAD TRUSS SPAN. VERTICAL ENDPOSTS, INTERMEDIATE LEGS, IN FRONT OF SOUTH ABUTMENT.

HIER No. WD-2019-1.10 VIEW TO NORTH. CANTILEVERED BEDSTEAD TRUSS SPAN. VERTICAL ENDPOSTS AND INTERMEDIATE LEGS IN FRONT OF INTERMEDIATE PIER.

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HIER No. WD-2019-1.12 VIEW TO NORTHEAST. INTERMEDIATE PIER WITH CANTILEVERED TRUSS TO SOUTH (RIGHT) AND WARREN TRUSS TO NORTH (LEFT).

HIER No. WD-2019-1.13 VIEW TO NORTHEAST. CLOSE-UP OF INTERMEDIATE PIER.

HIER No. WD-2019-1.14 VIEW TO SOUTHWEST. WARREN TRUSS SPAN.

HIER No. WD-2019-1.15 VIEW TO NORTHEAST. WARREN TRUSS SPAN.

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HIER No. WD-2019-1.17 VIEW TO SOUTH. WARREN TRUSS SPAN SIDE OF INTERMEDIATE PIER.

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HIER No. WD-2019-1.20 VIEW TO EAST. WARREN TRUSS SPAN. DIAGONAL/ INCLINED ENDPOST/TOP CHORD CONNECTION.

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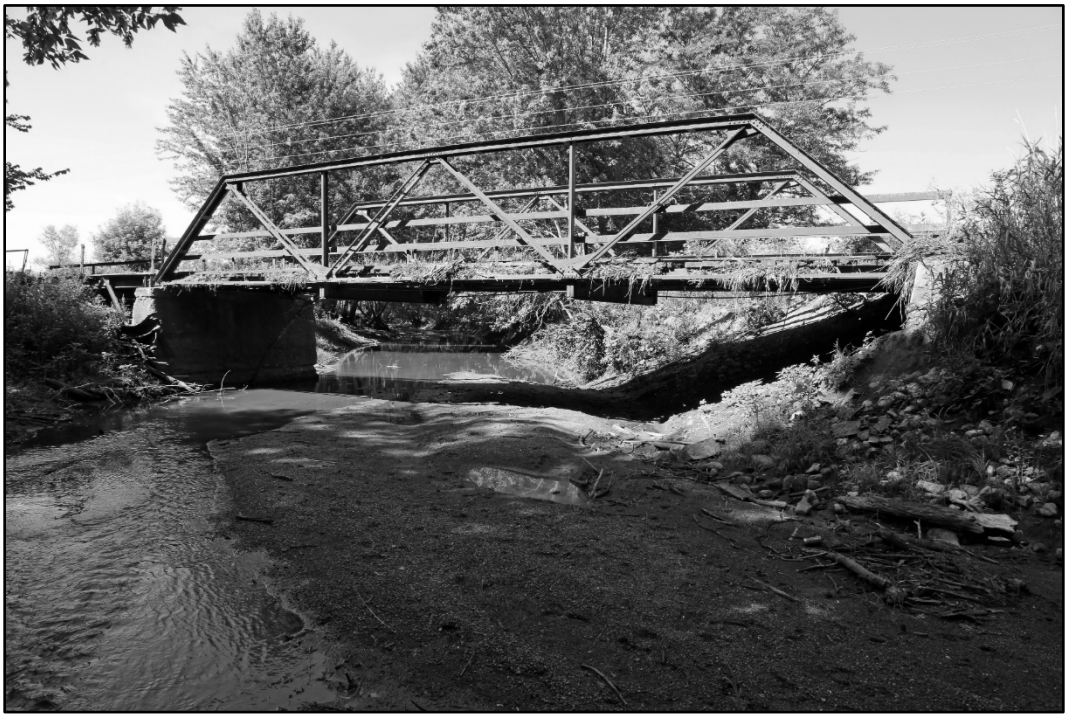

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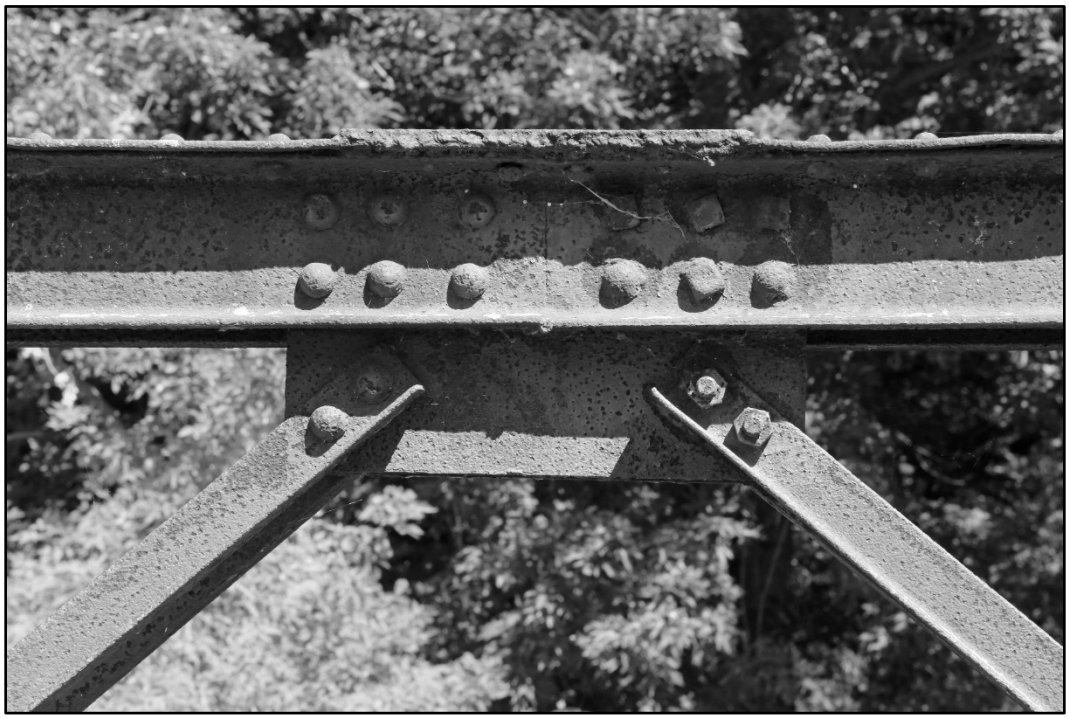

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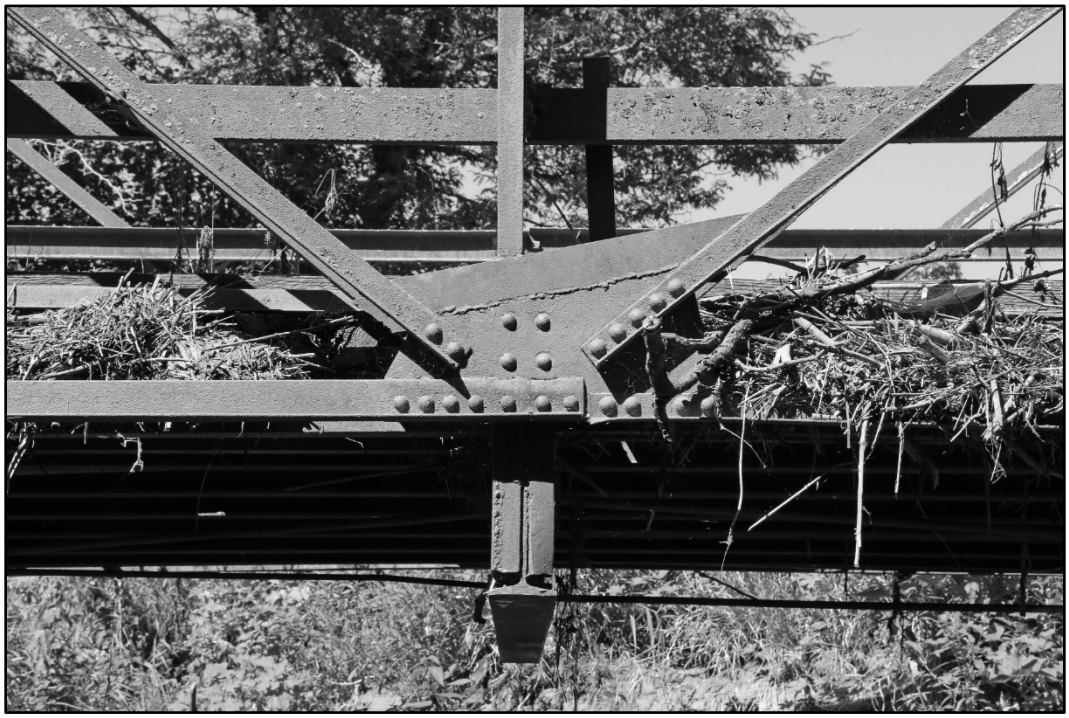

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