BIRD CREEK MIXED TRUSS Spanning Bird Creek Catoosa vicinity Rogers County Oklahoma

## **PHOTOGRAPHS**

# **COPIES OF PLANS**

AND

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD Submitted to: Oklahoma State Historic Preservation Office 800 Nazih Zuhdi Drive Oklahoma City, Oklahoma 73105 BIRD CREEK MIXED TRUSS Spanning Bird Creek Catoosa vicinity Rogers County Oklahoma

PHOTOGRAPHS

## HISTORIC AMERICAN ENGINEERING RECORD

#### INDEX TO PHOTOGRAPHS

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#### INDEX TO BLACK AND WHITE PHOTOGRAPHS

Anna Eddings, Photographer, February 2011

Note: The Bird Creek Mixed Truss Bridge is the structure located on the west side of the road.

- 1. GENERAL SETTING VIEW, LOOKING NORTH
- 2. GENERAL SETTING VIEW, LOOKING NORTHWEST
- 3. SOUTH END OF BRIDGE AND ADJACENT BRIDGE, LOOKING NORTH
- 4. SOUTH END OF BRIDGE AND ADJACENT BRIDGE, LOOKING NORTH
- 5. SIDE VIEW, LOOKING NORTHWEST
- 6. SIDE VIEW, LOOKING NORTHEAST
- 7. SIDE VIEW OF SOUTH K-TRUSS, LOOKING EAST-NORTHEAST
- 8. SIDE VIEW, LOOKING NORTHEAST
- 9. SIDE VIEW, LOOKING NORTHEAST
- 10. DETAIL OF BEARINGS AT SOUTH/MIDDLE K-TRUSSES JUNCTION, LOOKING NORTHEAST
- 11. UNDERSIDE OF BRIDGE AND SOUTH ABUTMENT, LOOKING SOUTH
- 12. SIDE VIEW, LOOKING NORTHWEST
- 13. VIEW FROM UPSTREAM, LOOKING EAST
- 14. VIEW FROM UPSTREAM, LOOKING EAST-NORTHEAST
- 15. SOUTH END OF BRIDGE, LOOKING NORTH
- 16. STEEL MILL STAMP, LOOKING WEST

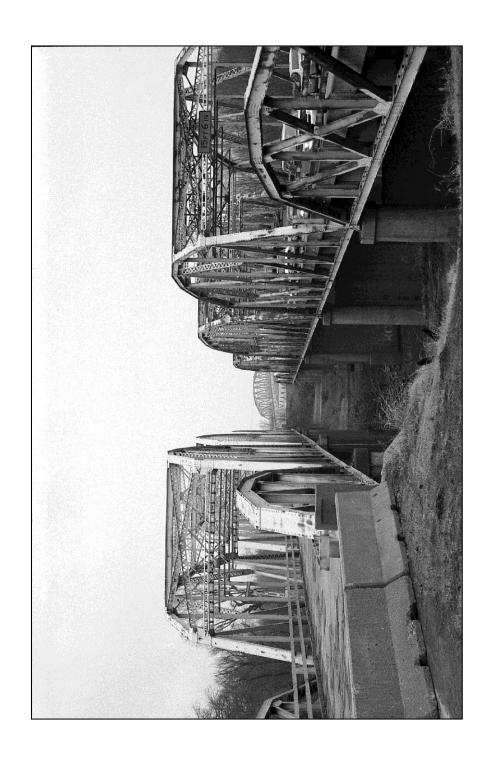
17.	SOUTH K-TRUSS, LOOKING NORTH
18.	MIDDLE K-TRUSS, LOOKING NORTH
19.	SIDE VIEW OF MIDDLE K-TRUSS, LOOKING NORTHWEST
20.	SIDEVIEW OF MIDDLE K-TRUSS, LOOKING NORTHEAST
21.	DETAIL OF REPAIRED DIAGONAL ON MIDDLE K-TRUSS, LOOKING NORTHEAST
22.	DETAIL OF BEARINGS AT NORTH/MIDDLE K-TRUSSES JUNCTION, LOOKING EAST
23.	NORTH K-TRUSS, LOOKING NORTH
24.	NORTH PARKER PONY TRUSSES, LOOKING NORTH
25.	NORTH END OF BRIDGE, LOOKING SOUTH
26.	BRIDGE DEDICATION MONUMENT, LOOKING SOUTHWEST
27.	GENERAL SETTING VIEW, LOOKING SOUTHEAST
28.	GENERAL SETTING VIEW, LOOKING SOUTHEAST
29.	GENERAL SETTING VIEW, LOOKING SOUTH
30.	GENERAL SETTING VIEW, LOOKING SOUTH
31.	SIDE VIEW, LOOKING SOUTHEAST
32.	SIDE VIEW, LOOKING SOUTHEAST
33.	UNDERSIDE OF NORTH K-TRUSS, LOOKING SOUTH
34.	GENERAL SETTING VIEW, LOOKING NORTH
35.	GENERAL SETTING VIEW, LOOKING NORTH
36.	GENERAL SETTING VIEW, LOOKING NORTH
37.	GENERAL SETTING VIEW, LOOKING NORTH
38.	GENERAL SETTING VIEW, LOOKING NORTH
39.	GENERAL SETTING VIEW, LOOKING NORTH
40.	GENERAL SETTING VIEW, LOOKING NORTHEAST

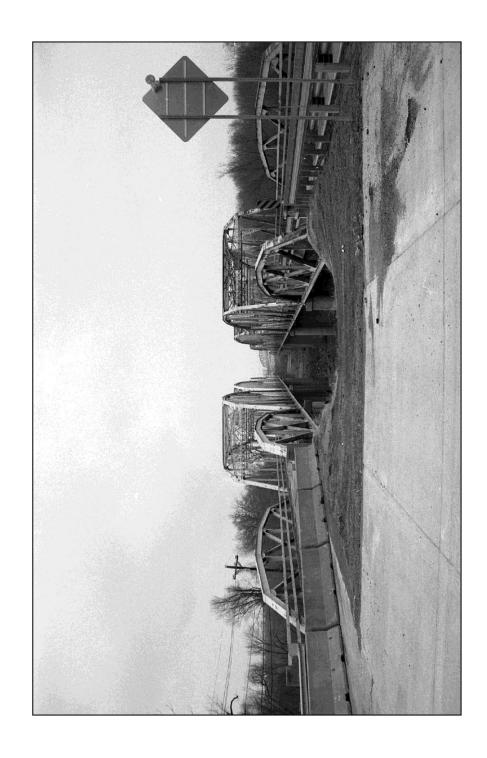
Note: Photographs 41 through 45 are copies of historic photographs obtained from various sources during archival research conducted March 4, 2013, through March 7, 2013.

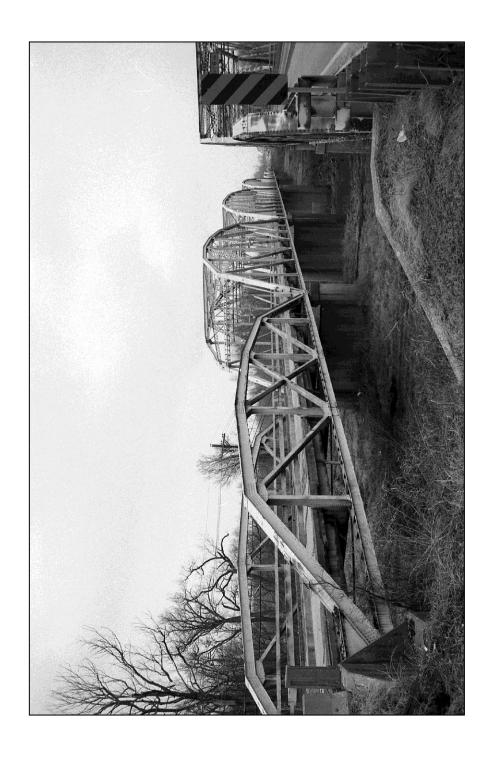
- 41. GENERAL VIEW OF BIRD CREEK MIXED TRUSS BRIDGE, LOOKING NORTHEAST. DATE: CA. 1939. SOURCE: BIENNIAL REPORT OF THE OKLAHOMA STATE HIGHWAY COMMISSION 1939-1940. OBTAINED FROM: OKLAHOMA STATE ARCHIVES, OKLAHOMA CITY, OKLAHOMA
- 42. GENERAL VIEW OF BIRD CREEK MIXED TRUSS BRIDGE DURING CONSTRUCTION OF ADJACENT BRIDGE, LOOKING NORTH. DATE: 1956. SOURCE: CLAREMORE DAILY PROGRESS 26 JULY 1956. OBTAINED FROM: OKLAHOMA HISTORICAL SOCIETY RESEARCH CENTER NEWSPAPER ARCHIVES, OKLAHOMA CITY, OKLAHOMA
- 43. GENERAL VIEW OF BIRD CREEK MIXED TRUSS BRIDGE DURING CONSTRUCTION OF THE ADJACENT BRIDGE, LOOKING SOUTHWEST. DATE: CA. 1956. PHOTOGRAPHER: ANONYMOUS. OBTAINED FROM: HTTP://WWW.MARKPOTTER.FREEWEBSPACE.COM/PHOTO3.HTML (ACCESSED MARCH 11, 2013)
- 44. AERIAL VIEW OF PORT OF CATOOSA, DURING CONSTRUCTION, LOOKING SOUTHEAST. NOTE BOTH 1936 AND 1956 BIRD CREEK BRIDGES IN THE CENTER BACKGROUND OF THE IMAGE. DATE: 1969. PHOTOGRAPHER: ANONYMOUS. OBTAINED FROM: OKLAHOMA HISTORICAL SOCIETY, RESEARCH DIVISION, BOB GREGORY COLLECTION, IMAGE 23370.8
- 45. AERIAL VIEW OF PORT OF CATOOSA, DURING CONSTRUCTION, LOOKING SOUTHEAST. NOTE IMAGE IS A CROPPED VERSION OF THE ABOVE PHOTOGRAPH. DATE: 1969. PHOTOGRAPHER: ANONYMOUS. OBTAINED FROM: OKLAHOMA HISTORICAL SOCIETY, RESEARCH DIVISION, BOB GREGORY COLLECTION, IMAGE 23370.8
- 46. 1942 AERIAL VIEW OF GENERAL AREA WITH ARROWS INDICATING LOCATION OF BIRD CREEK MIXED TRUSS BRIDGE AND OLD ROUTE 66 ROAD ALIGNMENT. DATE: 1942. PHOTOGRAPHER: ANONYMOUS. OBTAINED FROM: OKLAHOMA DEPARTMENT OF TRANSPORTATION, CULTURAL RESOURCES PROGRAM.
- 47. 1952 AERIAL VIEW OF GENERAL AREA WITH ARROWS INDICATING LOCATION OF BIRD CREEK MIXED TRUSS BRIDGE AND OLD ROUTE 66 ROAD ALIGNMENT. DATE: 1952. PHOTOGRAPHER: ANONYMOUS. OBTAINED FROM: OKLAHOMA DEPARTMENT OF TRANSPORTATION, CULTURAL RESOURCES PROGRAM.
- 48. 1923 ROGERS COUNTY MAP, SHOWING ROAD ALIGNMENT PRIOR TO THE CONSTRUCTION OF THE 1936 BIRD CREEK MIXED TRUSS BRIDGE. DATE: 1923. OBTAINED FROM: *THE HISTORY OF ROGERS COUNTY HISTORY* (CLAREORE COLLEGE FOUNDATION 1979).



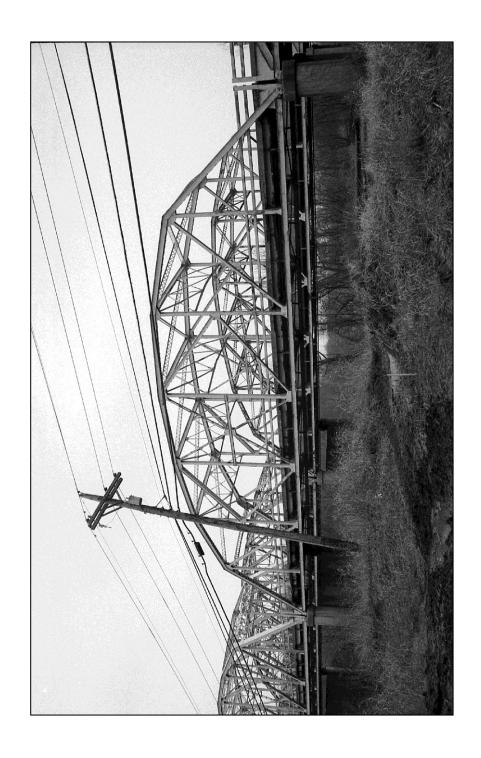


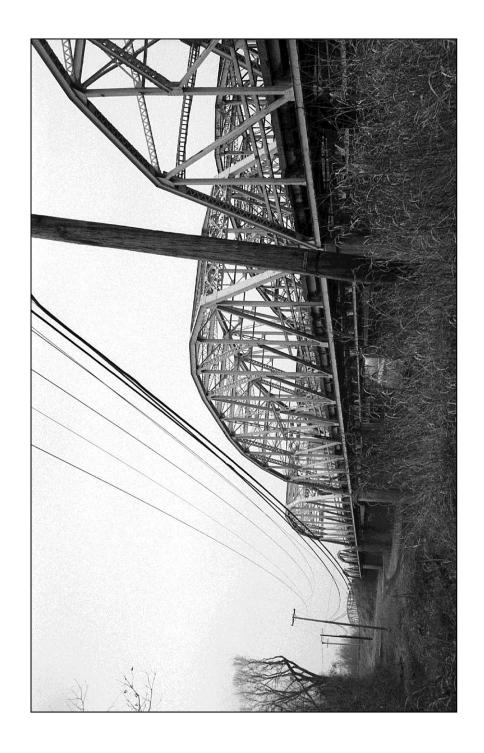


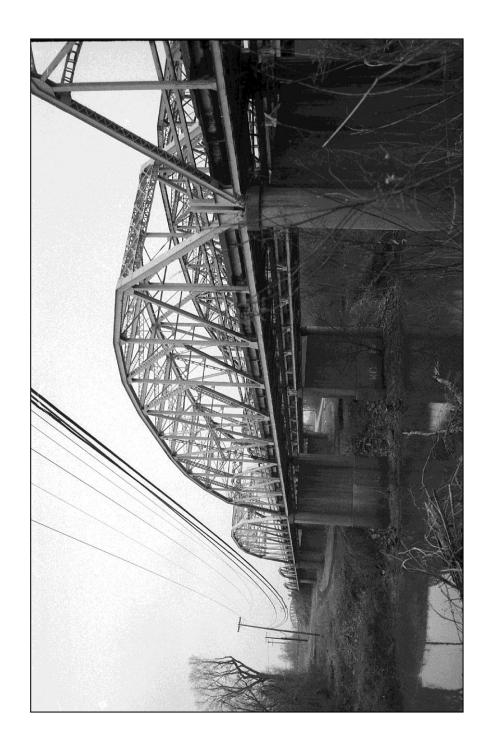




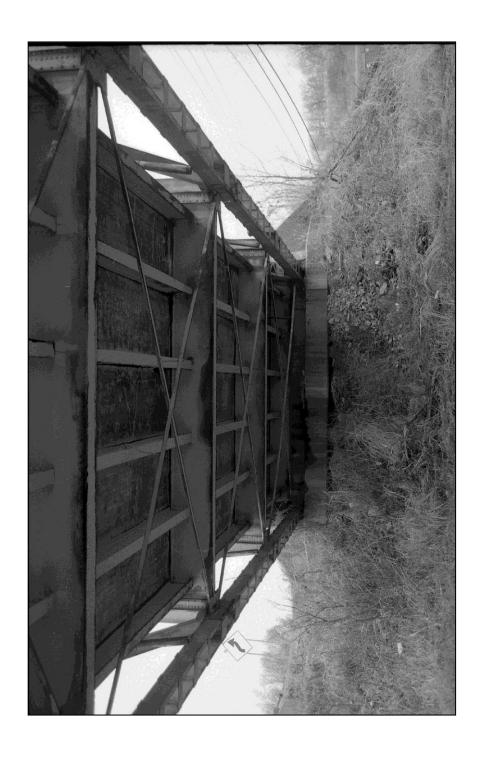


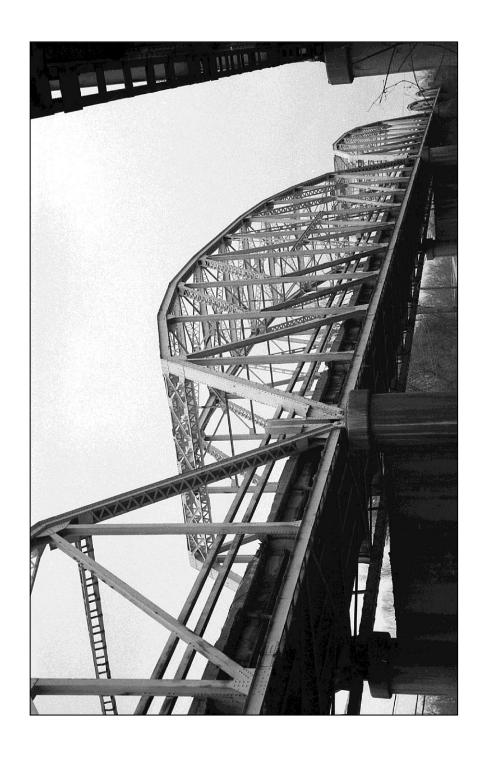






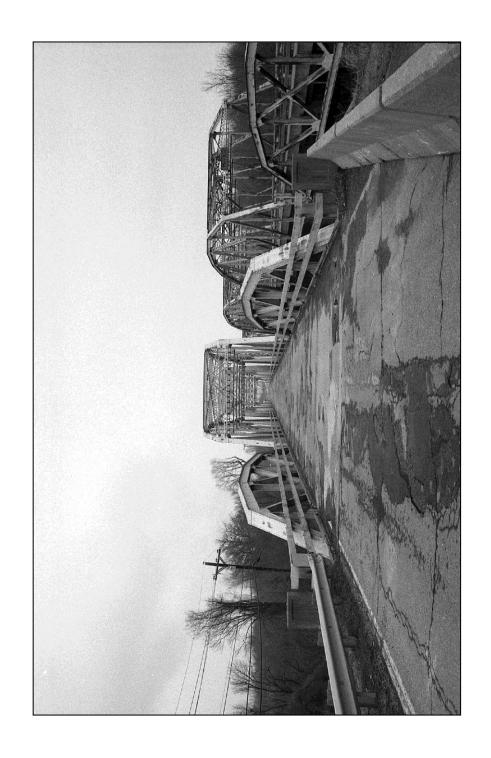




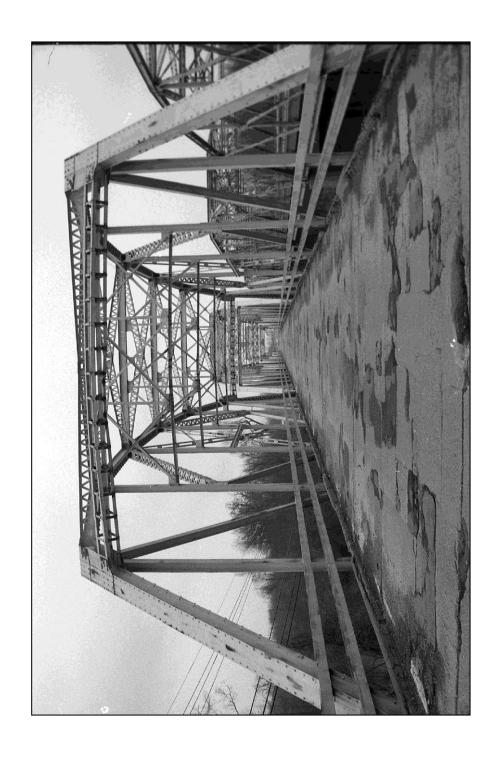


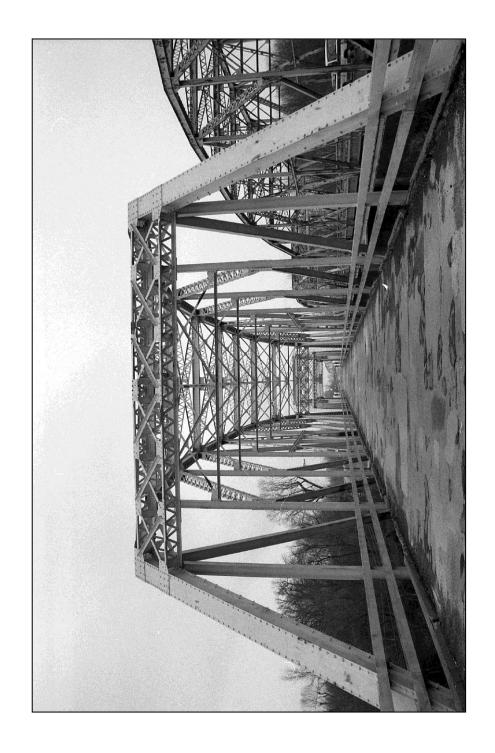


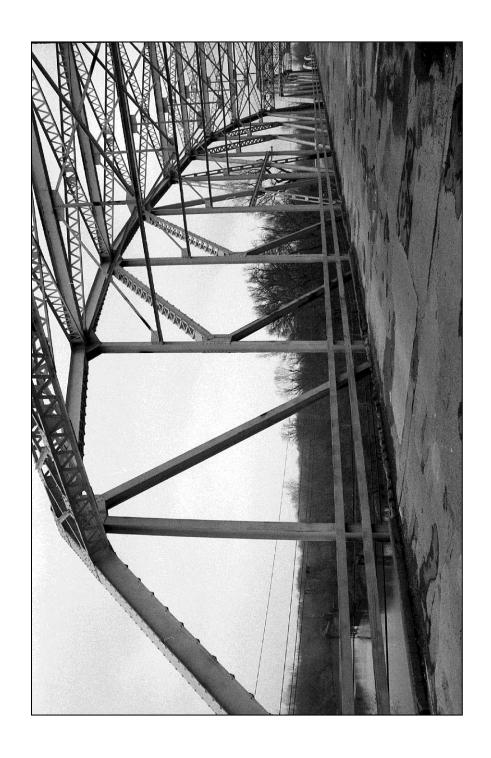


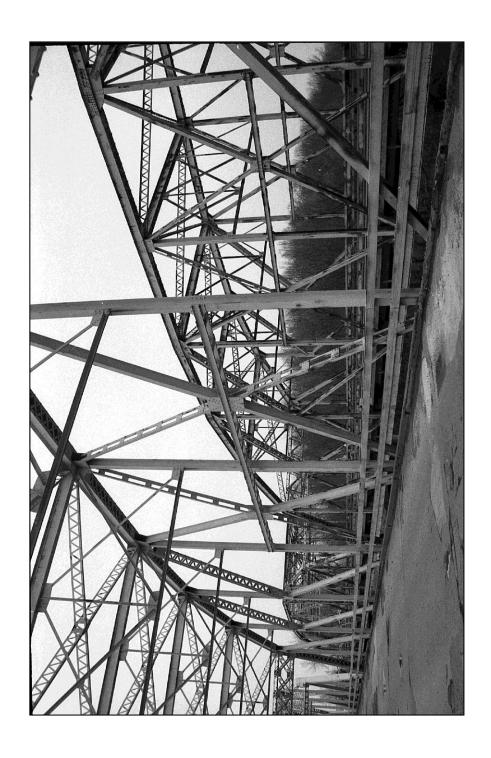






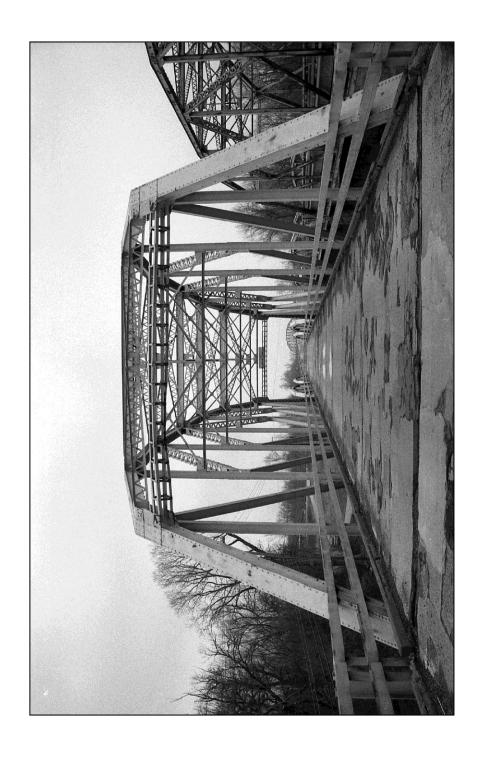


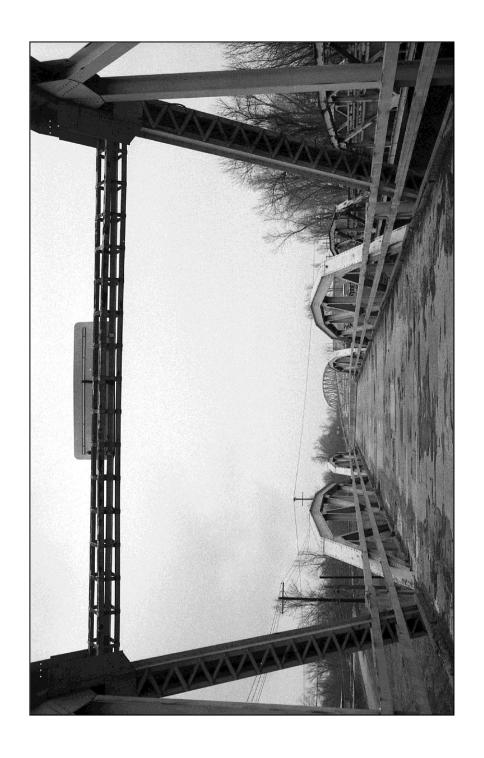






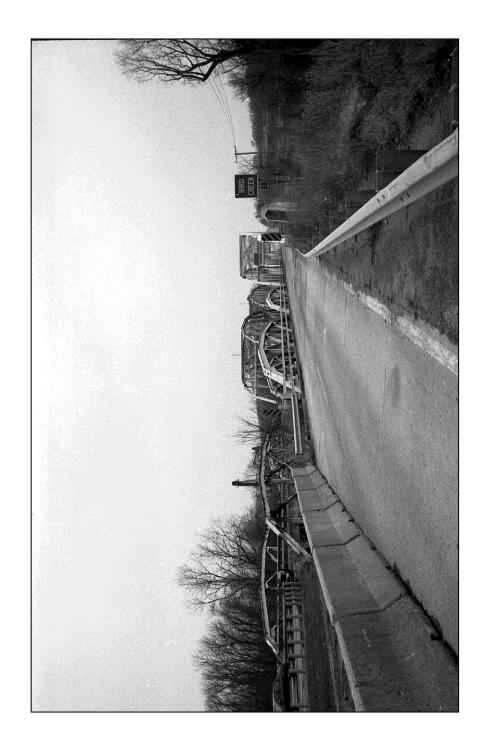


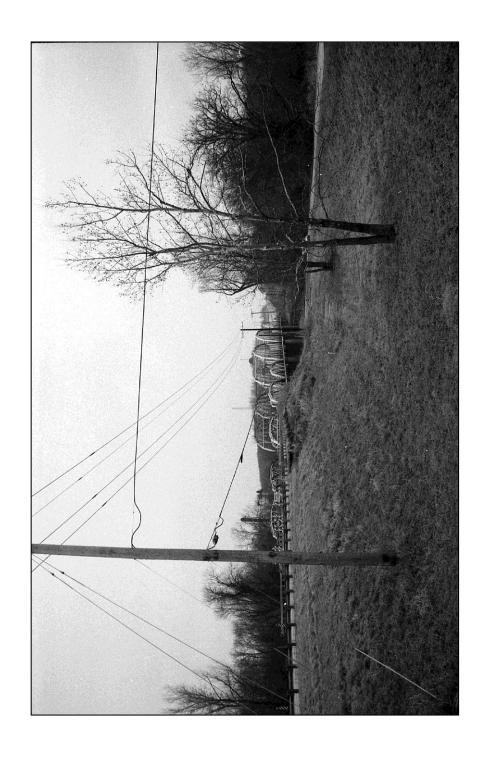


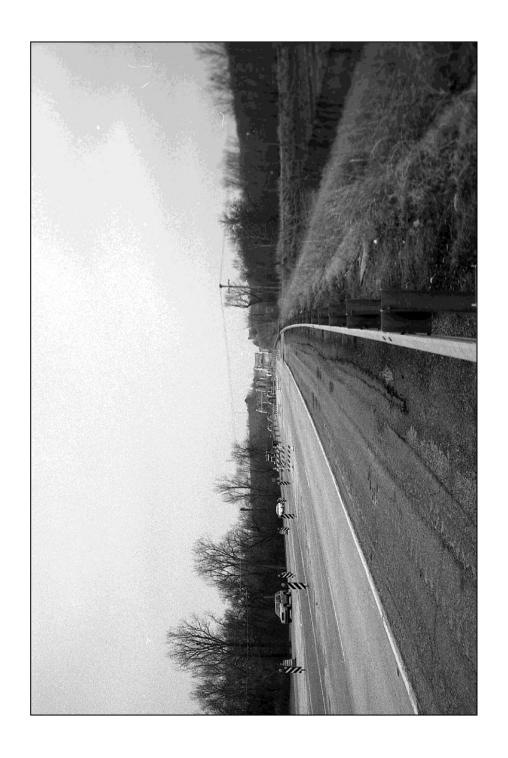


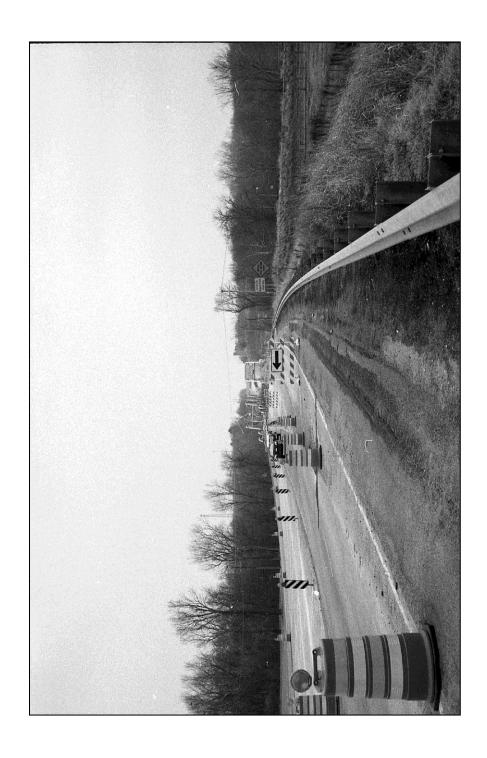


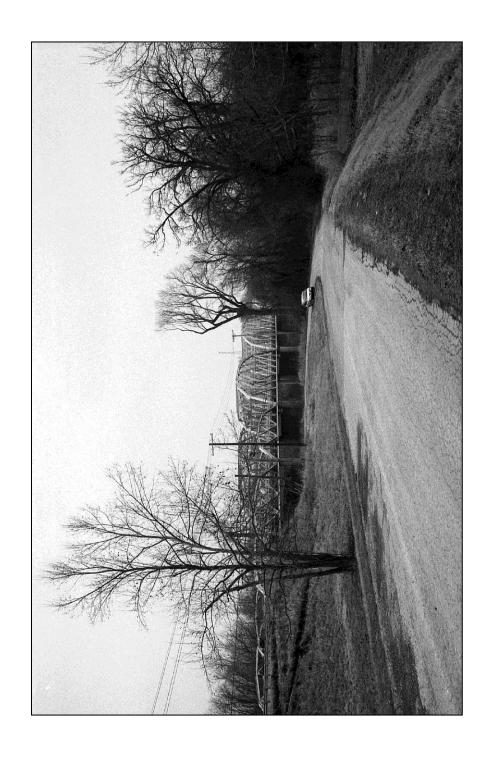






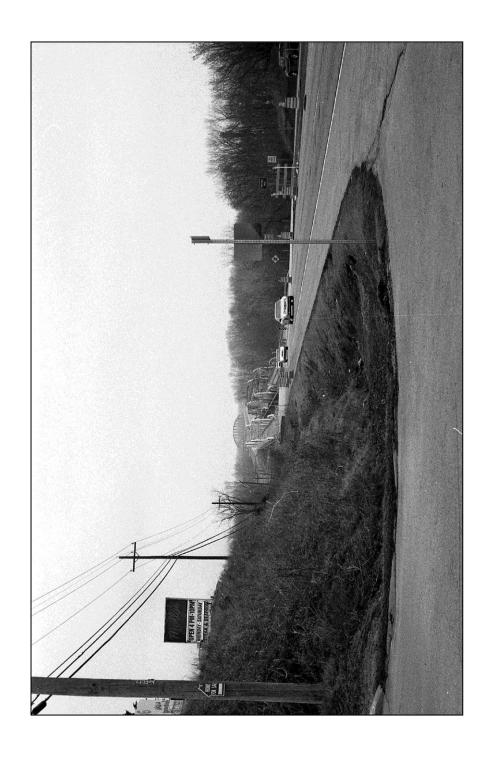


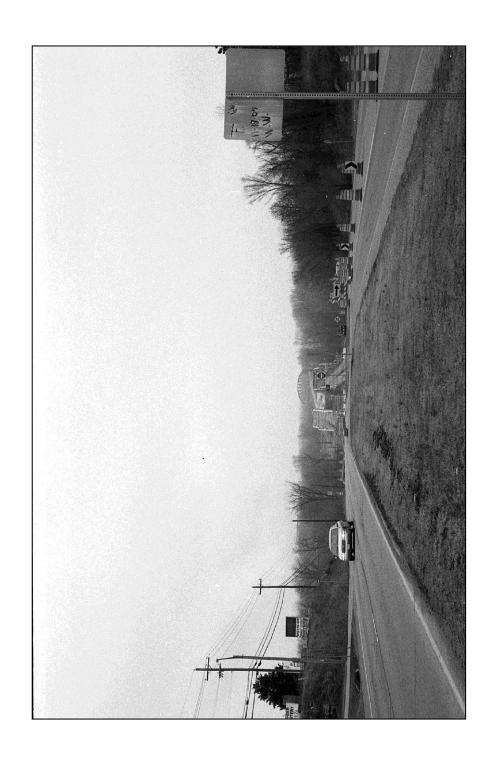


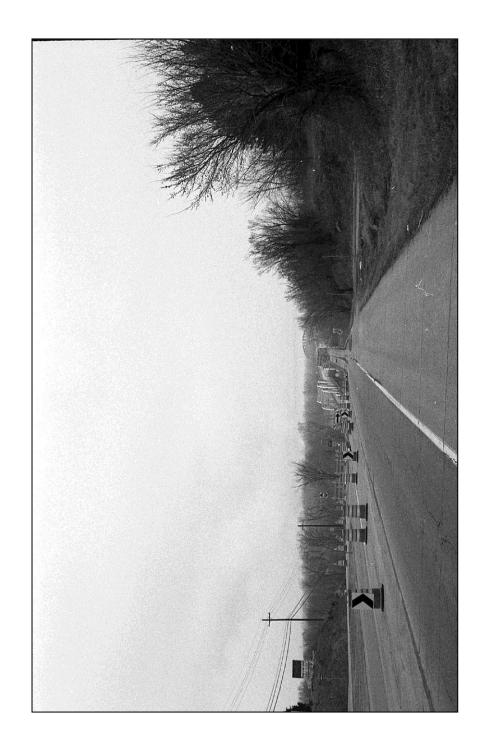


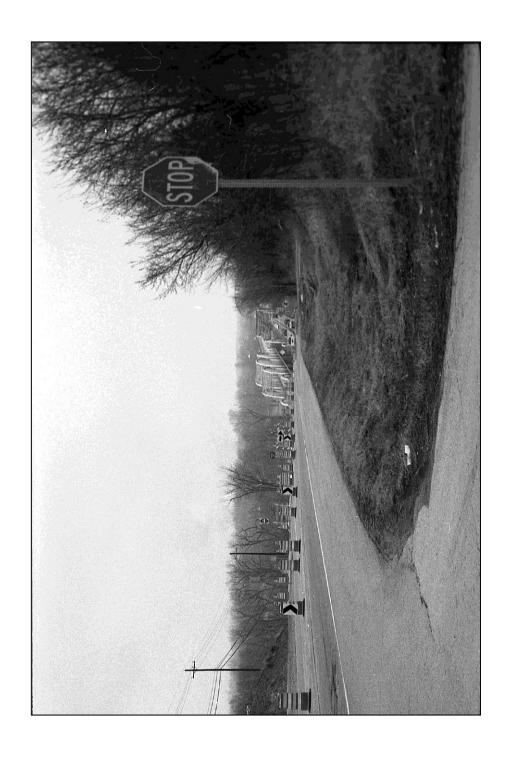


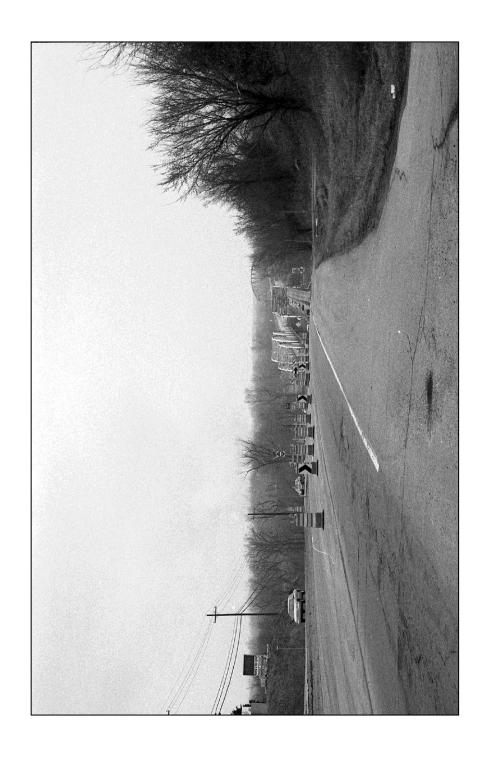


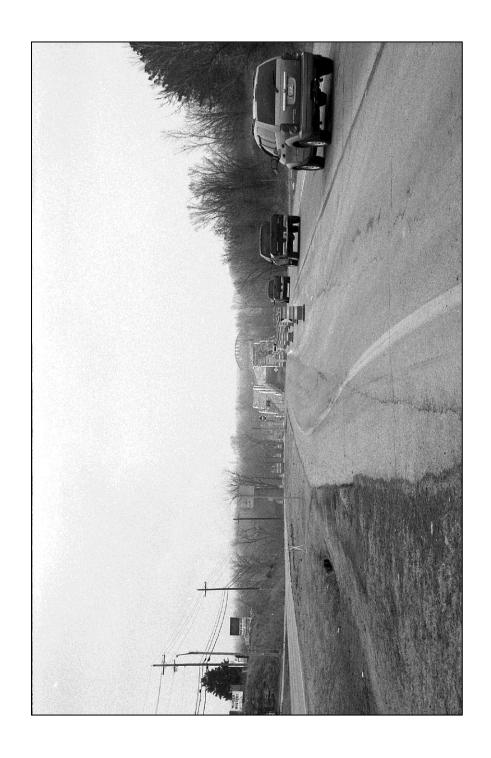


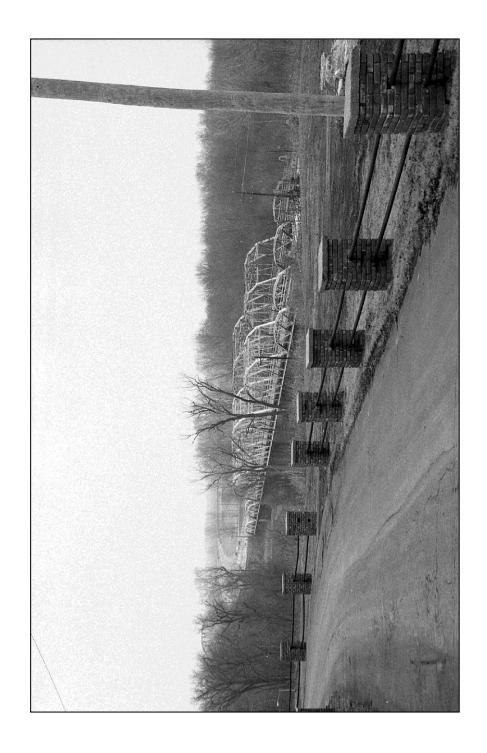


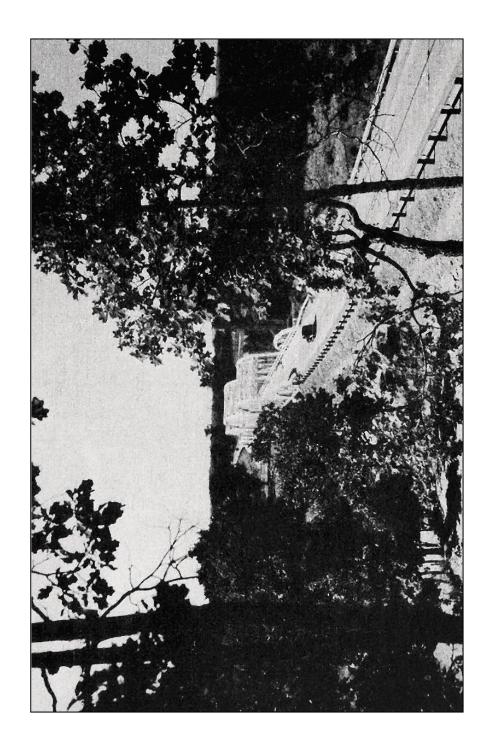


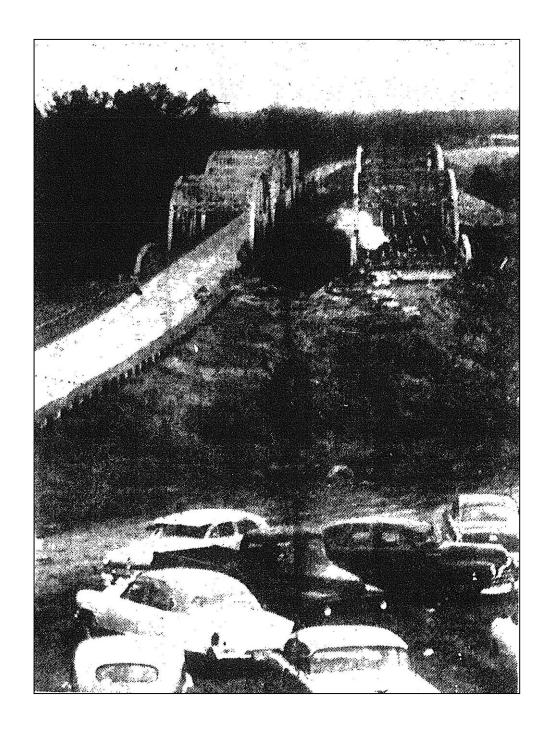


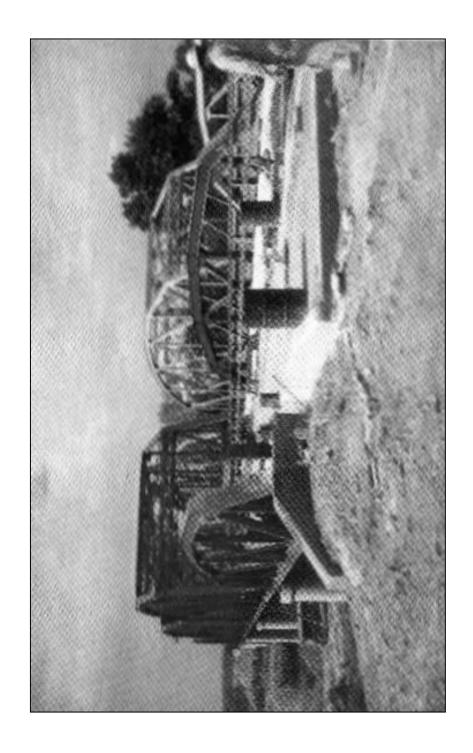




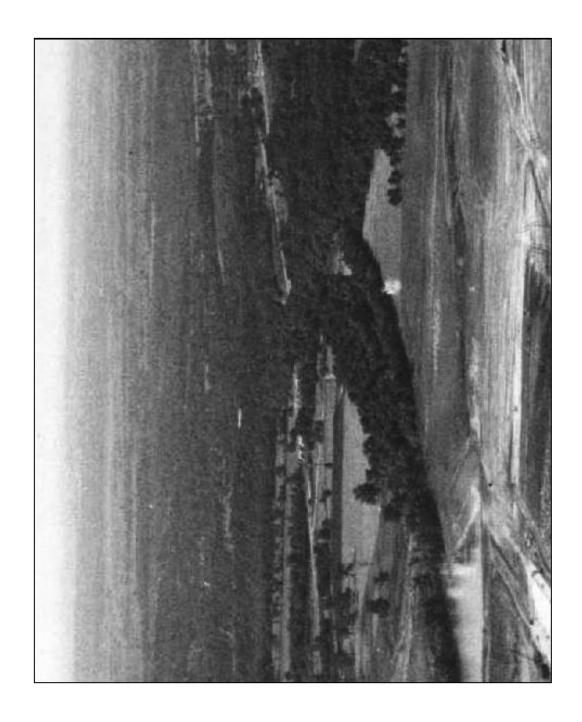


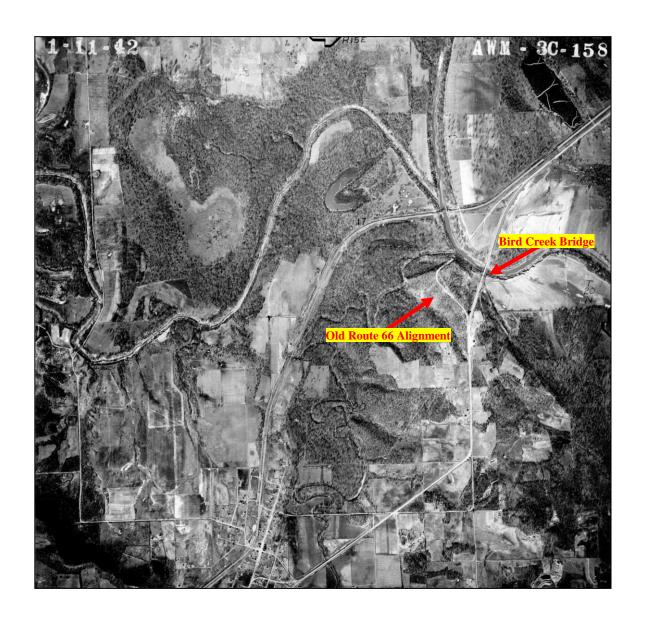


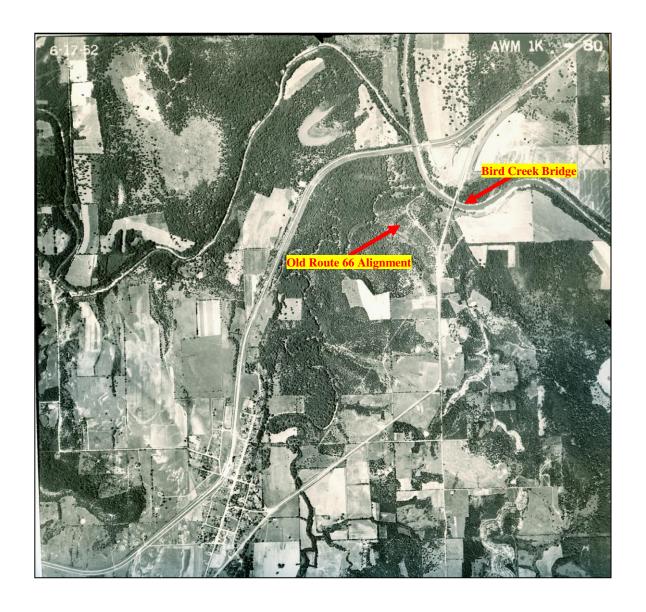


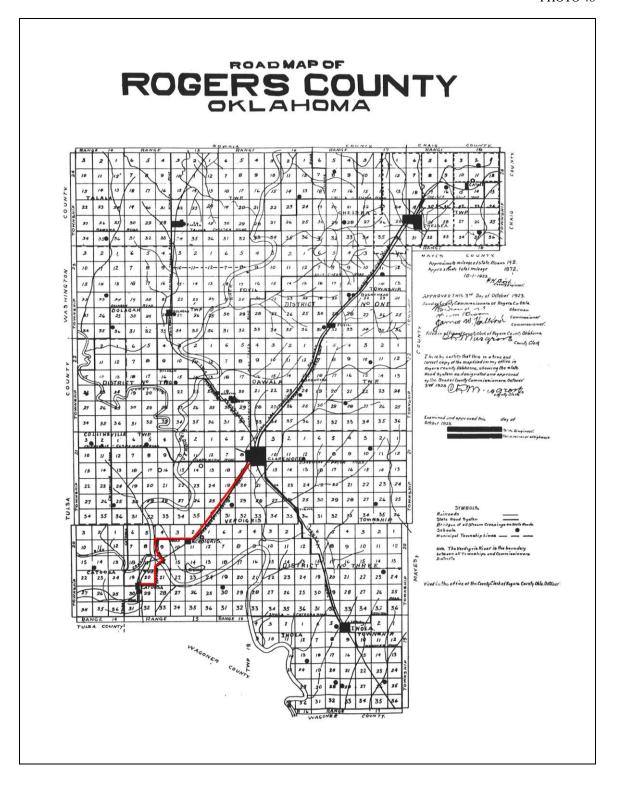












BIRD CREEK MIXED TRUSS Spanning Bird Creek Catoosa vicinity Rogers County Oklahoma

COPIES OF PLANS

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### INDEX TO COPIES OF PLANS

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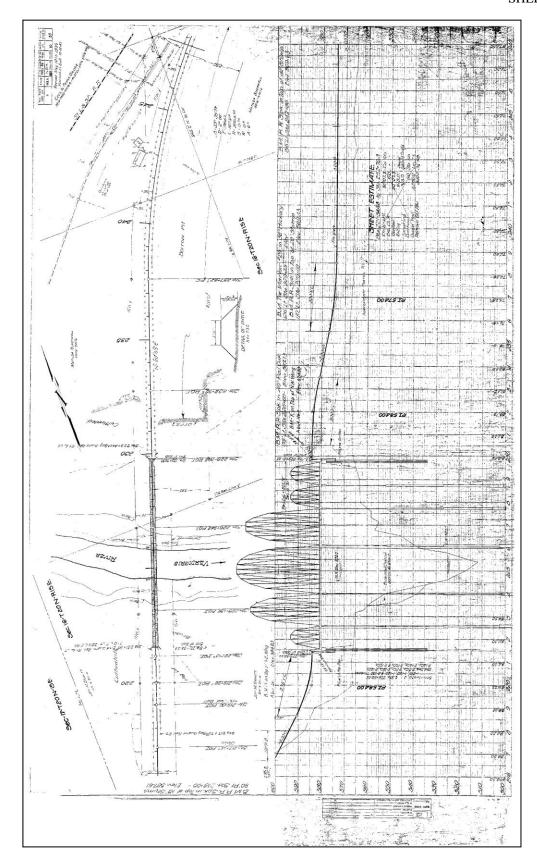
#### INDEX TO COPIES OF PLANS

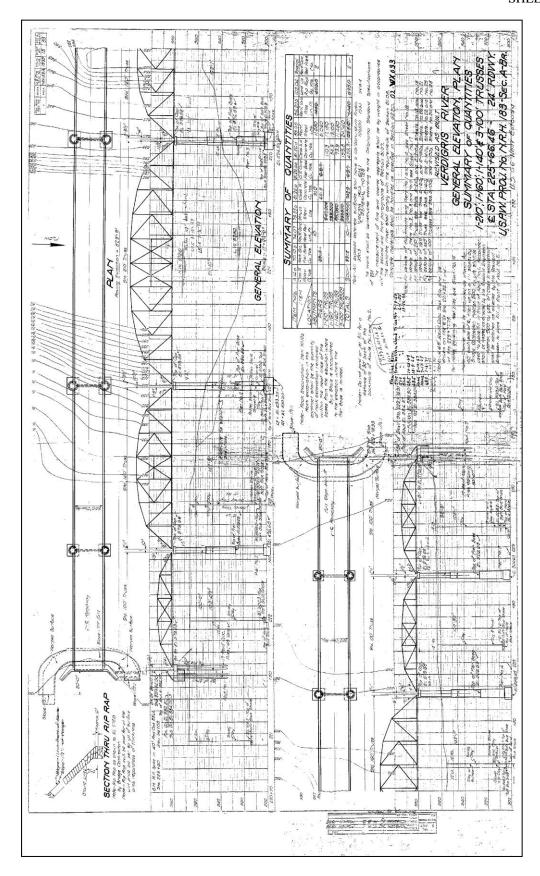
Note: Sheets 1 and 2 are 1936 plans of the Bird Creek Mixed Truss Bridge obtained from Oklahoma Department of Transportation District 8 Headquarters, Tulsa, Oklahoma, March 5, 2013.

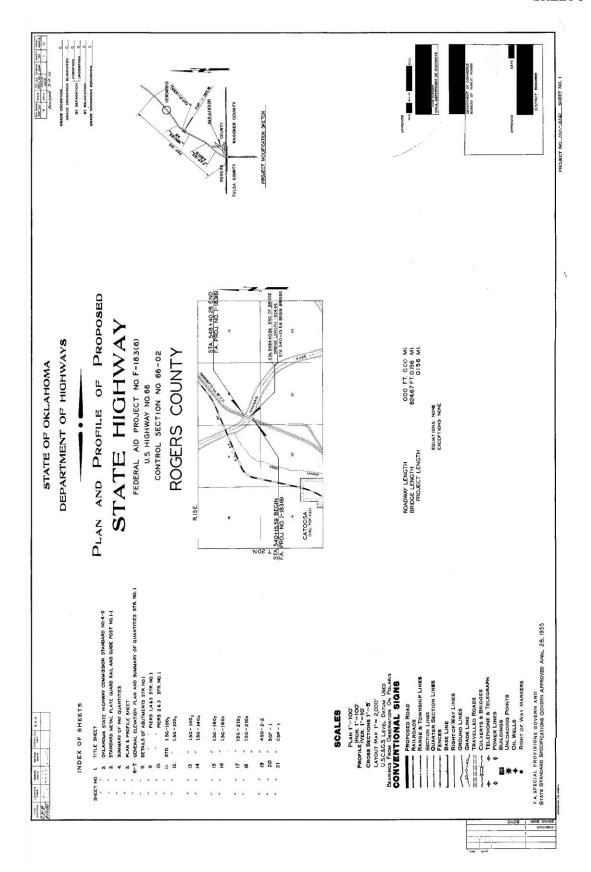
- 1. Sheet 1, base line, original sheet 10 of 33
- 2. Sheet 2, general elevation and plan, original sheet 15 of 33

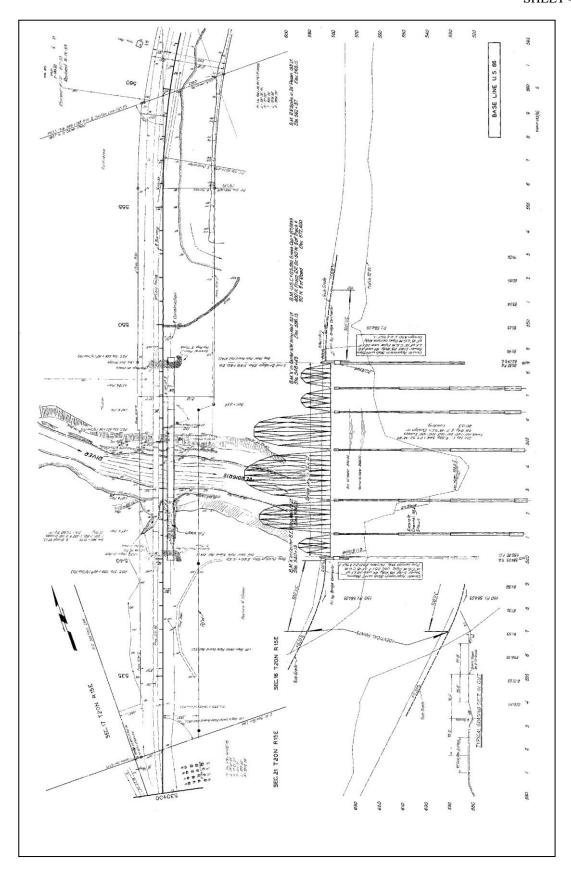
Note: Sheets 3 through 9 are 1955 plans of the adjacent 1956 Bird Creek Mixed Truss Bridge obtained from the Oklahoma Department of Transportation Reproduction Services, Oklahoma City, Oklahoma, February 27, 2013.

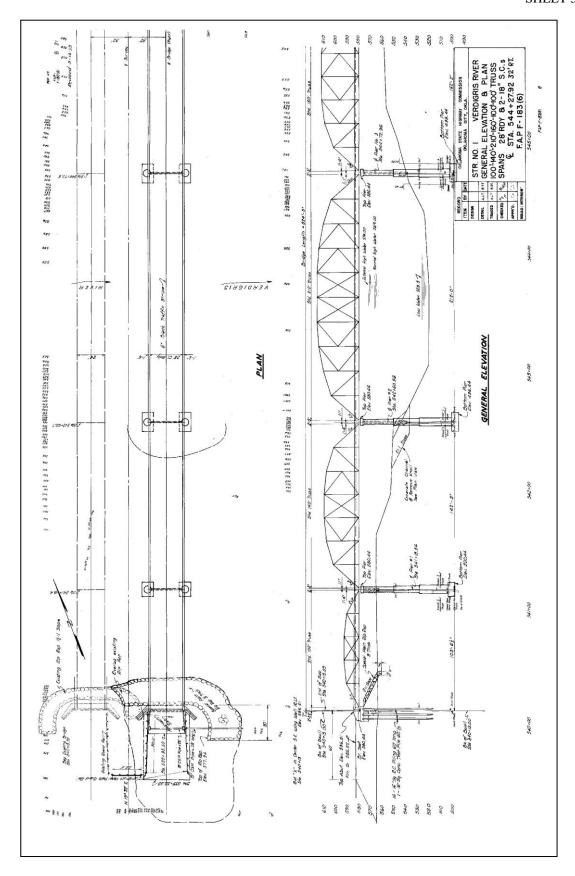
- 3. Sheet 3, title sheet, original sheet 1 of 21
- 4. Sheet 4, plan and profile, original sheet 5 of 21
- 5. Sheet 5, general elevation plan and summary of quantities, original sheet 6 of 21
- 6. Sheet 6, general elevation plan and summary of quantities, original sheet 7 of 21
- 7. Sheet 7, details of abutments, original sheet 8 of 21
- 8. Sheet 8, details of piers 1, 4, and 5, original sheet 9 of 21
- 9. Sheet 9, details of piers 2 and 3, original sheet 10 of 21

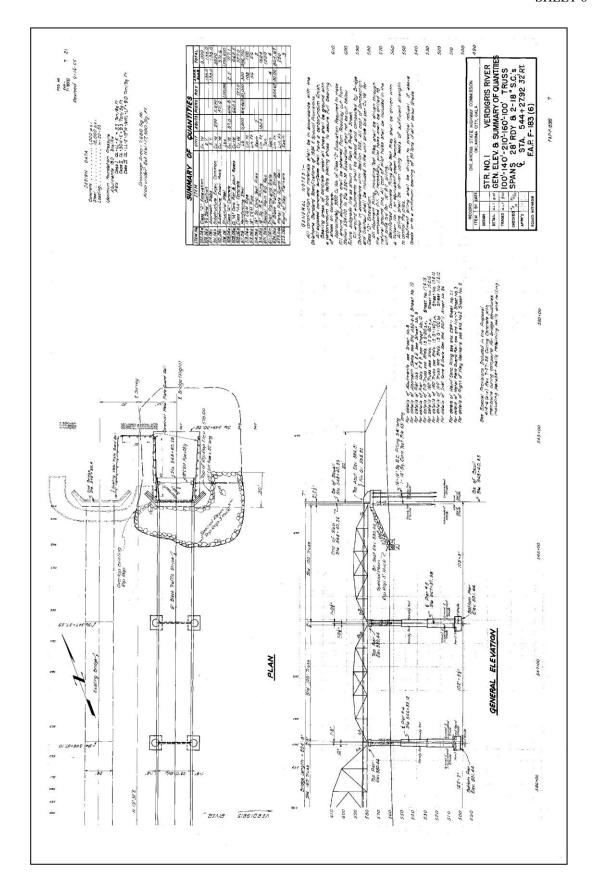


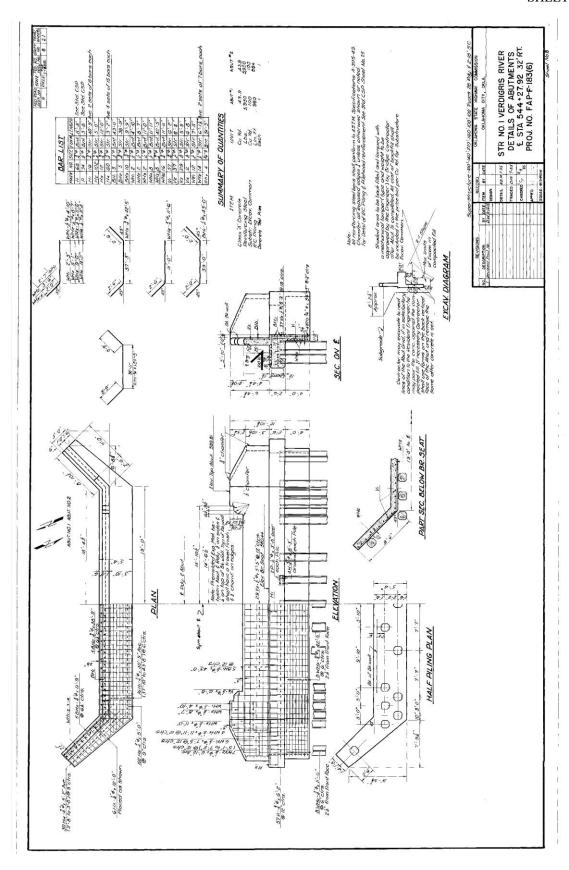


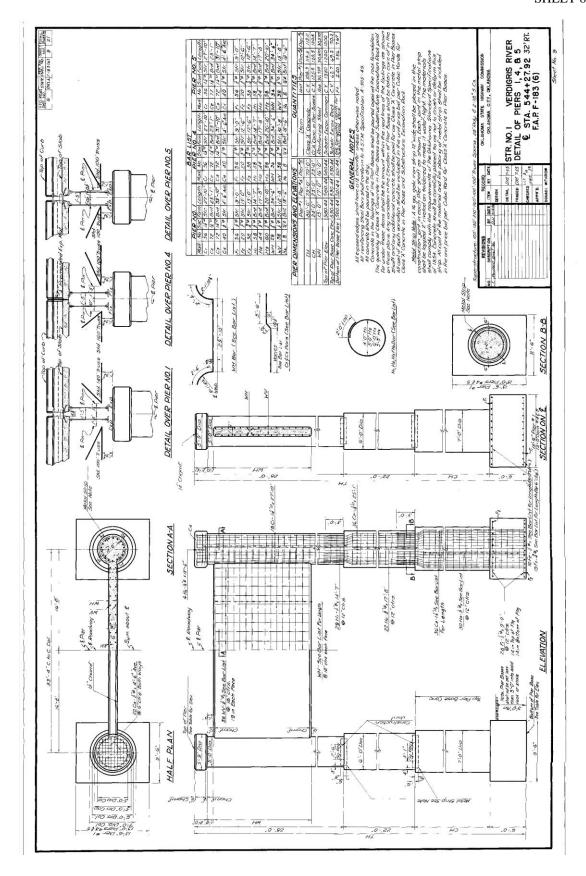


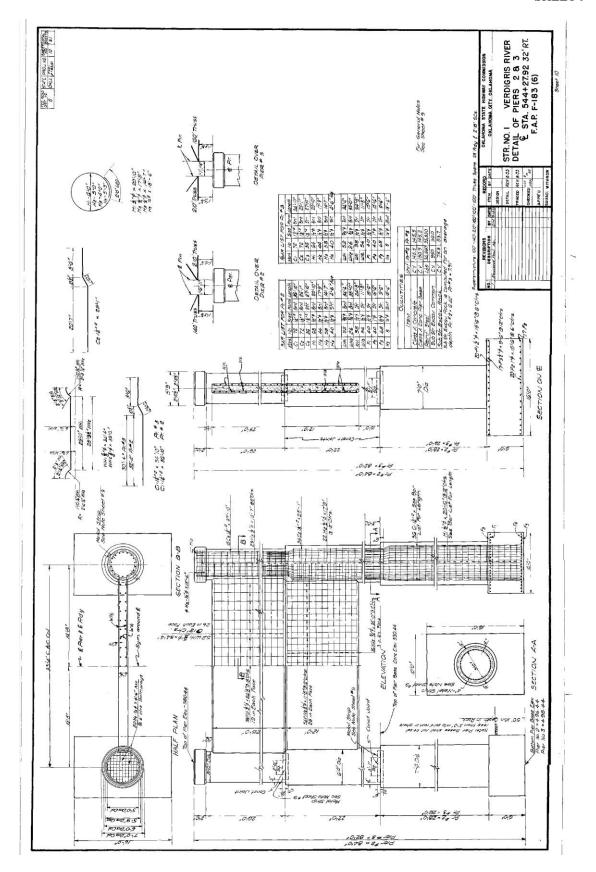












BIRD CREEK MIXED TRUSS Spanning Bird Creek Catoosa vicinity Rogers County Oklahoma

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

#### HISTORIC AMERICAN ENGINEERING RECORD

#### **BIRD CREEK MIXED TRUSS**

**Location:** Spanning Bird Creek, carrying State Highway 66, in the Catoosa

vicinity, Rogers County, Oklahoma. UTM: 15/E0255049/N4010608

Quad: Claremore, OK

**Legal Location:** Section 16, T20N, R15E

**Present Owner:** Oklahoma Department of Transportation

ODOT Structure Number 6602 0368 WX

**Present Use:** Vehicular Bridge

**Significance:** The Bird Creek Mixed Truss Bridge—the more westerly of two adjacent

bridges—is located on Route 66 over Bird Creek (previously Verdigris River, but redesignated Bird Creek due to the construction of the Port of Catoosa ca. 1969) northeast of Catoosa in Rogers County, Oklahoma. The bridge was constructed in 1936, as a six-span mixed truss and exhibits three Camelback pony trusses and three K-through trusses. The contractor for the bridge was M. E. Gillioz of Monnett, Missouri. The structure was built as a replacement for a previously existing bridge that collapsed under the weight of traffic in 1933. The previous bridge was constructed when the road was part of the Oklahoma City to Vinita route of the Ozark Trail, which became a component of Route 66 in 1926.

During construction of the Bird Creek Mixed Truss Bridge, Route 66 was realigned to eliminate dangerous curves, moving the road and bridge crossing approximately 800 feet (ft) east of its original alignment. Due to increased traffic, Route 66 was widened in 1956 to a four-lane highway and a second bridge was constructed on the southeast side of the Bird Creek Mixed Truss Bridge. The second bridge, constructed by Guy H. James of Oklahoma City, was built with the same truss configuration as the 1936 bridge, but with a wider roadway to meet new state standards. Nearly identical in appearance, the two bridges were dubbed the "Twin Bridges" or "Sister Bridges." As a mostly unaltered structure, the 1936 Bird Creek Mixed Truss Bridge is a good example of its type, and exemplifies the unique pattern of development associated with Route 66.

**Project Information:** 

Historic American Engineering Record (HAER) Level II equivalent documentation was performed in February 2011 and March 2013. Tanya McDougall, Architectural Historian, conducted an on-site visit and compiled the historical information in March 2013. Photo documentation was conducted in February 2011 by Anna Eddings, Architectural Historian with the Oklahoma Department of

Transportation. Photographs for this report have been digitally reproduced following National Park Service (NPS) standards for digital images. This HAER recordation serves as mitigation for the removal of the structure from vehicular traffic.

**List of Preparers:** Historian/ Project Manager: Tanya McDougall

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Photographer: Anna Eddings

Architectural Historian

**ODOT Cultural Resources Program** 

Norman, Oklahoma

### **PART I. HISTORICAL INFORMATION**

# A. Physical History:

1. Date of Construction: 1936

2. Architect/Engineer: Not Known

**3. Builder/Contractor/Supplier:** The bridge contractor was M. E. Gillioz from Monnett, Missouri. Steel for the bridge was supplied by Illinois-S-USA.

**4. Original Plans:** Copies of the bridge plans from 1936 were obtained from the Oklahoma Department of Transportation District 8 Headquarters, Tulsa, Oklahoma. In addition, copies of plans for the 1956 bridge, showing the 1936 bridge, were obtained from the Oklahoma Department of Transportation Reproduction Services Department, Oklahoma City, Oklahoma.

**5. Alterations and Additions:** The Bird Creek Mixed Truss Bridge has had minor alterations consisting of the replacement of the portal bracing on the northeast and southwest K-through trusses and replacement of a diagonal member on the center K-through truss.

#### **B.** Historical Context:

#### 1. Introduction

The Bird Creek Mixed Truss Bridge is located along State Highway 66 (Route 66) over Bird Creek (former Verdigris River channel) in southwest Rogers County, Oklahoma. The bridge is positioned between the communities of Catoosa (approximately 2 miles southwest) and Claremore (approximately 9 miles northeast). Beginning in the 1830s, the area now encompassed by Rogers County was part of the Saline District of the Cherokee Nation. In 1856, the western part of the district, including present-day Rogers County, was designated the Cooweescoowee District. The area remained part of the Cherokee Nation until 1907, when Oklahoma was admitted as a state. At statehood, Rogers County was officially formed, and Claremore, an established and centrally located community, was chosen as the county seat (Thomas 2013). Over the course of the county's history, the development of significant transportation routes, beginning with the railroad and later interstate highways, contributed greatly to the area's overall growth.

With abundant water sources provided by the Verdigris and Caney rivers, the Rogers County area is known for having good farm and ranch land. By the late 1800s, farming was the area's economic mainstay. The primary crops grown were corn, cotton, and wheat (Thomas 2013). The fledgling cattle ranching industry of that period intensified in 1882 when the St. Louis and San Francisco Railway (Frisco) was constructed from Missouri to what is now Catoosa in Rogers County. The communities of Chelsea, Foyil, Claremore, Verdigris, and Catoosa quickly developed along the rail line. The town of Catoosa was the end of the rail line and farthest stop west at that time. As such, ranchers from Texas and other areas began to drive their cattle to Catoosa to ship east. A significant cattle industry was soon established in the town; however, by 1885, the railroad line extended southwest to Tulsa, and the cattle industry in Catoosa, although still vibrant for several years, began to dwindle (Catoosa Historical Society 2002:6; Thomas 2013).

During the late 1800s and early 1900s, coal, petroleum, and natural gas industries also began to develop in the Rogers County area. Coal was first mined in Rogers County in

<sup>1</sup> Initially, Rogers County was named Cooweescoowee County, but after protest from the local residents, the county was renamed Rogers, after the local prominent rancher and active Cherokee tribal member Clement Vann Rogers (Thomas 2013). Clement Vann Rogers's son, Will Rogers, was the famed actor, columnist, and radio broadcaster who gained notoriety for his relatable country roots personality (Estate of Will Rogers 2013).

<sup>&</sup>lt;sup>2</sup> During the Civil War, the Cherokee Tribe, along with the other tribes in Indian Territory, signed treaties in support of the Confederacy. At the war's end, the Cherokee Tribe, viewed as a Confederate ally, was required to relinquish portions of land and open the territory for the construction of railroads as part of the terms of the 1866 Treaty of Fort Smith (Strickland 2013). The construction of the railroad attracted both Native American and illegal non-Native American settlers to the area.

1890 and became so prominent by 1904 that the Denver, Wichita and Memphis Railway constructed a local freight rail line from the Frisco railroad in Catoosa to the coal fields approximately 10 miles to the east (*New State Tribune* 13 June 1907; *Oklahoma State Capital* 10 November 1904; Thomas 2013). Drilling for petroleum and natural gas in the area began in 1903 near Claremore. However, to the surprise of the prospectors, instead of oil they discovered an artesian well with a high concentration of sulfur and other minerals (*Muskogee Daily Phoenix* 28 May 1903). Soon after the discovery, the water was promoted as having healing properties and sold to local health spas offering mineral baths (*Muskogee Daily Phoenix* 25 June 1905). The water and spas became very popular, attracting people to the area and adding to the growth of the local economy (Thomas 2013). At statehood in 1907, Rogers County had a population of 15,485, which increased to 17,736 by 1910 (Department of Commerce and Labor 1907;24; Thomas 2013).

To promote continued growth in Rogers County and throughout the new state of Oklahoma, it would be necessary to improve transportation outlets beyond the railroads. In the early 1900s, Good Road Association groups formed in cities throughout Oklahoma, advocating for the development and improvement of roads. The effort was well received, and in 1907, the Oklahoma constitution provided for the establishment of a state highway department; however, due to the lack of funding, the department was not officially created until 1911 (Burke 2011:7; Oklahoma Department of Highways 1970). Even after its creation, the department did not have the means to provide for the construction of roads and bridges until the 1920s, when changes in federal law mandated the state highway departments directly supervise plans and contracts for construction projects (Burke 2011:18; Oklahoma Department of Highways 1970). Thus, during that period, local efforts and volunteer groups such as the Good Road Associations continued to be the impetus for road development.

During the years following statehood, the development of a network of roads connecting Oklahoma to other states became a growing concern (Burke 2011:7; King 1993). In an attempt to remedy the issue, businessmen and citizens from Arkansas, Oklahoma, Missouri, and Kansas, formed the Ozark Trail Association in 1913. The group was organized "For the purpose of building 1,500 miles of improved automobile roads connecting more than 400 towns and 5,000,000 people. . . . " (Shawnee Daily News-Herald 11 July 1913). By the 1920s, the Ozark Trail consisted of a web of interconnected routes, linking the four states. The Ozark Trail route between Oklahoma City and Vinita traversed Rogers County in a northeast-southwest direction, following much of the same route as the Frisco railroad. In 1914, during the development of the trail, a bridge was constructed over the Verdigris River between Claremore and Catoosa, approximately 800 ft west of the Bird Creek Mixed Truss Bridge location (see Photo 48). Construction of the 1914 Verdigris River Bridge replaced the ferry crossing to the northwest near the Frisco Railroad Bridge that had been established at that location as early as 1882 (Catoosa Historical Society 2002:7; Reeder 1996:118).<sup>3</sup>

After the Ozark Trail was developed, the route between Tulsa and Vinita was promoted as a scenic highway that would ". . . open to Tulsa all of the natural wonders of the

<sup>&</sup>lt;sup>3</sup> The ferry crossing the Verdigris River between Claremore and Catoosa was opened in the late 1800s and operated by John Crutchfield, who later sold it to John Wofford (Catoosa Historical Society 2002:7).

southwest" (*Tulsa Daily World* 25 October 1916). In 1921, however, Congress passed the Federal Highway Act requiring states to designate a system of interstate and intercounty roads. The use of federal-aid funding was restricted to this system (Oklahoma Department of Highways 1970). It was at that time that Oklahoma's state highway department became more active and the state highway system was designated. Previously existing roads, including portions of the Ozark Trail routes, were incorporated into the state system. By 1925, State Highway Nos. 7, 11, 12, 16, 20, and 28 crossed Rogers County (Oklahoma State Highway Commission 1925). State Highway No. 7 was the old Ozark Trail route between Claremore and Catoosa.

Soon after the designation of the state highways, the Oklahoma State Highway Commission adopted the system of U.S. Interstate Highways, newly created in 1926. The routes for the system were designated by a Joint Board of State Highway Officials and approved by the American Association of State Highway Officials and the Secretary of Agriculture.<sup>4</sup> As was done with the state highways, previously existing roads were utilized to make up the interstate system. A total of nine interstate routes and 2,120 miles crossed through Oklahoma and included 400 miles of the Chicago to Los Angeles route designated U.S. Highway 66 or Route 66 (Goins and Goble 2006:176; Oklahoma State Highway Commission 1925–1926:8).<sup>5</sup> In Oklahoma, Route 66 followed State Highway No. 7 (including the portion through Rogers County), from the Kansas state line to Oklahoma City, where it connected to State Highway No. 3 to the Texas state line near Texola (Anderson et al. 2001–2002:4).

After Route 66 was officially designated, the U.S. 66 Highway Association was formed by representatives from the eight states the route crossed—Illinois, Missouri, Kansas, Oklahoma, Texas, New Mexico, Arizona, and California. The group promoted the route as the greatest transcontinental highway in America, and by 1927, Route 66 was dubbed "The Main Street of America" (*Miami News-Record* 6 February 1927). Motels, inns, restaurants, and roadside tourist attractions began to appear along the route. To promote its use, great efforts were made in each of the eight states to pave the entire route from Chicago to Los Angeles. Paving the Oklahoma portion took nearly 10 years to complete (Anderson et al. 2001–2002:4).

In an effort to create a smoother and safer route, improvements were continuously made to the road's alignment. In 1926, the alignment of Route 66 between Claremore and Catoosa in Rogers County was adjusted to eliminate at-grade railroad crossings and dangerous curves. After those improvements were made, the road remained as it was until 1933, when the 1914 bridge over the Verdigris River collapsed under the weight of traffic. As a result, the road was again realigned to further eliminate dangerous curves, and a replacement bridge, the Bird Creek Mixed Truss Bridge, was constructed approximately 800 ft east of the original bridge (*Chelsea Reporter* 14 May 1936). Completed in 1936, the bridge remained alone in that location until 1956, when the

<sup>&</sup>lt;sup>4</sup> Cyrus S. Avery, chairman of the Oklahoma State Highway Commission, was appointed by the Secretary of Agriculture as a member of the Joint Board of State Highway Officials (Oklahoma State Highway Commission 1925–1926:8). Prior to 1926, Avery was an active advocate for the development and improvement of roads and served on several road associations such as the Good Roads Association and Ozark Trail Association (Everett 2013).

<sup>&</sup>lt;sup>5</sup> Route 66 extended from Chicago to Los Angeles via St. Louis and Joplin, Missouri; Tulsa and Oklahoma City, Oklahoma; Amarillo, Texas; Tucumcari, Santa Fe, and Albuquerque, New Mexico; Holbrook, Arizona; to Los Angeles, California (Oklahoma State Highway Commission 1925–1926:8).

two-lane highway was widened to four lanes and a second bridge was constructed at that location.

## 2. Development of the Rogers County, Bird Creek Mixed Truss Bridge

The Bird Creek Mixed Truss Bridge, north of Catoosa in Rogers County, crosses Bird Creek<sup>6</sup> along State Highway 66 (Route 66), in the southwest corner of Section 16, Township 20N, Range 15E, Rogers County, Oklahoma. In 1882, the Frisco railroad was completed to Catoosa, and a railroad bridge was constructed over the Verdigris River between Claremore and Catoosa. A local roadway developed between the two communities, following the rail line from the Verdigris River to Claremore (United States Geological Survey 1901). However, at that time, the only means of crossing the river from the roadway was by ferry, which consisted of a 40-ft-long flat boat (Catoosa Historical Society 2002:7). The ferry remained in operation until 1914 when the first vehicular bridge was constructed at that location. Construction of the bridge preceded the designation of the Oklahoma City to Vinita route of the Ozark Trail, which it became a part of in 1916 (Catoosa Historical Society 2002:23; *Fort Gibson New Era* 7 May 1914). By 1925, however, the route was integrated into the state highway system and designated State Highway No. 7, which was also known as the Kansas City, Fort Scott, and Tulsa Short Line.<sup>7</sup>

From 1914 to 1925, the alignment of the road between Claremore and Catoosa included sharp turns north and south of the Verdigris River and two at-grade rail crossings north of the river (Claremore College Foundation 1979). The road alignment remained unchanged until 1926, when it was designated Route 66 of the newly created U.S. Interstate Highway system (See Photo 48). To improve the road alignment, the two at-grade rail crossings between Claremore and Catoosa were eliminated by relocating the road to the east side of the tracks. The improvements also eliminated several dangerous curves along that section of the road (Oklahoma State Highway Commission 1925–1926:135). The 1914 bridge over the Verdigris River, however, remained in its original location.

In November 1933, the southwest approach span of the 1914 bridge on Route 66 over the Verdigris River collapsed under the weight of traffic. The increase of traffic along the route and use of the automobile was more than the bridge, initially intended for wagons, was capable of handling (*Claremore Daily Progress* 25 November 1933). The structure was repaired and reopened to traffic later that same year. The contract for the work was awarded to the Patterson Steel company of Tulsa, which replaced the collapsed 165-ft-long bridge span at the cost of \$6,500 (*Miami Daily News-Record* 1 December 1933). After the bridge failed, traffic was diverted west of Claremore to highway 20, thence to highway 75 to a point southwest of Catoosa, where it connected with Route 66. Once fixed, the bridge was still considered unsafe and traffic continued to be detoured. Although necessary, the detour route diverted traffic away from the

<sup>&</sup>lt;sup>6</sup> Initially, the Bird Creek Mixed Truss Bridge spanned the Verdigris River. However, in ca. 1969, construction of the Port of Catoosa at the western end of the McClellan-Kerr Arkansas River Navigation System (MKARNS) rechanneled the Verdigris River to the north, and the waterway below the bridge was designated Bird Creek.

<sup>&</sup>lt;sup>7</sup> In 1925, State Highway No. 7 extended from the Kansas state line, north of Picher in Ottawa County, Oklahoma, to the Texas state line, south of Hollis in Harmon County, Oklahoma (Oklahoma State Highway Commission 1925:14–15).

communities between Claremore and Catoosa, hindering the local economy. Citizens of those towns expressed their concerns, but the lack of available funds prevented the state highway department from building a second local detour (*Miami News-Record* 27 January 1936).

The state highway department approved the construction of a new bridge (Bird Creek Mixed Truss Bridge) on Route 66 over the Verdigris River in May 1935. The contract to build the new bridge was awarded to M. E. Gillioz of Monett, Missouri, under project number NRH-183-A in June 1935, for the amount of \$126,300.80<sup>8</sup> (Oklahoma State Highway Commission 1935-1936:30-31) In addition to the bridge construction, the road at that location was realigned, eliminating "... dangerous curves on both sides of the bridge, especially one around the top of the river hill which has been the scene of several accidents" (*Claremore Daily Progress* 12 May 1936). Paving for the bridge and 1.069 total miles of the road was completed by the Standard Paving Company of Tulsa, at the cost of \$53,607.07 (*Ada Weekly News* 6 June 1935). Due to the realignment, however, the bridge was located approximately 800 ft east of the original bridge (See Photos 46 and 48).

The new bridge was opened to traffic in May 1936 and consisted of three K-through trusses and three Camelback (C-back) pony trusses (*Chelsea Reporter* 14 May 1936). At the time the bridge was constructed, the state of Oklahoma had been using the K-truss type as a standardized design for several years. The K-truss features a curved top chord and vertical members with two small inclined members forming a K-shape within the truss panels, design elements that allowed for a longer structure and cost-efficient construction. Due to these design qualities, the state of Oklahoma used the K-truss as a standard design from the early 1930s through the 1950s. The standardized K-trusses built by the state varied in length from 140 ft to 210 ft (King 1993).

The Bird Creek Mixed Truss Bridge remained alone at its location until 1956, when a second bridge was constructed along its southeast side. Due to the increase in traffic, the Oklahoma State Highway Commission approved a proposal to widen the stretch of Route 66 between Claremore and Catoosa from a two-lane highway to a four-lane highway in 1954 (*Miami Daily News-Record* 23 September 1954). The route would connect with the four-lane Turner Turnpike in Tulsa, recently opened in 1953. As a result of the road widening and construction of the second bridge, the 1936 bridge over the Verdigris River was assigned to carry the highway's southbound traffic. The new bridge, completed in 1956, was built using the same truss configuration as the 1936 bridge, but with a wider deck that conformed to the state's standards at that time (*Claremore Daily Progress* 26 July 1956). Although research could not confirm the claim, a local newspaper announced the new bridge would have a "record-breaking" 79 ½ tons of steel when completed (*Claremore Daily Progress* 16 August 1955).

M. E. Gillioz, best known as a road and bridge contractor, is also known to have built the Route 66 Neosho River Bridge in 1935 (*Miami Daily News-Record* 22 September 1935).

<sup>&</sup>lt;sup>9</sup> In 1935 during the construction of the bridge, the famed entertainer and native Rogers County resident Will Rogers died in a plane crash on his way to Alaska. That same year, the National U.S. 66 Highway Association designated Route 66 the Will Rogers Highway in his honor (*Miami News-Record* 11 December 1935).

<sup>&</sup>lt;sup>10</sup> The 1956 bridge was completed under project number F-183(6) (Oklahoma State Highway Commission 1955-1956:240).

After the 1956 bridge's completion, the State Highway Commission, under Commission item 562 7-9-56, dedicated both bridges in honor of the State Highway Commission chairman and Claremore native H. Tom Kight Jr. (Ada Evening News 10 July 1956; Lopez et al. 2008). The Kight dedication plaques were placed on either side of the crossing in 1957. Due to the bridges being nearly identical in appearance, they have also been referred to locally as the "Sister Bridges" or "Twin Bridges."

Beginning in the 1950s, drivers used Route 66 less and less due to the construction of super-highways. In Oklahoma, the construction of Interstate (I) 40 and I-44 segmented Route 66 by incorporating, abandoning, or bypassing portions of the road. In 1985, Route 66 was officially decommissioned as a U.S. Interstate Highway. Portions of the road in Oklahoma, including the section between Claremore and Catoosa, were redesignated as State Highway 66 (Anderson et al. 2001–2002:6). Although no longer a national route, features such as the Bird Creek Mixed Truss Bridge and its sister bridge exemplify the unique pattern of development associated with Route 66.<sup>11</sup>

### PART II. STRUCTURAL/DESIGN INFORMATION

**A. General Description:** The Bird Creek Mixed Truss Bridge is a two-lane, concrete deck bridge along State Highway 66 (Route 66) between Claremore and Catoosa in Rogers County, Oklahoma. This 1936 structure is the westernmost of two adjacent bridges and runs northeast–southwest to accommodate the northwest–southeast drainage of Bird Creek.

The structure has a total of six simple spans (spans that are independent of one another), which include three K-through trusses flanked by one C-back pony truss on the southwest end and two C-back pony trusses on the northeast end. All of the members of the trusses are riveted together with gusset plates located at each connection. Continuous double channel, metal railing extends along each truss. The total length of the structure is 824 ft with the longest span measuring 209 ft. The structure carries two southbound lanes of traffic, has a total width of 27 ft, and a curb-to-curb width of 24 ft. The deck consists of a concrete slab supported by six metal stringers, a series of metal floor beams, and lateral bracing.

The three K-through trusses at the center of the bridge each vary in size. Beginning at the northeast end of the bridge, the K-through trusses have eight, ten, and seven panels. The two outermost panels at each end of each truss are identical and consist of a panel void of a diagonal followed by a panel with a single inward angled diagonal. The two middle panels of the center truss and one middle panel of the southwest truss exhibit diagonals that cross and form an X. This feature is not present on the northeast truss. The remaining panels of each truss have two small diagonal members that form an inward facing K-shape, providing the trusses with its character-defining feature. The upper diagonals of the K are built-up members with V-lacing, while the lower diagonals are I-beams. The truss webs connecting the truss walls at the top chord consist of, beginning from the northeast, six, eight, and five

<sup>&</sup>lt;sup>11</sup> In 2012, The Oklahoma Department of Transportation removed the Bird Creek Mixed Truss Bridge from vehicular traffic. Several of the bridge's trusses were relocated for reuse. The middle K-through truss and one pony truss were relocated southwest of their original location, off of Old Route 66, and used at the driveway entrance for the commercial establishment known as Molly's Landing. The remaining two K-through trusses were relocated to Rogers Point Park, located northeast of the bridge's original location.

panels with portal bracing flanking sway and lateral bracing. The portal bracing of the southwest and northeast trusses have been replaced and consist of four angles riveted together to form a box frame. The portal bracing of the center truss and the lateral bracing of all three trusses consist of angles with V-lacing. The sway bracing on all three trusses consists of I-beams and angles.

The three C-back pony trusses, one at the southwest end and two at the northeast end of the structure, are all identical. The top chord of each wall is made up of five inclined built-up members with stay plates on the underside of the arch. The use of five inclined members for the top chord is a defining characteristic of this design. The truss walls are each five panels wide and have four vertical and four diagonal I-beams. Two of the diagonal members cross at the center panel forming an X.

The bridge's substructure consists of five, concrete column piers with solid web walls and two concrete abutments. The concrete piers are original to the structure and positioned at the end of each span. Located at each end of the bridge is a concrete abutment with flared wing walls.

- 1. Character: The Bird Creek Mixed Truss Bridge has retained the character-defining features of both the K-through truss and C-back pony truss, and is a good representative example of the type of bridge construction completed during the mid 1930s along Route 66 in Oklahoma.
- 2. Condition of Fabric: The Bird Creek Mixed Truss has undergone minimal alterations, consisting only of the replacement of the portal bracing on the northeast and southwest K-through truss and the replacement of a diagonal member on the center K-through truss. Overall, the structure has retained its character and integrity.
- **B. Site Information:** The Bird Creek Mixed Truss Bridge is located in a moderately developed area with domestic and commercial properties to the southwest, light industrial properties to the southeast and northwest, and recreational facilities to the northeast. More heavily developed areas near the bridge site include the Port of Catoosa approximately 1 mile northwest and the populated center of Catoosa approximately 2 miles southwest.

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BIRD CREEK MIXED TRUSS Spanning Bird Creek Catoosa vicinity Rogers County Oklahoma

LOCATION MAP

