

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

Historic name: Long Branch Creek Bridge
 Other names/site number: ODOT Structure #60N3300E0530009, NBI 01055
 Name of related multiple property listing:
N/A
 (Enter "N/A" if property is not part of a multiple property listing)

2. Location

Street & number: 1/8 mile north of the intersection of N3300 and E0540
 City or town: Stillwater State: OK County: Payne
 Not For Publication: Vicinity:

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this X nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property X meets does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

 national statewide X local
 Applicable National Register Criteria:
 A B X C D

Signature of certifying official/Title:	Date
State or Federal agency/bureau or Tribal Government	

In my opinion, the property <u> </u> meets <u> </u> does not meet the National Register criteria.	
Signature of commenting official:	Date
Title :	State or Federal agency/bureau or Tribal Government

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4. National Park Service Certification

I hereby certify that this property is:

- entered in the National Register
- determined eligible for the National Register
- determined not eligible for the National Register
- removed from the National Register
- other (explain:) _____

Signature of the Keeper

Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

- Private:
- Public – Local
- Public – State
- Public – Federal

Category of Property

(Check only **one** box.)

- Building(s)
- District
- Site
- Structure
- Object

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Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
<u>0</u>	<u>0</u>	buildings
<u>0</u>	<u>0</u>	sites
<u>1</u>	<u>0</u>	structures
<u>0</u>	<u>0</u>	objects
<u>1</u>	<u>0</u>	Total

Number of contributing resources previously listed in the National Register 0

6. Function or Use

Historic Functions

(Enter categories from instructions.)

Cat: Transportation Sub: road-related (vehicular)

Current Functions

(Enter categories from instructions.)

Cat: Transportation Sub: road-related (vehicular)

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7. Description

Architectural Classification

(Enter categories from instructions.)

Other: Pratt Half-Hip Pony Truss

Materials: (enter categories from instructions.)

Principal exterior materials of the property: Steel and Timber

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

The Long Branch Creek Bridge is located in Payne County approximately five and one-half miles northwest of downtown Stillwater. It carries N3300 Road over Long Branch Creek and was constructed in 1910 by the Wichita Construction Company. The bridge is a Pratt Half-Hip Pony Truss design. A rural landscape with wooded stream valley, pasture, and cultivated fields comprise the bridge's setting. Historic integrity of the bridge is maintained because of the presence of the original trusses and the lack of evidence the bridge was moved.

Narrative Description

The Long Branch Creek Bridge has a total length of 70 feet with a deck length of 50 feet. The truss is only over the creek channel. The abutments are located at the creek banks. The bridge's driving surface width (between the curbs) is 14 feet.

The truss is in the Pratt Half-Hip pony truss design and has pinned connections. A pony truss is defined as a truss bridge which has no bracing over the top of the roadway, while the Pratt design indicates that the bridge's top chord is horizontal. In describing metal truss bridges, the topmost

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beam of the truss is called the top chord, the bottom beam is called the bottom chord, and linking the top and bottom chords are vertical and diagonal beams. Following is a description of the truss members of the Long Branch Creek Bridge:

Top Chord:

An I-beam running three quarters the length of the span, providing the compression strength of the bridge.

Inclined End Posts:

This I-beam has been inclined to become more perpendicular to the deck, in order to become more cost effective without diminishing its strength. This post is then pinned to the top chord

Bottom Chord:

A set of tension cables that provide the tension strength of the bridge.

Diagonals:

The diagonals are tension cables that span the gaps between the inclined end posts and the vertical members. These diagonals also cross in the center of the bridges to form an "X" pattern.

Verticals:

The vertical members of the bridge connect the top chord to the large I-beams that span the width of the truss underneath the deck.

Underneath the deck there are I-beams running longitudinally the length of the truss, and larger I-beam floor beams spanning the width of the truss. The bottom lateral bracing consists of tension cables in an "X" pattern between the floor beams.

The deck is of timber construction. The timbers of the deck run east and west. There are also timber placed on top of the main deck that are laid north to south. These north to south timbers form the driving surface of the bridge.

The abutments are of a "U" shaped design. These corrugated steel and I-beam structures link into the bridges support pillars. They provide vertical and lateral support for the bridge, and acting as retaining walls.

Due to its age the Long Branch Creek Bridge has undergone repairs as recent as 2013. These repairs include new tension cables placed along the diagonals and along the bottom chord. The presence of these repairs does not take away from the historic integrity of the bridge because they are in accordance with the original design.

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8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

- A. Owned by a religious institution or used for religious purposes
- B. Removed from its original location
- C. A birthplace or grave
- D. A cemetery
- E. A reconstructed building, object, or structure
- F. A commemorative property
- G. Less than 50 years old or achieving significance within the past 50 years

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Areas of Significance

(Enter categories from instructions.)

Cat: Engineering

Period of Significance

1910

Significant Dates

1910

Significant Person

(Complete only if Criterion B is marked above.)

N/A

Cultural Affiliation

N/A

Architect/Builder

Wichita Construction Company

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Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

During the early 1900s, the Pratt Half-Hip Pony Truss was one of the most common bridge designs used in the rural United States. This commonality was based on price and usability. However, as roads expanded to carry larger and a greater number of vehicles, the Pratt Half-Hip Pony Truss was incapable of carrying the load. According to the Oklahoma Historic Bridge Survey the Long Branch Creek Bridge avoided dismantling and has become one of the last documented Pratt Half-Hip Pony Truss bridges in Payne County, Oklahoma. Over the last 114 years, this bridge has served as E3300 Road's only bridge over Long Branch creek. This bridge was rehabilitated in 2013 due to needed maintenance. The rehabilitation added new tension cables to the bridge, but these new cables are in line with the old tension cables (old tension cables were not removed). New tension cables were added underneath the deck. These additions do not take away from the historic integrity of the bridge, because the cables are unobtrusive, add to the longevity of the bridge, and do not degrade the trusses. This bridge is significant at the local level significance, because it is one of two remaining examples of Pratt Half-Hip Pony Truss in Payne County, Oklahoma identified in the Oklahoma DOT bridge survey.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

The Long Branch Creek Bridge is an excellent example of the Pratt Half-Hip Pony Truss. This bridge embodies the functional, yet symmetric and shapely design of the Pratt Half-Hip Pony Truss. The popularity of the Pratt Half-Hip Pony Truss design ranged from 1800s until the 1920s, marking the construction of the Long Branch Creek Bridge near the end of this period.

In Pony Truss bridge designs, the deck is attached to the lower chord of each truss and the trusses are low enough that there is no need for overhead bracing; overhead bracing helps to resist lateral sway, which is not needed in a pony truss system. The Pratt component of the design is characterized by vertical compression members, which are relatively thick and prominent visually. What indicates this bridge as a half-hip are the inclined end posts that do not horizontally extend the length of a full panel. An unusual feature to the Long Branch Creek Bridge is its counters. These counters are tension cables that cross at the center of the bridge where a center vertical member would normally be. By replacing the center vertical member with counters the construction company minimized cost, but also created a unique bridge.

The Wichita Construction Company designed the Long Branch Creek Bridge based on research found with the Oklahoma Department of Transportation.¹ However, since the Wichita Construction Company only existed from 1910-1913, three short years, no other information about the company could be located.

¹ When the bridge was initially surveyed by the Oklahoma Department of Transportation, a bridge plate was extant. In 2014, the bridge plate is non-extant.

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The Pratt Half-Hip Pony Truss design was a popular bridge design, however as vehicle sizes and volumes increased, and the Pratt Half-Hip Pony Truss design was not capable to carry the load. Over time, these bridges were replaced. However, due to its rural setting and low traffic volumes the Long Branch Creek Bridge avoided dismantling. To date this bridge is one of two remaining examples of the type in Payne County. In addition, this bridge is the longer of the two remaining. More importantly, the Long Branch Creek Bridge's historical significance is intact.

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9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Chatterjee, S. 1991. The Design of Modern Steel Bridges. Oxford: BSP Professional Books.

Mattioni, Rick. 2014. "Long Branch Creek Bridge." Accessed May 9.
<http://bridgehunter.com/ok/payne/10550000000000/>.

Oklahoma Department of Transportation. 2014a. "ODOT Memorial Highways & Bridges: Pratt Half-Hip Pony Truss." Accessed May 2. <http://www.okladot.state.ok.us/hqdiv/p-r-div/spansoftime/pratthalf.htm>.

———. 2014b. "ODOT Memorial Highways & Bridges: Pratt Pony Truss." Accessed May 2. <http://www.okladot.state.ok.us/hqdiv/p-r-div/spansoftime/prattpony.htm>.

Svirsky, Alexander. 2014. "National Bridge Inventory Database Search - 2012." Accessed May 9. <http://nationalbridges.com/>.

Troitsky, M. S. 1994. Planning and Design of Bridges. New York: John Wiley & Sons, Inc.

Zhao, J., and D. Tonia. 2012. Bridge Engineering: Design, Rehabilitation, and Maintenance of Modern Highway Bridges. Third Edition. New York: McGraw-Hill.

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____
- recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository: _____

Historic Resources Survey Number (if assigned): _____

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10. Geographical Data

Acreage of Property Less the one acre

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates (decimal degrees)

Datum if other than WGS84: _____

(enter coordinates to 6 decimal places)

- | | |
|------------------------|-----------------------|
| 1. Latitude: 36.232907 | Longitude: -97.123777 |
| 2. Latitude: | Longitude: |
| 3. Latitude: | Longitude: |
| 4. Latitude: | Longitude: |

Verbal Boundary Description (Describe the boundaries of the property.)

The Southeast corner of the Long Branch Bridge is 1/8 mile from the intersection of N3300 and E0540 Road. From the Southeast corner, the boundary continues north 70 feet reaching the Northeast corner of the bridge. The boundary then turns left and continues 14 feet reaching the Northwest corner. Turning left once more, the boundary continues 70 feet to the Southwest corner. The final left turn takes the boundary 14 feet back to the Southeast corner.

Boundary Justification (Explain why the boundaries were selected.)

This boundary was chosen so that it only included the bridge from abutment to abutment (width, east and west) and from where the roadbed enters the deck to where the deck exits to the roadbed (length, south and north).

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11. Form Prepared By

Name/title: Nicholas Rose Graduate Student
Organization: Oklahoma State University
Street & number: 139 S Husband ST APT 5
City or town: Stillwater state: OK zip code: 74074
e-mail: njrose@okstate.edu
Telephone: 513-649-4286
Date: 5/22/2014

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: Long Branch Creek Bridge

City or Vicinity: Near Stillwater

County: Payne

State: Oklahoma

Photographer: Nicholas Rose

Date Photographed: May 2, 2014

Description of Photograph(s) and number, include description of view indicating direction of camera:

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1 of 8	This photograph is of the entrance of the south side of the bridge. Standing near the southeast corner the camera direction was north through the span of the bridge, including the deck and both the east and west truss.
2 of 8	This photography was taken from east to west. It includes the east truss and part of the deck.
3 of 8	This photography was taken from west to east. It includes the west truss and part of the deck.
4 of 8	This photograph was taken underneath the southeast corner of the bridge, shooting diagonally to the northwest corner. The image depicts the foundation of the bridge and the underneath of the deck.
5 of 8	Photograph 5 was taken from the center of the bridge deck shooting to the east. This image depicts a close-up of the support members and the reconstructed tension cables.
6 of 8	Photography 6 depicts the counters at the center of the west truss. Camera view is from east to west.
7 of 8	Shooting from under the south side of the bridge and shooting north, this image depicts the supports and under-decking of the bridge.
8 of 8	Photograph 8 depicts the top of the east truss, showing the intact pins. View is pointing southeast.

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

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Long Branch Creek Bridge

1/8 mile north of the intersection of N3300 and E0540
Stillwater Vicinity, Payne County, Oklahoma



Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

