



Historic Bridge Foundation Facebook Archives

Focus Bridge: Bluff Dale Bridge

June 2018

The Bluff Dale Suspension Bridge is located in Erath County, Texas. Although abandoned, it is one of the most significant historic bridges in Texas as the oldest known cable-stayed bridge in Texas, and perhaps the country. The bridge was built in 1890 by the Runyon Bridge Company, Weatherford, Texas, and is a wire cable-stayed bridge with a stiffening truss composed of tubes and cast iron connecting pieces. It was repaired by the Flinn-Moyer Bridge Company of, Weatherford, Texas, in 1899. Company owner William Flinn had previously worked with Edwin Elijah Runyon at the Runyon Bridge Company. It is assumed that the Howe stiffening truss of tubes and castings were added at this time, since other Runyon bridges did not have this stiffening truss, while other William Flinn bridges did. In 1934 the bridge was replaced and moved from its original location on the Stephenville-Granbury Road upstream a short distance to what is today CR-149. It remained open to traffic in this location until the early 1990s when a new bridge was built. Today the bridge is abandoned and at high risk of eventual collapse due to neglect.

The basic thinking of cable-stayed and suspension bridges goes back to as early 282 B.C. In more recent history, the United Kingdom and the United States engaged in some experimentation with cable-stayed designs such as the 1873 Albert Bridge in London and the 1866 Roebling Bridge in Cincinnati, Ohio. Many of these early bridges were a combination of suspension and cable-stayed designs. However, Runyon designed the Bluff Dale Bridge as a true cable-stayed bridge with no parabolic suspension cable. As such, it stands out as an unusual bridge. His design did not catch on at the time, nor does it appear to have received much attention from the engineering community of the period. This is ironic since the design is essentially a prototypical example of a bridge type that reemerged after World War II to become a very popular bridge type. In fact, the cable-stayed bridge is today one of the most common long-span bridge types to be built in new bridge construction.



A photo of the bridge taken in 2016.



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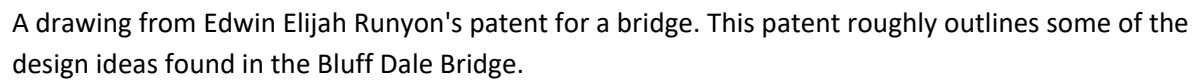
This ca. 1975 photo from the National Register Nomination shows the bridge prior to construction of the replacement bridge.



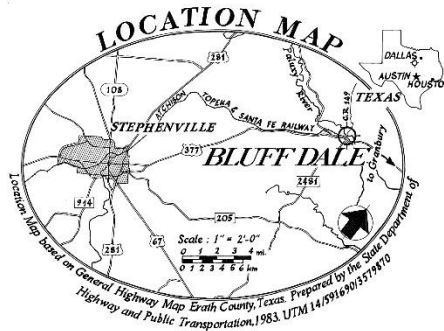
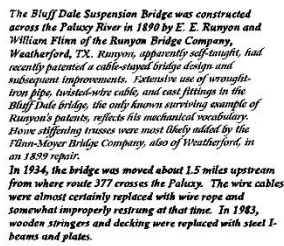
This photo from the Historic American Engineering Record shows the unusual floorbeams that include wire cables in their design, as well as the connection detail with the stiffening truss.

3 Sheets—Sheet 1.

E. E. RUNYON.
SUSPENSION BRIDGE.
Patented Dec. 18, 1888.



ERATH COUNTY ☆ 1890 ☆ TEXAS



The Texas Historic Bridges Recording Project is part of the Historic American Engineering Record (HAER), a long-range program documenting historically significant engineering, industrial, and maritime sites in the United States. The HAER program is administered by the National Park Service, U.S. Department of the Interior. The Texas Historic Bridges Recording Project was co-sponsored during the summer of 1996 by HABS/HAER under the general direction of E. Blaine Cliver, chief; the Texas Department of Transportation, Environmental Affairs Division and Design Division; and the Federal Highway Administration.

The field work, measured drawings, historical reports, and photographs were prepared under the direction of Eric DeLony, chief of HAER. The team consisted of Eric DeLony, architectural supervisor (ICOMOS-Canada); Christopher B. Brown (University of Washington); Heather J. Dodd (Texas Tech University); Christianna Kaber (Rice University) and Zsolt Zsanna (ICOMOS-Hungary); and Michael M. Smith, Jr., Estelle M. Chung (University of Michigan at Ann Arbor); J. Philip Gruen (University of California at Berkeley) and Robert Jackson (University of Texas at Austin), historians; Joseph Elliot, photographer; Todd Ashby (Texas Department of Transportation), special assistant.