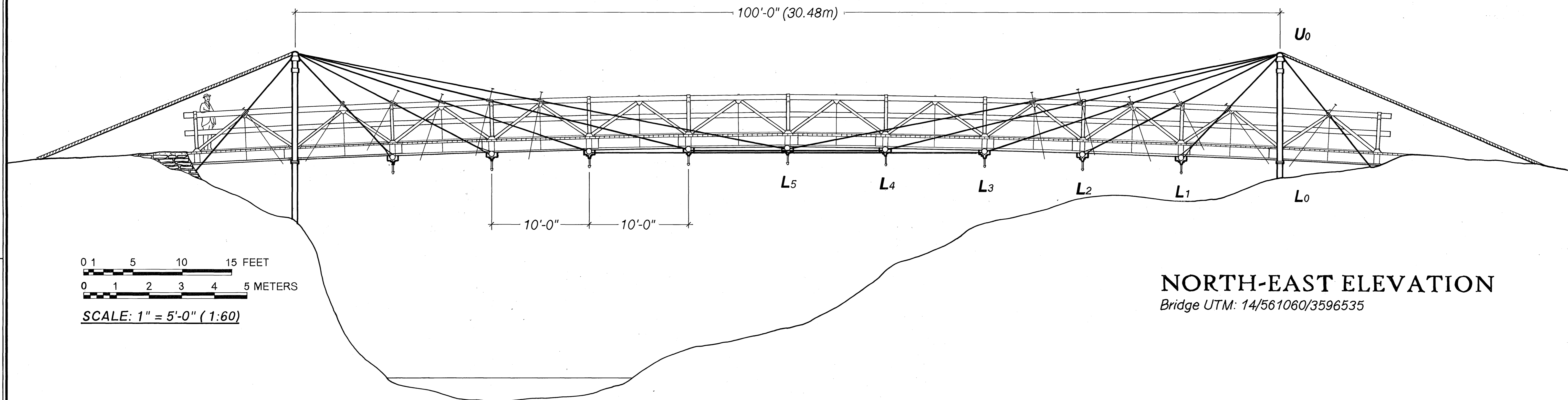


BARTON CREEK BRIDGE

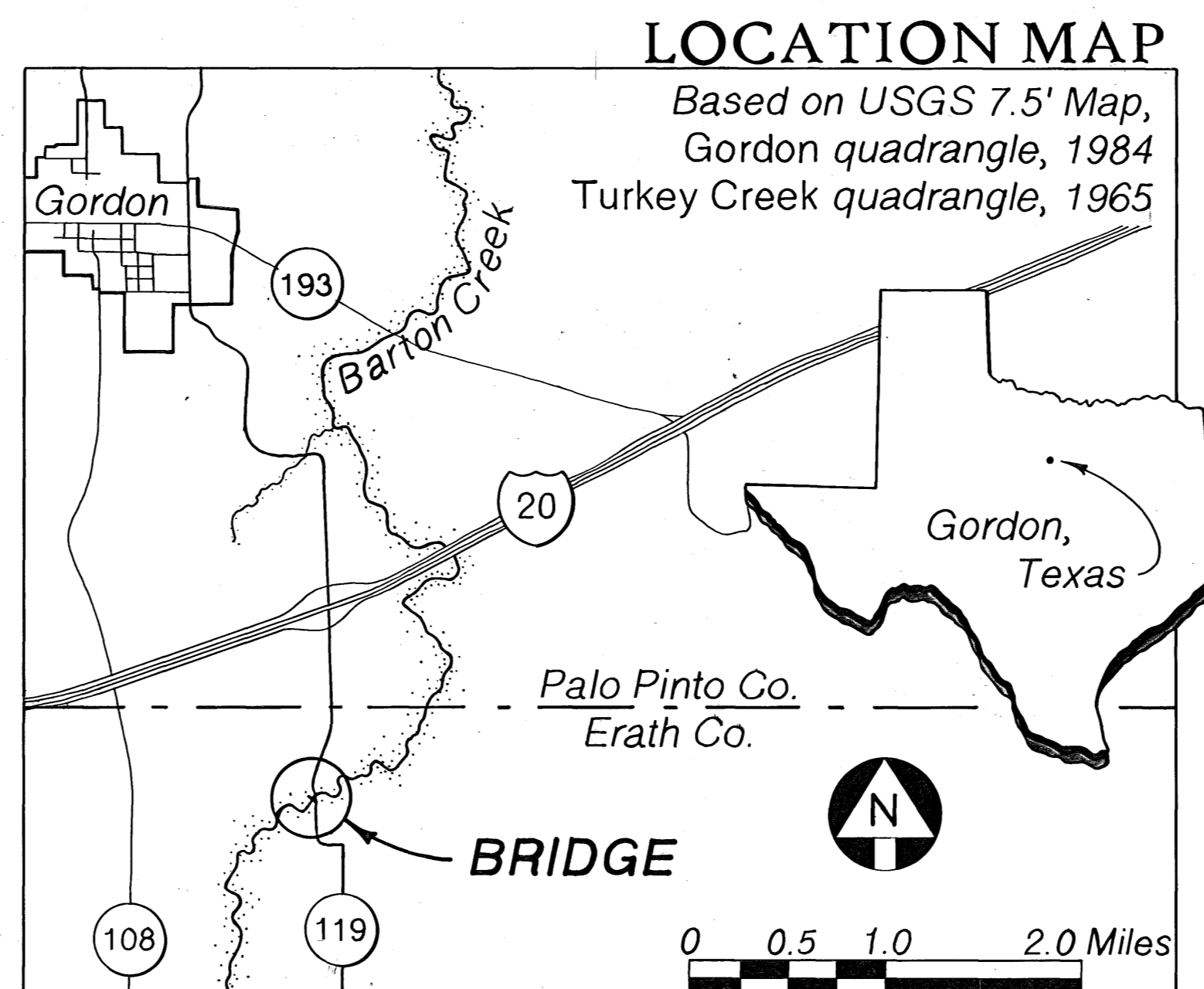
Vicinity of Gordon, Texas
1890



NORTH-EAST ELEVATION
Bridge UTM: 14/561060/3596535

In 1890, the Runyon Bridge Co. consisting of Edwin Elijah Runyon and William Flinn of Weatherford, Texas, constructed at least three bridges for Erath County. Between 1888 and 1893, Runyon was awarded 6 patents for suspension bridges. A school teacher and shopkeeper, Runyon developed an unusual mechanical vocabulary using pipe, twisted-wire cable, and cast fittings. Both Barton Creek, completed in October 1890, and the Bluff Dale (HAER TX-36) suspension bridges were part of the 1890 commission – the only known extant examples of Runyon's patents. Rare cable-stays connect the decks of both bridges directly to the towers. While in very poor condition, the Barton Creek Bridge is largely unaltered. It is also a remnant of a once much larger body of inventive short-span vernacular suspension bridges designed and built in North Central Texas before 1920. Flinn would become an important suspension bridge builder throughout North Central Texas before his death in 1904. Abandoned sometime after 1936, the bridge is on private property.

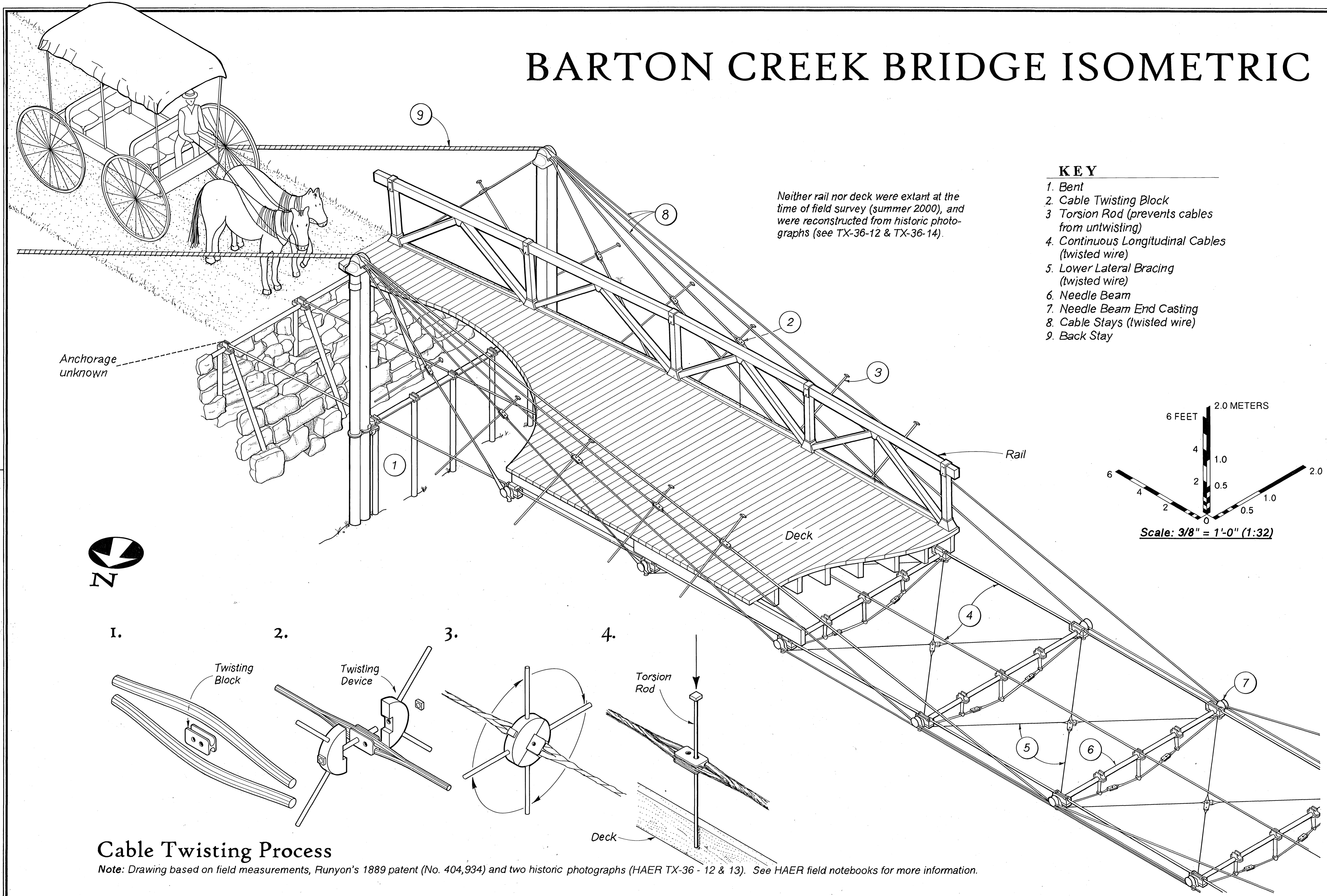
Note: These drawings are based on field measurements, Runyon's patents, and two historic photographs (HAER TX-36-12 & 13). See HAER field notebooks for more information.



The Texas Historic Bridges Recording Project II 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 II was co-sponsored during the summer of 2000 by HAER under the general direction of E. Blaine Cliver, Chief; and the Texas Department of Transportation, Environmental Affairs Division, Dianna F. Noble, P. E., Director.

The field team, measured drawings, historical reports, and photographs were prepared under the direction of Eric DeLony, Chief of HAER. The team consisted of Pete Brooks, Architectural Supervisor (Yale University), Jennifer M. Chrusciel (Kent State University), Wenhai Li, (ICOMOS-People's Republic of China), Megan C. Olson (Washington State University), Tim S. Reynolds (University of California at Berkeley), architects; Dr. Mark M. Brown, Dr. Peggy J. Hardman, Dr. Robert W. Jackson, Dr. Joseph King, historians; Dr. Dario A. Gasparini and Stephen G. Buonopane, consulting engineers.

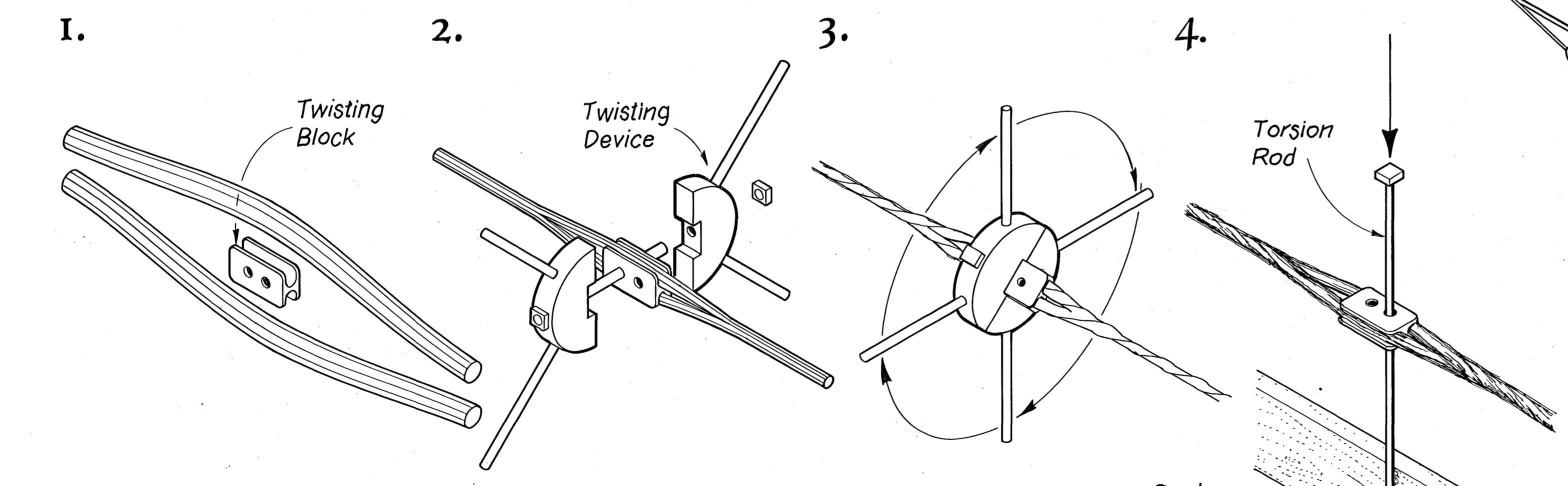
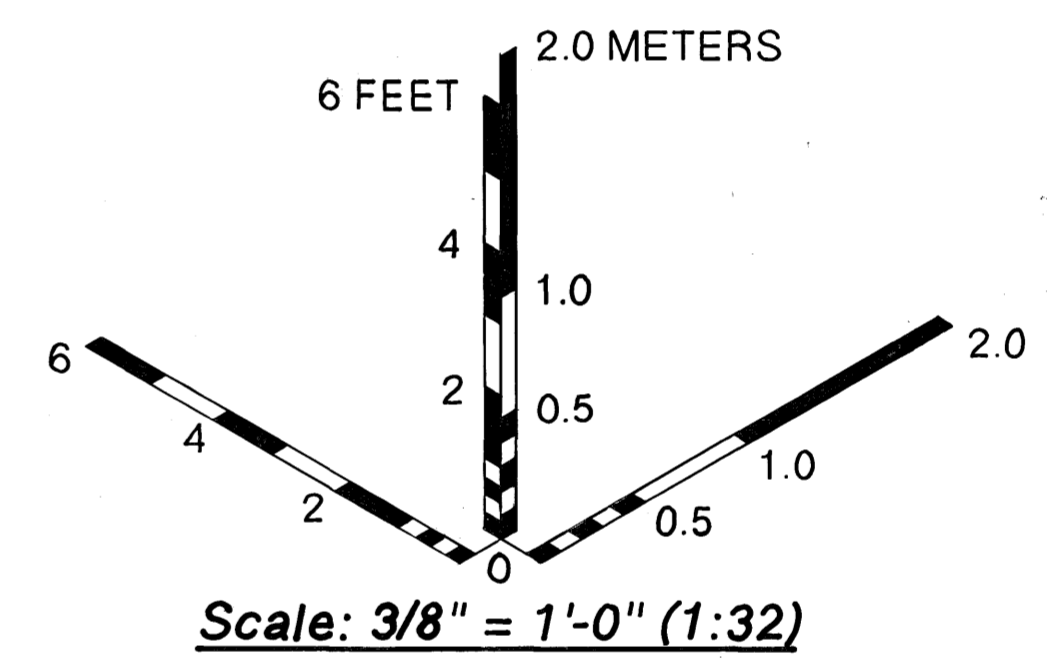
BARTON CREEK BRIDGE ISOMETRIC



Neither rail nor deck were extant at the time of field survey (summer 2000), and were reconstructed from historic photographs (see TX-36-12 & TX-36-14).

KEY

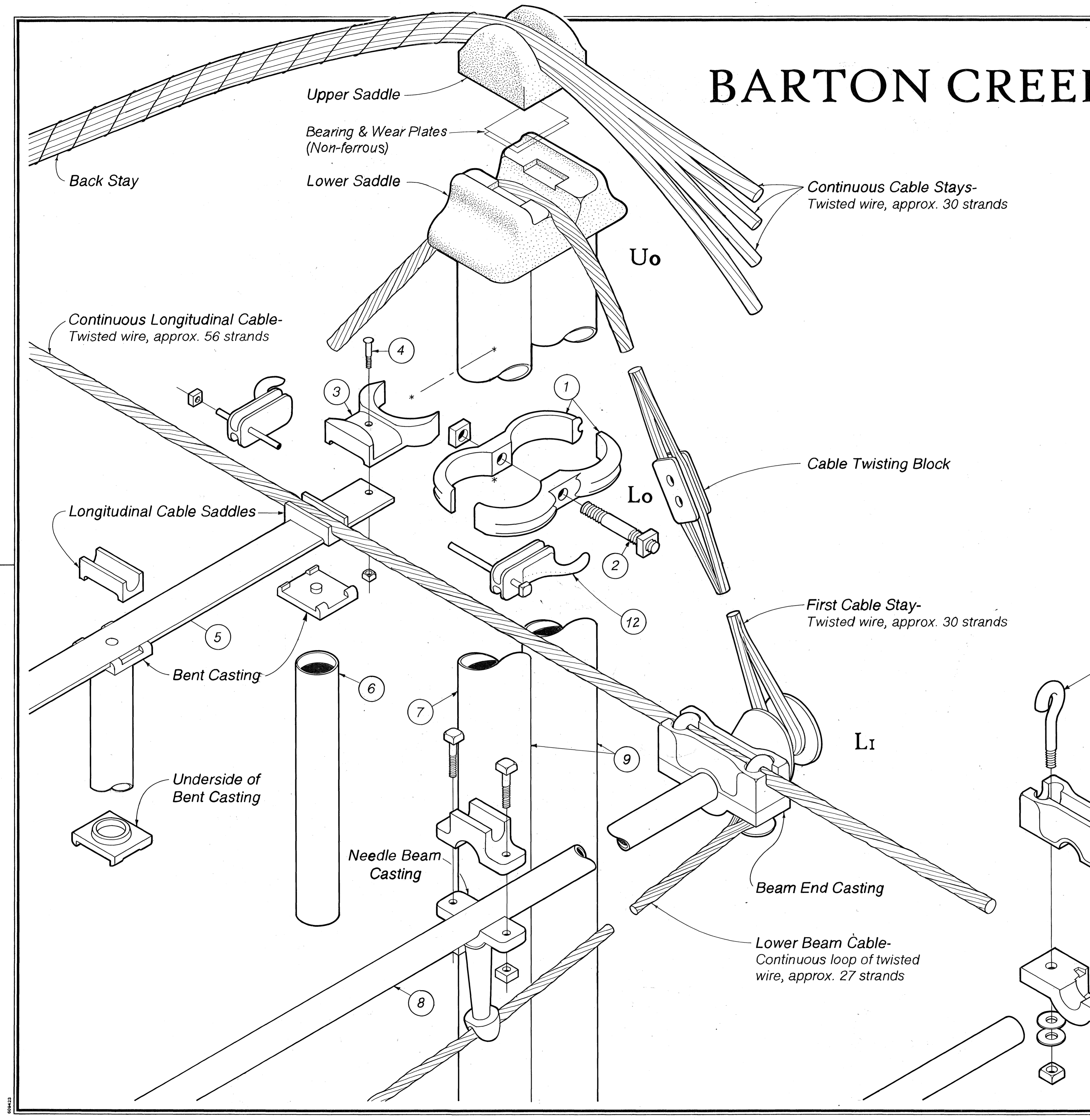
1. Bent
2. Cable Twisting Block
3. Torsion Rod (prevents cables from untwisting)
4. Continuous Longitudinal Cables (twisted wire)
5. Lower Lateral Bracing (twisted wire)
6. Needle Beam
7. Needle Beam End Casting
8. Cable Stays (twisted wire)
9. Back Stay



Cable Twisting Process

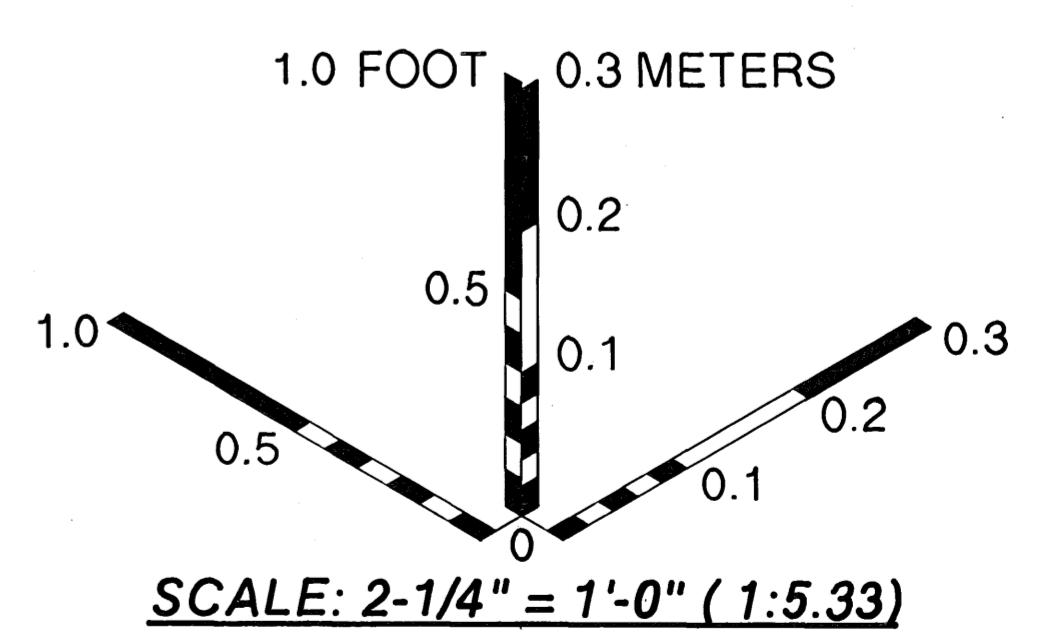
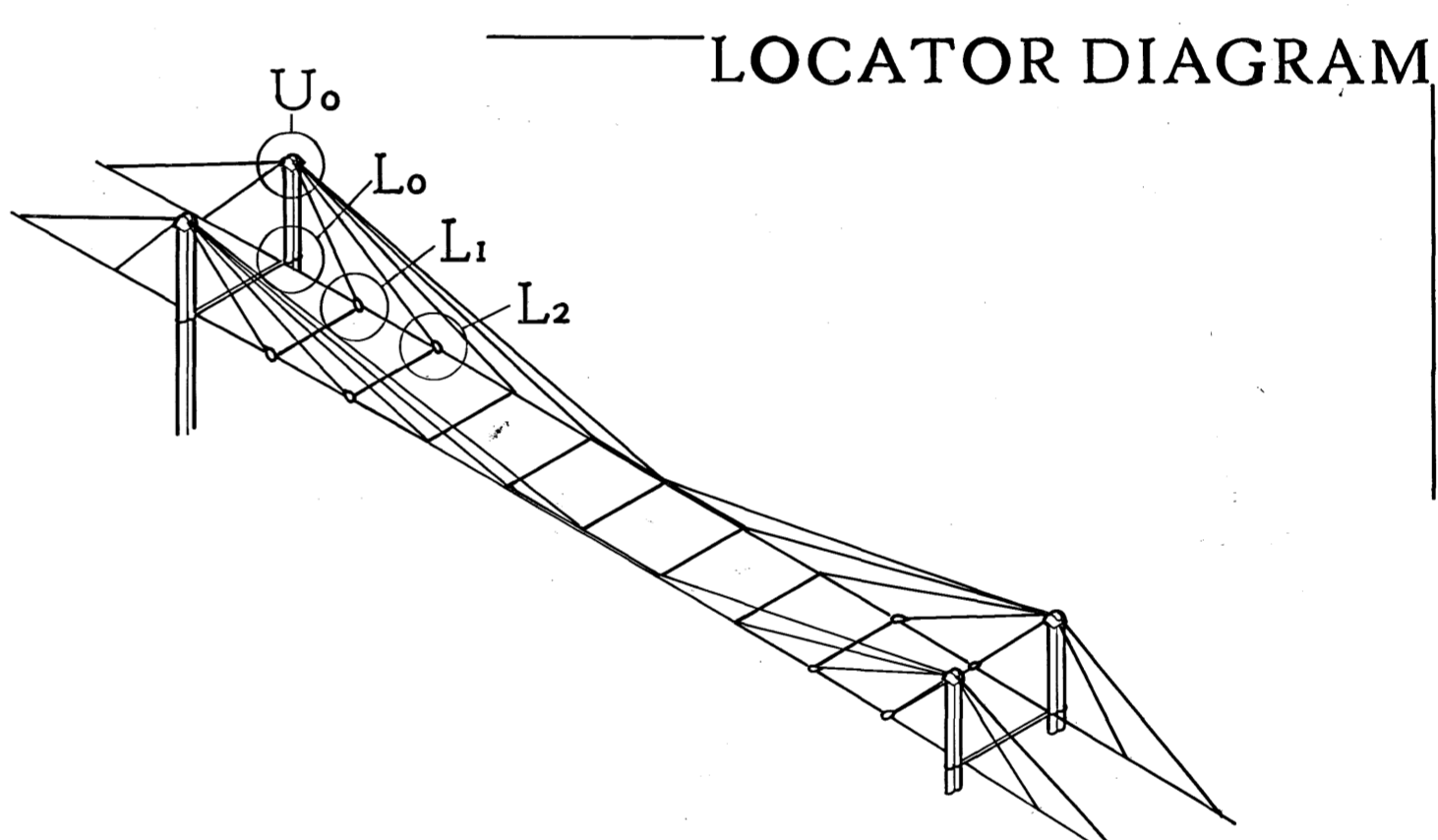
Note: Drawing based on field measurements, Runyon's 1889 patent (No. 404,934) and two historic photographs (HAER TX-36-12 & 13). See HAER field notebooks for more information.

BARTON CREEK BRIDGE DETAILS



KEY

1) Tower Bracing Clamps	7) 3/4" Ø Bolts
2) 1" Ø Bolt	8) 1-7/8" Ø Pipe
3) Bracing Yoke	9) Twin 6-1/2" Ø Pipe Towers
4) 3/8" Ø Bolt	10) Bearing Clamps for Longitudinal Cable - 13/16" Ø Bolts
5) 4-1/4" Bar	11) 2-1/2" Ø Washers, 1/8" Thick
6) 3-5/8" Ø Pipe	12) Original Lower Lateral Bracing Connection



Note: Drawing based on field measurements, Runyon's patents, and historic photographs. See HAER field notebooks for more information.