

HISTORIC AMERICAN ENGINEERING RECORD

PERU CUTOFF BRIDGE (Peru Overhead Crossing) (Structure FKE)

HAER No. WY-102

- Location:** Spanning the Union Pacific Railroad tracks on County Road 37 (Peru Cutoff Road), one-quarter mile south of Interstate 80 in the James Town vicinity, Sweetwater County, Wyoming.
- The bridge is located at latitude: 41.549586, longitude: -109.592220. The coordinate represents the northeast abutment of the bridge. This coordinate was obtained May 3, 2016, using Google Earth (WGS84). The Peru Cutoff Bridge location has no restriction on its release to the public.
- Present Owner:** Sweetwater County
- Present Use:** Vehicular Bridge
- Significance:** Peru Cutoff Bridge is significant for its association with the 1924 alignment of the Lincoln Highway. The bridge is also a good example of a riveted plate girder bridge, an uncommon bridge type in Wyoming.
- Historian:** Jason Bogstie, Wyoming Department of Transportation, Summer 2016
- Project Information:** Documentation of Peru Cutoff Bridge was undertaken by the Wyoming Department of Transportation as part of the mitigation of adverse effects caused by its replacement. HAER photography was completed in May 2015 by the Wyoming SHPO photographer Richard Collier.

Part I. Historical Information

A. Physical History:

1. **Date of Construction:** 1924
2. **Architect/Engineer:** Wyoming Highway Department
3. **Builder/Contractor/Supplier:** Fort Pitt Bridge Works, Pittsburgh, PA.

B. Historical Context:

At the turn of the twentieth century, roadways consisted of little more than dirt paths that provided service to local communities. As automobiles gained in popularity, the need for reliable roads was evident. In 1912, Carl Fisher, an automobile entrepreneur, conceived of a transcontinental road. After much solicitation, funding was secured and, in 1913, the Lincoln Highway was open for use. The new transcontinental road began in Times Square, New York, and ended at Lincoln Park in San Francisco, California.¹

Within Wyoming, the original alignment of the Lincoln Highway followed a series of existing roads and trails, including portions of the 1868 Union Pacific Railroad (UPRR) grade, which had been abandoned in 1901. West of Green River, Wyoming, the Lincoln Highway passed through Telephone Canyon and followed alongside portions of the Overland Trail.

In 1924, the Lincoln Highway was realigned west of Green River under Federal Aid Project No. 58A. The new route no longer utilized Telephone Canyon south of the Union Pacific mainline. Instead, it was constructed on the north side of the Union Pacific right-of-way. This 11.344-mile long segment eliminated the dangerous crossing of 22 tracks of the Union Pacific Railroad at Green River by the construction of an overhead bridge crossing at Peru. The new road had an 18-foot wide gravel surface on a 24-foot wide roadway with corrugated iron pipe and reinforced concrete culverts. The new route also required a 30-foot T-beam bridge over Alkali Creek and a 286-foot steel span over the Green River. The

¹U.S. Department of the Interior, National Park Service, *Lincoln Highway Special Resource Study and Environmental Assessment* (Washington, D.C., 2004), 3-5.

work for this project was authorized in April 1923,
and was completed by May 24, 1924.²

As part of the road realignment, a new riveted plate girder bridge was constructed, under Federal Aid Project 58B, to allow vehicles to cross the Union Pacific Railroad and its associated deep cut at Peru Station. The construction of the Peru Cutoff Bridge was a joint venture between the State of Wyoming and the UPRR.

The Wyoming State Highway Commission and the Union Pacific Railroad Company reached an agreement whereby the railroad built the bridge, and the State of Wyoming constructed the approaches. The estimated cost of the bridge and approaches totaled \$20,758.52. Federal aid granted for the project amounted to \$11,705.52. The final cost of the Peru Bridge totaled \$21,463.38.³

In 1943, an alignment of U.S. 30 (now Wyoming State Highway 374) provided a more direct path for travelers heading west from Green River. This alignment eliminated the awkward curves of the 1924 Lincoln Highway route. Construction of Interstate 80 in the late 1960s truncated the alignments of the Lincoln Highway and Wyoming State Highway 374, making it impossible to continue driving westward from Peru Cutoff Bridge.⁴ The original and 1924 alignments of the Lincoln Highway are now designated as County Road 37 west of Green River. Today, Peru Cutoff Bridge provides service to the residents of the nearby communities of James Town and Green River.

² *Fourth Biennial Report*, Wyoming Highway Commission (1922-1924), 73, 86, quoted in Robert G. and Elizabeth L. Rosenberg, *Report of Historical Investigations: Bridge Replacement, Peru Cutoff Road*, WYDOT Project No. CN04106, Sweetwater County, Wyoming (Cheyenne: Wyoming Department of Transportation, 2014), 13.

³ *Ibid.*

⁴ Jason Bogstie, *Alternatives Analysis, 48SW18892, WYDOT Structure FKE, Sweetwater County Road 37, Milepost 0.30*, WYDOT Project CN04106 (Cheyenne: Wyoming Department of Transportation, 2014), 2.

Part II. Structural/Design Information

A. General Statement:

1. Character:

Peru Cutoff Bridge is a simple-span, steel riveted plate girder bridge. Simple span girder bridges were commonly constructed after 1920. Due to high fabrication costs and resulting from improved welding techniques, riveted plate girder versions of this bridge type were quickly replaced by welded plate girders; this makes Peru Cutoff Bridge an uncommon bridge type.⁵ The bridge has not been altered over the years and retains good physical integrity; making it a good example of an uncommon bridge type in Wyoming.

2. Condition of Fabric:

The original historic fabric of the bridge is intact, as the bridge has not been altered. Structurally, the bridge has numerous issues of varying severity. The concrete bridge deck has areas of spalling and exposed aggregate and large traverse cracks. Bullet holes are present in the web of the west girder. Cracks are present throughout the abutments and under the bridge bearings. Segments of concrete that were previously repaired with injected epoxy have re-cracked. A corrugated galvanized steel bin retaining wall was added to the north abutment to help alleviate instability of the berm slope. Pack rust is prevalent throughout the built up steel girders and rivets. Finally, undermining has occurred at the southwest abutment of the bridge.⁶

B. Description:

Peru Cutoff Bridge is a steel riveted plate girder bridge with three simple spans and a cast-in-place concrete deck. The bridge railing is top mounted W-beam. The bridge is 123' long and 22.6' wide with a clear roadway width of 20' - 0"; the curb-to-curb width is 20' - 0". The vertical clearance of the bridge to the railroad track is 29' - 3/4". The bridge abutments are cap type with straight wingwalls on spread footings. Sometime during the 1970s, a corrugated galvanized steel bin retaining wall was added to the north abutment to provide added stability against the eroding berm slope.

⁵ Parsons Brinckerhoff and Engineering and Industrial Heritage, *A Context for Common Historic Bridge Types*, NCHRP Project 25-25, Task 15 (Cheyenne: Wyoming Department of Transportation, 2005), 3-110.

⁶ Bogstie, *Alternatives Analysis*, 4-5.

D. Site Information:

Peru Cutoff Bridge is situated on County Road 37 (Peru Cutoff Road), spanning the Union Pacific Railroad in Sweetwater County, Wyoming. The area is rural; Interstate 80 is approximately ½ mile to the north, the town of Green River is approximately 6 miles to the east. The Greater Green River Intergalactic Spaceport is approximately 9-½ miles to the south. A dirt path adjacent to the south side of the bridge provides vehicular access to the railroad track below. Two sets of track run below the bridge with railroad switching equipment immediately adjacent to the west side of the bridge, within the railroad right-of-way.

Part III. Sources of Information

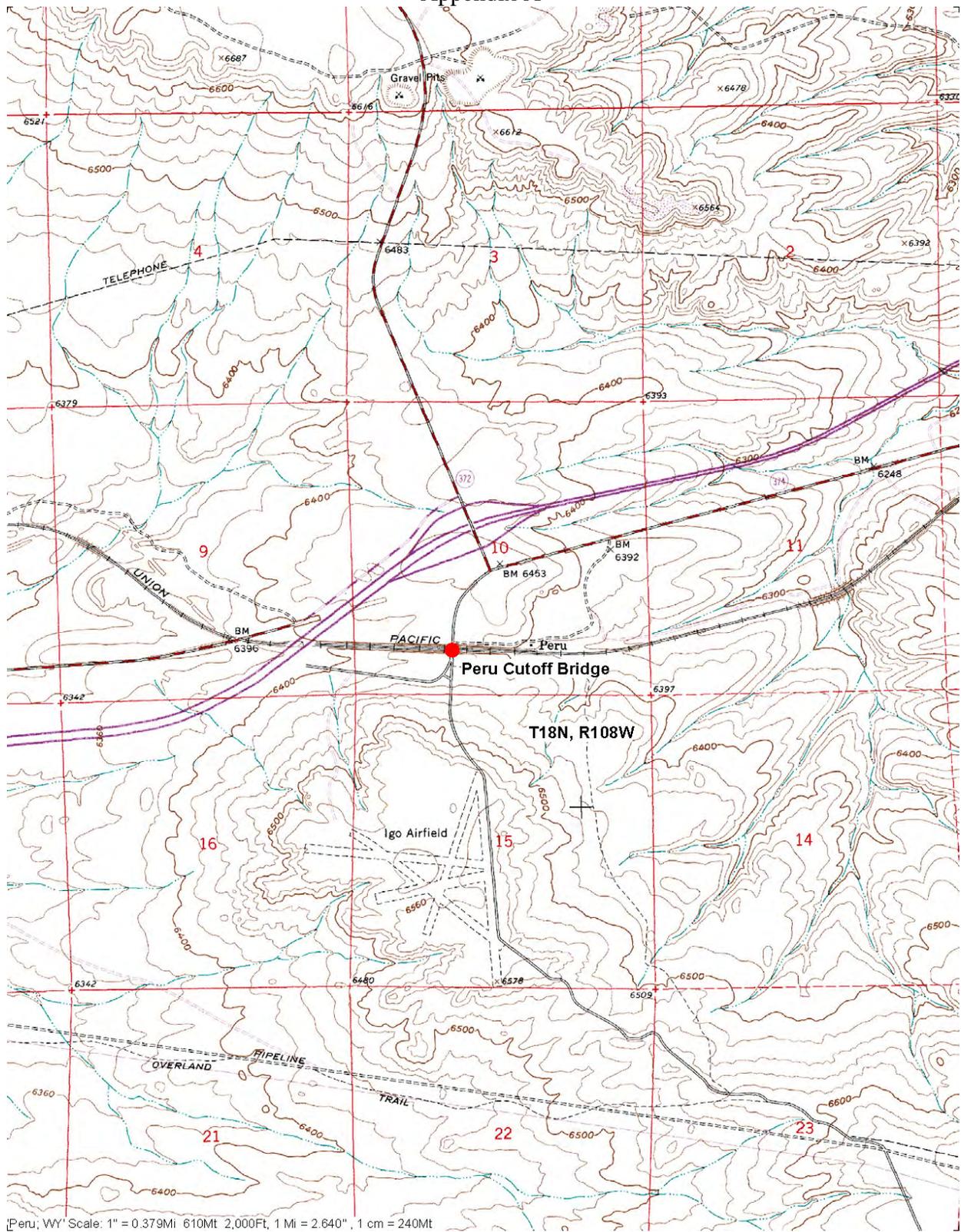
Bogstie, Jason. *Alternatives Analysis, 48SW18892, WYDOT Structure FKE, Sweetwater County Road 37, Milepost 0.30, WYDOT Project CN04106* Cheyenne: Wyoming Department of Transportation, 2014.

Brinckerhoff, Parsons and Engineering and Industrial Heritage. *A Context for Common Historic Bridge Types, NCHRP Project 25-25, Task 15*. Cheyenne: Wyoming Department of Transportation, 2005.

Rosenberg, Robert G and Elizabeth L. Rosenberg. *Report of Historical Investigations: Bridge Replacement, Peru Cutoff Road, WYDOT Project No. CN04106, Sweetwater County, Wyoming*. Cheyenne: Wyoming Department of Transportation, 2014.

U.S. Department of the Interior, National Park Service, *Lincoln Highway Special Resource Study and Environmental Assessment* Washington, D.C., 2004.

Appendix A



[Peru, WY] Scale: 1" = 0.379Mi 610Mt 2,000Ft, 1 Mi = 2.640", 1 cm = 240Mt

Figure 1: A U.S.G.S. topographic map showing the location of Peru Cutoff Bridge. Peru, WYO 1961, Photorevised 1980.

Appendix B

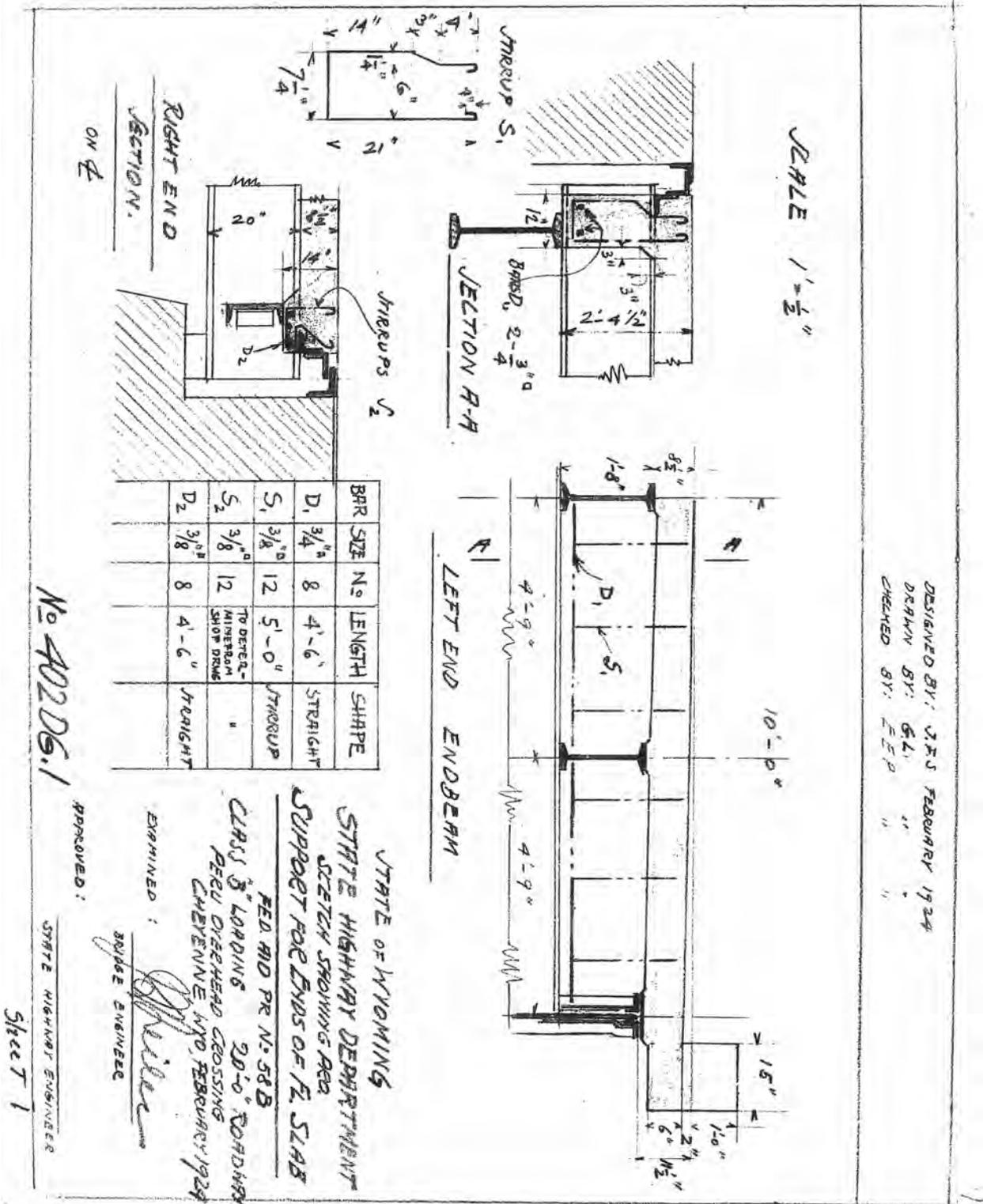


Figure 2: Drawing No. 402DG.1, showing the support for the ends of the flange slab. Source: Wyoming State Highway Department, February 1924. (See enlargement in Field Records) This is the only surviving drawing of Peru Cutoff Bridge.