1. SITE I.D. NO

HAER INVENTORY

Department of the Interior, Washington, D.C. 20240

2. INDUSTRIAL CLASSIFICATION: Bridges, Trestles, and Aqueducts

ARCH: concrete | 7 | 5 | 9 | 5

3. PRIORITY: 1

5. DATE: 1911-14

4. DANGER OF DEMOLITION? (SPECIFY THREAT) ☐ YES ☒ NO ☐ UNKNOWN

6. GOVT SOURCE OF THREAT: OWNER ADMIN

7. OWNER/ADMIN: City of Spokane

8. NAME(S) OF STRUCTURE: Sunset Boulevard Bridge

9. OWNER'S ADDRESS: West 221 Wall Street
Spokane, Washington

10. STATE: WA | COUNTY: 063 | COUNTY NAME: Spokane | CITY/VICINITY: Spokane | CONG. DIST.: 05

STATE | COUNTY | COUNTY NAME | CITY/VICINITY | CONG. DIST.

11. SITE ADDRESS (STREET & NO.)
Crossing: Latah Creek

S.T.R.: 24 25N 42E

12. EXISTING SURVEYS ☐ NR ☐ NHL ☐ HABS ☐ HAER—1 ☐ HAER ☐ NPS ☐ CL6
☐ CONF ☐ STATE ☐ COUNTY ☐ LOCAL ☐ OTHER

13. SPECIAL FEATURES (DESCRIBE BELOW)
☐ INTERIOR INTACT ☐ EXTERIOR INTACT ☐ ENVIRONS INTACT

14. UTM ZONE: 11 | EASTING: 464505 | NORTHING: 5277270 | SIGN

SCALE ☐ 1:24 ☒ 1:62.5 ☐ OTHER _____ QUAD NAME: Spokane, Washington

UTM ZONE | EASTING | NORTHING | SIGN

SCALE ☐ 1:24 ☐ 1:62.5 ☐ OTHER _____ QUAD NAME

15. CONDITION: 70 ☐ EXCELLENT 71 ☐ GOOD 72 ☐ FAIR 73 ☐ DETERIORATED 74 ☐ RUINS 75 ☐ UNEXPOSED 76 ☐ ALTERED 82 ☐ DESTROYED 85 ☐ DEMOLISHED

16. INVENTORIED BY: Lisa Soderberg | AFFILIATION: HAER/Washington State Bridge Inventory | DATE: June 1979

17. DESCRIPTION AND BACKGROUND HISTORY, INCLUDING CONSTRUCTION DATE(S), HISTORICAL DATE(S), PHYSICAL DIMENSIONS, MATERIALS, EXTANT EQUIPMENT, AND IMPORTANT BUILDERS, ENGINEERS, ETC.

In 1911, construction was begun on the second of Spokane's grand, monumental concrete arches, the Latah Creek Bridg This massive 1070 foot structure with distinctive classical detailing on the seven semicircular arch spans, evokes an undeniable sense of power. The bridge consists of two 150 foot arches, two 135 foot arches, one 128 foot arch, and two 54 foot abutment or approach arches. In order to connect two different streets on opposite ends of the valley, two arches on the west end were built on a skew with their piers on radial lines.

In contrast to the flattened central arch of its predecessor at Monroe Street, the Latah Creek Bridge is composed of a series of Roman or semi-circular arches. Carl Condit points out in his volume on American Building Art that this arch form looks back to an older day in concrete arch design. However, there was some justification to the choice of an older arch design, because "the semicircular form exerts a thrust at the abutment with a minimum horizontal component which is an important consideration in pier construction in a bridge of such magnitude. In addition, some of (CONT OVER)

18. ORIGINAL USE: vehicular | PRESENT USE: vehicular | ADAPTIVE USE:

19. REFERENCES—HISTORICAL REFERENCES, PERSONAL CONTACTS, AND/OR OTHER

City Engineering files.
J.F. Greene, "The Latah Creek Bridge, Spokane, Washington, " Engineering News, Vol. 69, 27 March 1913.
Carl Condit, American Building Art, 2 Vols., (New York, 1961), 2:201.

(CONT OVER)

20. URBAN AREA 50,000 POP. OR MORE? ☒ YES ☐ NO

21. NPS REGION: NW

22. PUBLIC ACCESSIBILITY ☐ YES, LIMITED ☒ YES, UNLIMITED ☐ NO ☐ UNKNOWN

23. EDITOR INDEXER

24. LOCATED IN AN HISTORIC DISTRICT? ☐ YES ☒ NO NAME DISTRICT I.D. NO

Description (continued)
the box type piers were heavier than usual because much of the foundation material was compact sand which necessitated the construction of heavy reinforced-concrete spread foundations. In an article in Engineering News, J.F. Greene, the bridge construction engineer, gave an explanation for the choice of the arch design: "In the determination of span lengths for the arches, architectural considerations were given much weight and an effort was made to effect a combination which was adapted to the ground line and site. The intrados and extrados curves are many centered, and were so laid out as to give a neutral axis which conformed very closely with the thrust line under dead load."

Each arch consists of four arch ribs. In all spans the two outer ribs are four feet wide, while the two inner ribs are 6 feet wide. They are spaced 16 feet 6 inches center to center. Each outer rib is connected to the adjacent rib by a thin slab at the intrados. The floor slab connects the inner two ribs. Three keys were inserted in each arch rib, one at the crown and one at each third point. Each of the third point keys contains a 12 x 12 inch reinforced-concrete strut as a hinge.

Above each of the five main arches, are four spandrel arches. The two abutment arches have closed spandrels. The spandrel columns and arches which rest on the arch rings support a 45 foot roadway with two 7 foot sidewalks edged with ornamental cast iron posts. The roadway accommodates a double track for heavy interurban electric railway cars.

In the spandrel wall, concealed behind pilasters, expansion joints of steel rods and hoops have been inserted at th end of each panel to compensate for stress caused by temperature changes.

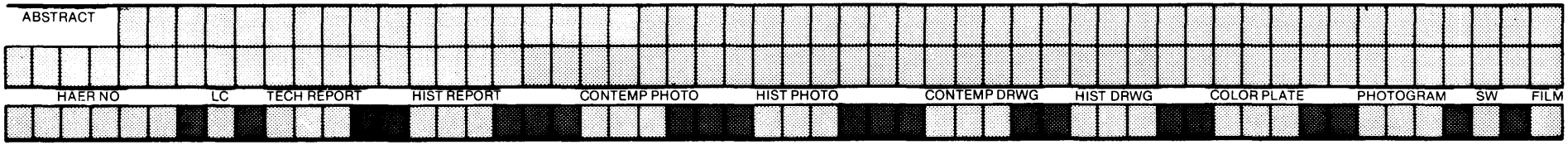
The falsework upon which the arch was centered consisted of a series of 8 x 8 inch posts spaced about 14 feet center to center longitudinally, and 5 feet apart transversely. Corbels were placed on these posts over which was built a rib. The ribs were designed to carry the load to the posts by arch action.

The concrete plant which consisted of a storage bin and mixer was located at the east end of the bridge. An industrial railway operated by a gasoline locomotive ran along the south half of the original timber trestle from which there were turnouts and hoppers for depositing the concrete in the arches and piers. In order to concrete each pair of arch ribs, the concrete was poured into eight voissoir sections.

The steel for the $416,000 structure was fabricated by the Lackamanna Steel Company, and the cement for the concrete was supplied by the Inland Portland Cement Company.

As is evident in the countless similarities between the two bridges, many of the people who were responsible for the design and construction of the Monroe Street Bridge were also responsible for the design and construction of the Latah Creek Bridge. Morton McCartney, who was a key individual in the construction of the Monroe Street Bridge, supervised the design and construction of the Latah Creek Bridge as City Engineer. Plans were prepared by W.S. Maloney with consulting advise from Waddell and Harrington of Kansas City. Waddell and Harrington also participated in the design of the falsework and in the planning of construction methods. J.F. Greene and W.H. Fisher were the construction engineers. J.F. Cunningham of Spokane was the contractor.

Like the Monroe Street Bridge, the Latah Creek Bridge is an early example within the State of a long-span fixed-end arch. Although the semi-circular arches of the Latah Creek Bridge were reminiscent of an earlier age of concrete and masonry arch construction, the steel reinforcement of the concrete structure pointed towards the future in concrete arch design.



25. Photos and Sketch Map of Location