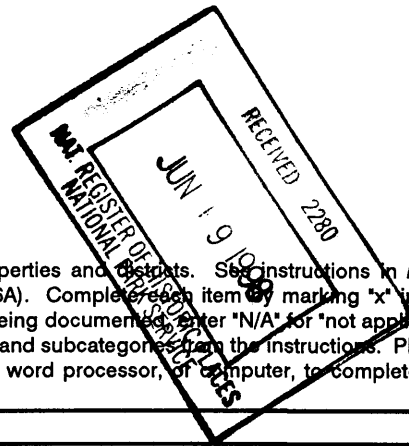


United States Department of the Interior  
National Park Service

National Register of Historic Places  
Registration Form



869

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an 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. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Ellsworth Ranch Bridge

other names/site number \_\_\_\_\_

2. Location

street & number 130th St. over East Fork of the Des Moines River  not for publication

city or town 7.0 miles northwest of Armstrong  vicinity

state Iowa code IA county Emmet code 063 zip code 50514

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this  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  meets  does not meet the National Register criteria. I recommend that this property be considered significant  nationally  statewide  locally. (  See continuation sheet for additional comments.)

Patricia Munkin DSITPO 5-12-98  
 Signature of certifying official/Title Date

\_\_\_\_\_  
 State or Federal agency and bureau

In my opinion, the property  meets  does not meet the National Register criteria. (  See continuation sheet for additional comments.)

\_\_\_\_\_  
 Signature of certifying official/Title Date

\_\_\_\_\_  
 State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register
  - See continuation sheet
- determined eligible for the National Register
  - See continuation sheet
- determined not eligible for the National Register
- removed from the National Register
- other, (explain):

Edson H. Beall 7-15-98

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**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

**Number of Resources within Property**

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	Total

**Name of related multiple property listing**

(Enter "N/A" if property is not part of a multiple property listing)

Highway Bridges of Iowa

**Number of contributing resources previously listed in the National Register**

0

**6. Function or Use**

**Historic Functions**

(Enter categories from instructions)

TRANSPORTATION/road-related

**Current Functions**

(Enter categories from instructions)

TRANSPORTATION/road-related

**7. Description**

**Architectural Classification**

(Enter categories from instructions)

other: Pratt/Warren through truss

**Materials**

(Enter categories from instructions)

foundation Steel  
 walls Concrete filled steel  
 roof N/A  
 other N/A

**Narrative Description**

(Describe the historic and current condition of the property on one or more continuation sheets)

Located 7.0 miles northwest of Armstrong, the Ellsworth Ranch Bridge spans East Fork of the Des Moines River in a rural Emmet County setting that has changed little since the structure's period of significance. A description of the structure follows:

span number: 1                      construction date: 1895  
 span length: 80.0'                construction cost: unknown  
 total length: 80.0'                current condition: good  
 roadway wdt.: 16.2'                alterations: reconstructed, 1937

superstructure: steel, 5-panel, pin-connected Pratt/Warren through truss  
 substructure: concrete-filled steel cylinder abutments with timber plank back- and wingwalls, supported by timber piles  
 floor/decking: timber deck over timber stringers  
 other features: upper chord and inclined end post: 2 face-to-face channels with lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 square eyebars; outside-panel diagonal: 2 punched rectangular eyebars; inside-panel diagonal: 2 angles with batten plates; guard-rail: horizontal timbers on timber posts; floor beam: I-beam, field-bolted to stay plates; portal bracing: 2 angles with flat-bar lattice; top and bottom lateral bracing: round rods

Other than maintenance-related repairs, the bridge remains essentially unaltered as it continues to carry vehicular traffic. The Ellsworth Ranch Bridge today retains a high degree of integrity of location, design, setting, materials, workmanship, feeling and association.

**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)

Property is:

- 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 of age or achieved significance within the past 50 years.

**Narrative Statement of Significance**

(Explain the significance of the property on continuation sheets.)

**Areas of Significance**

(Enter categories from instructions)

ENGINEERING

**Period of Significance**

1895

(The period of significance is derived from the original construction date.)

**Significant Dates**

1895 (construction date)

**Significant Person**

(Complete if Criterion B is marked above)

N/A

**Cultural Affiliation**

N/A

**Architect/Builder**

designer:

King Bridge Company, Cleveland OH

fabricator:

King Bridge Company, Cleveland OH

builder:

King Bridge Company, Cleveland OH

**9. Major Bibliographical References**

**Bibliography**

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

**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

**Primary location of additional data:**

- State Historic Preservation Office
  - other State agency
  - Federal agency
  - Local government
  - University
  - other
- name of repository:

**10. Geographical Data**Acreage of Property less than one acre**UTM References**

(Place additional UTM references on a continuation sheet)

1 15 372160 4812885  
zone easting northing2 \_\_\_\_\_  
zone easting northing**Verbal Boundary Description**

(Describe the boundaries of the property)

The nominated property is a rectangular-shaped parcel measuring 18 feet by 80 feet, which is centered on the UTM point(s) listed above. Included within this rectangular parcel are the bridge's superstructure, substructure, approach spans and floor system.

**Boundary Justification**

(Explain why the boundaries were selected)

The nominated structure includes the bridge's superstructure, substructure, floor system, any approach spans and the property on which they rest. These boundaries encompass, but do not exceed, all of the property that has been historically associated with the bridge.

**11. Form Prepared By**name/title Clayton Fraser and John Lauberorganization Fraserdesign date 31 August 1994street & number 1269 Cleveland Avenue telephone 303-669-7969city or town Loveland state Colorado zip code 80537**Additional Documentation**

Submit the following items with the completed form:

**Continuation Sheets****Maps**A **USGS map** (7½ or 15 minute series) indicating the property's locationA **Sketch map** for historic districts and properties having large acreage or numerous resources**Photographs**Representative **black and white photographs** of the property**Additional Items**

(Check with the SHPO or FPO for any additional items)

**Property Owner**

(Complete this item at the request of SHPO or FPO)

name/title Emmet Countystreet & number 609 First Avenue North telephone 712-362-4846city or town Estherville state Iowa zip code 51334

**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. 470 *et seq.*).

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 18.1 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 Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

**United States Department of the Interior  
National Park Service**

**National Register of Historic Places  
Continuation Sheet**

Section Number   8   Page   1   Ellsworth Ranch Bridge Emmet County; Iowa

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Located in northeastern Emmet County, this short-span through truss extends north-south across the East Fork of the Des Moines River. The structure consists of a single pin-connected truss, supported by steel cylinder piers, with timber retaining walls. The five-panel truss displays elements of both Pratt and Warren configurations. The end posts and outside panels are typically Pratt-like, but the interior three panels feature a triangular, Warren-like configuration, with diagonals acting alternately in compression and tension. Even in this, the truss's web differs from the typical Warren configuration, however, because the inverted V of the center panel diagonals does not parallel the diagonals in the adjacent panels. Known locally as the Ellsworth Ranch Bridge, this structure dates to 1895. In January of that year the Emmet County Board of Supervisors received a petition for a bridge across the Des Moines River in Lincoln Township. The board laid the matter over until April, whereupon it approved construction of the bridge and solicited competitive bids for its fabrication and erection. When the proposals were submitted the following month, the board adopted the plans of the King Bridge Company as "the most suitable," but rejected all of the bids as too high. After further discussion, the supervisors rewrote the specifications for the proposed bridge, reducing its length from 100 feet to 80 feet in the hope that the reduction in materials would result in a lower cost. This strategy was apparently successful. By day's end, the supervisors had awarded a contract to the King Bridge Company for the construction of three bridges - including this truss - for \$3400.00. The Ellsworth Ranch Bridge was completed later that year. Other than a minor reconstruction in 1937, it remains unaltered today.

The Pratt and Warren truss configurations were both developed in the 1840s, but it was the Pratt that received the most widespread use in the late 19th century. The reasons for this probably relate to the versatility of the pin-connected Pratt for different span lengths and its easier erection using timber falseworks. The Ellsworth Ranch Bridge represents an unusual hybridization of Warren and Pratt technologies. It is identical in size and detail with two such trusses found in South Dakota, both built in the mid-1890s by the King Bridge Company, as represented by King's Minneapolis representative, M.A. Adams. This esoteric truss does not appear in company literature of the time, suggesting that its use was experimental and short-lived. The only one of its type identified in Iowa, the Ellsworth Ranch Bridge is thus a rare surviving example of structural experimentation by one of the country's most prolific 19th-century bridge manufacturers.

**United States Department of the Interior  
National Park Service**

**National Register of Historic Places  
Continuation Sheet**

Section Number   9   Page   2   Ellsworth Ranch Bridge Emmet County; Iowa

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Iowa Department of Transportation, Structure Inventory and Appraisal: Structure Number 148950.

Emmet County Supervisors' Record, Book 2: page 46 (1 May 1895), located at the Emmet County Courthouse, Estherville IA.

"Rare King Bridge trusses found in S. D., Minn.," **Society for Industrial Archeology Newsletter** (Spring 1992), page 3.

Field inspection by Danielle Johnson, 10 July 1991.