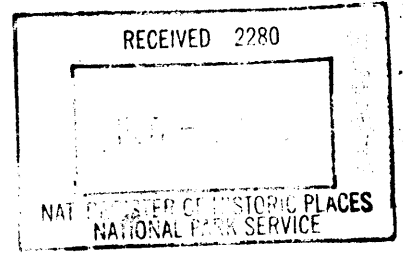


United States Department of the Interior  
National Park Service

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### NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

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 any 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 N/A

other names/site number South Dakota Dept. of Trans. Br. No. 07-220-454

=====

#### 2. Location

=====

street & number Local road over Mud Creek not for publication

city or town Stratford vicinity

state South Dakota code SD county Brown code 013 zip code 57474

=====

#### 3. State/Federal Agency Certification

=====

As the designated authority under the National Historic Preservation Act of 1986, 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.)

Jay D. Vogt 01-24-2000  
Signature of certifying official 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 commenting or other official Date

4. National Park Service Certification

I, hereby certify that this property is:

entered in the National Register Edna H Boal 3/9/00

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):

Jan Signature of Keeper Date of Action

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

Contributing	Noncontributing
<u>      </u>	<u>      </u> buildings
<u>      </u>	<u>      </u> sites
<u>  1  </u>	<u>      </u> structures
<u>      </u>	<u>      </u> objects
<u>  1  </u>	<u>      </u> Total

Number of contributing resources previously listed in the National Register   0  

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.)   Historic Bridges in South Dakota

=====

6. Function or Use

=====

Historic Functions (Enter categories from instructions)

Cat: Transportation Sub: road-related (Vehicular)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Current Functions (Enter categories from instructions)

Cat: Transportation Sub: road-related (Vehicular)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

=====

7. Description

=====

Architectural Classification (Enter categories from instructions)

Other: bedstead pony truss

\_\_\_\_\_

\_\_\_\_\_

Materials (Enter categories from instructions)

foundation concrete

roof \_\_\_\_\_

walls \_\_\_\_\_

\_\_\_\_\_

other metal: steel

\_\_\_\_\_

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

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.)

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or a 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.

Areas of Significance (Enter categories from instructions)

Engineering

Politics/Government

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Period of Significance 1921-1942

\_\_\_\_\_

\_\_\_\_\_

Significant Dates 1921

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

Significant Person N/A

Cultural Affiliation N/A

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

Architect/Builder Designer: South Dakota State Highway Commission  
Builder: Aberdeen Construction Company

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

=====

9. Major Bibliographical References

=====

(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: South Dakota Department of Transportation

=====  
10. Geographical Data  
=====

Acreage of Property Less than 1 acre

UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing	Zone	Easting	Northing
1	14	555880	5013015	3	_____	_____
2	_____	_____	_____	4	_____	_____
	_____	See continuation sheet.				

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

=====  
11. Form Prepared By  
=====

name/title Mary McCormick & Fred Quivik  
organization Renewable Technologies, Inc date August 1990  
street & number 510 Metals Bank Bldg telephone 406-782-0494  
city or town Butte state MT zip code 59701

=====  
Additional Documentation  
=====

Submit the following items with the completed form:

**Continuation Sheets**

**Maps**

- A **USGS map** (7.5 or 15 minute series) indicating the property's location.
- A **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 the SHPO or FPO.)

name \_\_\_\_\_
street & number \_\_\_\_\_ telephone \_\_\_\_\_
city or town \_\_\_\_\_ state \_\_\_\_\_ zip code \_\_\_\_\_

=====
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 the 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 Project (1024-0018), Washington, DC 20503.

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**NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET**

Section 7, 8 Page 1

**Description**

Bridge no. 07-009-060 is located 2 miles east and 2.4 mile south of Stratford and carries a local road over Mud Creek. The 50-foot, single span, riveted steel bedstead pony truss bridge rests on standard State Highway Commission concrete abutments. The superstructure is composed as follows: the upper chords consist of paired angle sections riveted with a channel section cover plate; the vertical end posts consist of built up H-members, the diagonal members, and the lower chords all consist of paired angle sections. The concrete deck rests on steel I-beam floor beams which are riveted to the vertical members above the lower chord. Sway bracing consists of angle section knee-braces riveted to the tops of the vertical members and to extensions of the floor beams. Angle section cross-braces provide bottom lateral bracing. A channel section forms railing along each side of the bridge.

This bridge retains excellent integrity.

**Statement of Significance**

Bridge no. 07-220-454 is being nominated to the National Register of Historic Places as part of the "Historic Bridges in South Dakota" Multiple Property Nomination. It is related to the historic context of "Historic Bridges in South Dakota, 1893-1942" and is classified with the associated property type for iron and steel frame bridges. Bridge no. 07-220-454 is individually eligible for the National Register under Criterion A for its association with the early designs of the South Dakota State Highway Commission (SHC). Bridges designed by the SHC, such as this one, represent the efforts of state government to improve the quality of bridge construction in South Dakota and break the hold the bridge building companies had on local governments. The bridge is also National Register eligible under Criterion C as a representative example of a design developed by the SHC for a riveted bedstead truss. Bridges of this design, such as this bridge, were the only pony trusses built in South Dakota after 1919 until about 1930 and have added significance because they represent the development of a standardized design unique to South Dakota.

Prior to about 1920, South Dakota lacked a coordinated statewide system to control the quality and costs of bridge work in the state. Most of its counties and townships independently carried out their bridge building projects, with little coordination except for sharing costs for an occasional county-line road or bridge. Within each county, the commissioners determined the location, need, and plans and specifications for new bridges with little, or as in most cases, no technical expertise themselves or outside technical assistance. Each county seemed to be dominated by a bridge company different from neighboring counties, with the same company receiving bridge contracts in the same county year after year. This was mostly likely due to illegal "pooling" arrangements under which various



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CONTINUATION SHEET**Section 8, 9 Page 2

bridge-building firms agreed to divide states among them, assigning particular counties to specific firms.

In 1919, however, the state government actively intervened to improve the quality of bridge construction in South Dakota. At this time, the South Dakota State Highway Commission (SHC) established a bridge department, hired a bridge engineer, and gave him responsibility for designing all state and county bridges and supervising the bidding process for bridge construction contracts. The first bridge engineer for the State of South Dakota was John E. Kirkham, a professor of engineering at Iowa State at Ames and consulting engineer to the Iowa State Highway Commission, among the most innovative state highway departments in the country at the time. In South Dakota, Kirkham sought to reduce the cost of bridge construction and maintenance. He accomplished this in part by developing a series of standardized bridge plans which were especially suited to South Dakota's conditions of climate, terrain, and rural traffic needs.

One bridge plan devised by Kirkham for the South Dakota SHC was for a bedstead-type pony truss. Unique to Kirkham's design was its single-web upper chord in place of the conventional boxed upper chord. To critics, Kirkham argued that his design resulted in cost reductions because it required less material to fabricate both the bridge superstructure and deck. Kirkham's pony truss design also called for concrete abutments with concrete approach guards to protect the ends of the truss. Kirkham believed that vertical end-posts, distinctive of the bedstead truss, with concrete approach guards provided a superior aesthetic design in comparing with other pony truss types. Although SHC pony trusses of Kirkham's design replaced construction of riveted Pratt and Warren pony truss in South Dakota, it was not adopted by other states.

Although several of these standardized SHC pony trusses with vertical end posts and concrete approaches survive on the South Dakota landscape, Bridge no. 07-220-454 has added significance because it is one of the oldest. It was constructed by the Aberdeen Construction Company in 1921.

**Bibliography**

Brown County, "Brown County Bridges," n.d., Bridges no. 68, Highway Superintendent's Office, Brown County Courthouse, Aberdeen.

Brown County, "Commissioners Record," Book 7, pp. 574-575, Auditor's Office, Brown County Courthouse, Aberdeen.

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

**NATIONAL REGISTER OF HISTORIC PLACES**  
**CONTINUATION SHEET**

Section 10 Page 3

**Verbal Boundary Description**

The nominated property consists of a rectangle, 23 feet wide by 55 feet long, whose vertices coincide with the outside corners of the bridge abutments at each end of the bridge, and includes only the bridge superstructure and substructure.

**Boundary Justification**

Because the bridge is located on a public road, there are no legal boundary lines for the ends of the bridge. Therefore, these boundaries are drawn to encompass only the superstructure and substructure of the bridge itself.