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United States Department of the Interior
National Park Service

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NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

NATIONAL
REGISTER

1. Name of Property

historic name: Kearney Rapids Bridge

other name/site number: Ferndale Bridge

2. Location

street & number: Bigfork Canyon Road

not for publication: n/a
vicinity: X

city/town: Bigfork

state: Montana

code: MT

county: Flathead code: 029

zip code: 59911

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this X 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 X meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally X statewide X locally. (See continuation sheet for additional comments.)

Maurel Shep MT SHPO 6-17-94
Signature of certifying official/Title Date

Montana State Historic Preservation Office
State or Federal agency or bureau

In my opinion, the property meets does not meet the National Register criteria.

Signature of commenting or other official Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this 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

 see continuation sheet
 removed from the National Register
 see continuation sheet

 other (explain): _____

Entered in the
National Register Date of Action
for Signature of the Keeper 7/22/94

5. Classification

Ownership of Property: Public - Local

	Number of Resources within Property	
	Contributing	Noncontributing

Category of Property: Structure

Number of contributing resources previously listed in the National Register: 0

_____	_____ building(s)
_____	_____ sites
<u> 2 </u>	_____ structures
_____	_____ objects
<u> 2 </u>	_____ TOTAL

Name of related multiple property listing: n/a

6. Function or Use

Historic Functions:
TRANSPORTATION: road-related

Current Functions:
TRANSPORTATION: road-related

7. Description

Architectural Classification:
Other: Pratt through truss

Materials:
foundation: n/a
walls: n/a
roof: n/a
other: steel bridge structure

Narrative Description

The Kearney Rapids Bridge is located two miles upstream from Bigfork, Montana, spanning the Swan River at the head of Bigfork Canyon. Over time this bridge has acquired a variety of names. The Montana Department of Transportation labels it BR 9015(11). Locally it is known as the Swan River Bridge, the Upper Bridge, the Ferndale Bridge, Carney Rapids Bridge; the most consistent, accurate historic name appears to be Kearney Rapids Bridge.

The Kearney Rapids Bridge was built by the A. Y. Bayne & Co. across the Swan River in 1911. The metal truss bridge is a patented Pratt design with counters, the main span measures about 152 feet. The superstructure of the main span is comprised of I-beam lower chord and hip verticals, two laced channel verticals, eyebar and turnbuckle diagonals, and an upper chord formed of a continuous steel plate riveted atop two channel sections with batten plates riveted to the lower flanges. Wood stringers rest on the top flange of steel I-beam floor beams which are riveted to the superstructure, except those connected to the hip verticals, which are suspended by U-bolts. The deck is 16 feet wide and of wooden bridge plank.

Presently, the steel structure is coated with deteriorating silver paint, while the wooden members of the bridge are stained dark brown. Nameplates above each approach bear the manufacturers name and the date, 1911. A manufacturer's stamp, "Illinois Steel," is impressed into the structure.

Following a 1931 flood in which the north approach to the bridge was washed out, two 24-foot timber stringer spans on wood pile bents were added extending the approaches to this pin-connected Pratt through truss.

The Kearney Rapids Bridge sustained damage in 1940, when a logging truck struck the bridge's southwest corner, severing the first vertical and displacing the second. The severed vertical was welded and a cable was placed to help carry tension loads.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section number 7

Kearney Rapids Bridge

Page 1

During the spring of 1974, the Swan River flooded, and approaches to the Kearney Rapids Bridge were seriously eroded. During repairs, the Flathead County Road Department rebuilt the wooden approaches.

Just upstream from the bridge, a number of log pilings remain set into the river. These were placed during the logging of the upper Swan valley; logs were tied off to these piers and to the bridge supports, serving as bumpers to direct floating logs safely under the bridge without causing damage. Deteriorated by decades of submersion in the river water, they are visible today along the shoreline; the tops of the pilings project above the water level, from a few inches to approximately two feet.

Integrity

The Kearney Rapids Bridge exhibits a very high level of historic integrity. Retaining integrity of materials and design, it is an excellent representative of the Pratt through truss design. Repairs have been minimal over the years, and do not detract from the bridge's integrity. Furthermore, the repairs mark events which occurred during the long life of the bridge.

The 1974 repair of the approaches did postdate the period of significance for the bridge; however, in reconstructing the approaches, the county road department employed a compatible design, with timber posts, wooden decking and rails.

The Kearney Rapids Bridge remains in its original location -- a powerful, naturalistic river setting which has changed little during this century. Viewed from every direction, the bridge occupies a span of wild river, surrounded by dense forests and rugged mountains. A feeling of monumentality is readily conveyed, reflecting both the aesthetic and historic importance of this structure.

8. Statement of Significance

Applicable National Register Criteria: A, C

Areas of Significance: Transportation
Architecture

Criteria Considerations (Exceptions): n/a

Period(s) of Significance: 1911-1944

Significant Person(s): n/a

Significant Dates: 1911, 1931

Cultural Affiliation: n/a

Architect/Builder: A. Y. Bayne & Co.

Narrative Statement of Significance

The Kearney Rapids Bridge is a well preserved, representative example of the steel truss bridges which became commonplace on highways throughout Montana during the early 20th century. Reflecting expansion of Flathead region road systems during the early 20th century and advances in bridge construction technology during the late 19th-early 20th century, the bridge is eligible for the National Register under Criteria A and C.

Historic Background

The Kearney Rapids Bridge is of significant historic importance to the community of Bigfork, Flathead County, and the State of Montana. The history of the Kearney Rapids Bridge is linked to events well before it was built. There is little written history of travel routes of the Native Americans in the Bigfork area, however, Frank Bird Linderman does mention a ford where the Bigfork bridge sits in the present day town of Bigfork, and mentions a trail on the south side of the Swan River through the Bigfork Canyon.

The first homesteads in the Bigfork and Swan River areas were filed in 1885-1886. Most of the homesteads in the Bigfork area were filed on fertile lands along the north shore of the mouth of the Swan River and along the Flathead River to the north. The first permanent local settlement began with a town approximately one mile upstream from the mouth of the Flathead River. Originally called Lee's Landing, it was rechristened Holt after Joe Holt, and was the site of both a steamboat landing and a ferry. The ferry remained in operation from the mid-1880s until 1942.

Nearby, by 1888 eight families were living east of Bigfork Canyon in the Swan River area, which later became known as Ferndale. The logistics of crossing the Swan River above Bigfork Canyon were solved by building a small ferry about one and one quarter mile upriver from Kearney Rapids, to access the Ferndale area. The Flathead County Clerk and Recorder's Office depict this ferry on a plat map dated October 15, 1894. By 1896, County Road #13 had been built with a bridge crossing the Swan River at Simpson Rapids about a mile upriver from Kearney Rapids. As the Ferndale area opened to homesteading, Swan Lake gained interest for its game, fishing and timber resources.

Elsewhere in the Flathead, the 1890s saw pronounced influence by the Great Northern Railway under the direction of James J. Hill. In 1891, the Great Northern laid track across an area known as Alkali Flats north of Flathead Lake, bypassing the existing settlement of Demersville. Anxious to be along the rail line, townspeople moved the buildings of Demersville 5 miles to the new townsite of Kalispell, which in a short time became the primary hub of transportation and commerce for the upper Flathead Valley.

In 1897, Patrick Kearney filed for a homestead on the south side of the Swan River. His property encompassed the mouth of "Carney" Creek and was bordered on the east by Road #13.

At the turn of the century great attention was focused on the Swan River and the area's natural resources. L. Tinkel filed for water rights for the construction of a power plant at the mouth of Bigfork Canyon. A diversion dam was built and the power house completed on August 1, 1901. By 1902, Mountain States Power was providing electricity for Kalispell.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section number 8

Kearney Rapids Bridge

Page 1

In 1900 John O'Brien, an associate of J. J. Hill of the Great Northern Railway, built a lumber mill at Somers, Montana. The Great Northern Railway built a spur line to the mill, and a contract was signed to provide Great Northern with 40,000,000 feet of lumber and 600,000 ties per year for 20 years. Great Northern Railway was to provide the trees for milling.

That same year, E. L. Sliter laid out the townsite of Bigfork. The local population grew rapidly in the new town, as well as along the east shore of Flathead Lake. As a result, travel through Bigfork from the south increased accordingly. A wooden bridge was built downstream from the power house in the location of the present Bigfork bridge in 1907 by the Collins brothers for \$2500.00. Prior to that time, the Swan River was forded at low water and a ferry was put to use in the same location during high water.

1907 also saw the Great Northern Railway company assume control of the John J. O'Brien Lumber Co. The name was changed to the Somers Lumber Co. J. J. Hill had become chairman of the Board of Great Northern Railway and Louis W. Hill, president. L. W. Hill recognized the potential value of a national park in the Northern Rockies. Beginning in 1907, he actively lobbied for the creation of Glacier National Park until it came into official being in 1910.

A sidenote of significant importance to Bigfork and the Swan Valley was the land trades between Great Northern Railway and the U.S. government. When Glacier National Park was created, large tracts of it were originally Great Northern Railway lands. In return for Great Northern lands, the U.S. government compensated Great Northern Railway with timber lands well away from the main rail lines. Large tracts of timberland in the Ferndale and Swan Lake area and the Swan Valley were transferred to Great Northern Railway ownership at that time.

Passage of the Enlarged Homestead Act of 1909 and vigorous promotion by the railroads, gave rise to increased homesteading all across the Northern Plains, as well as in the Flathead valley. Great Northern was in a position to provide not just transportation services for the influx of settlers but also the wood products for towns and farms. Somers Lumber Company soon operated permanent stores in eastern Montana and North Dakota. The influx of population in the West created a demand which opened the Swan Lake area for timber harvest.

It was recognized that the rivers of the Flathead and Swan Valleys provided sufficient flow for log transport but land transport was necessary for people and supplies. A road was built on the north side of the Bigfork Canyon and came under the county's umbrella in 1910.

On January 10, 1911 the Flathead County commissioners accepted a bid for the construction of a steel bridge to span the Swan River at Kearney Rapids. The contractor was A. Y. Bayne and Co.; the bid was \$6,000. On June 21, 1911 A. Y. Bayne was granted the contract for \$4,400 to build a steel bridge crossing the Swan River at the town of Bigfork. Both bridges were patented Pratt truss designs. The same year Swan River Road was extended to Lee Road giving access to the Swan Lake area via the Kearney Rapids Bridge from the north as well as from Bigfork via the Bigfork Canyon Road. Also in 1911 the first logs were harvested for the purpose of building a steamboat landing at the Swan River Townsite. The dock was built on property owned by A.K. Millet. A landing was also developed near the outlet of Swan Lake.

In 1913, the Great Northern Railway accepted bids for harvest of timber in the Swan Lake area plus the lower Swan below Swan Lake. The sale was a Forest Service allotment, the largest single timber sale to date within the Flathead National Forest, 90 million board feet. The cut was expected to last 10 years. After bids were taken, Great Northern Railway made the decision to keep the harvest "in house." J. E. Crainey was hired as superintendent for the Swan Lake harvest. In 1914 lumbering activities were in full swing. Three camps were built: one permanent camp at Swan Lake, one on rails, and a tent camp.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section number 8

Kearney Rapids Bridge

Page 2

A railroad engine was barged from Somers to Bigfork. This "Shay" was feared to be too heavy for the Kearney Rapids Bridge so it was moved by land to the foot of Swan Lake. It was barged from that point to the Swan Lake townsite. Meanwhile, the Swan Lake population grew rapidly. The number of men employed is unknown, but an estimate of 400 probably falls short. Many men built homes and brought their families. For a period of time two shifts were needed to feed the permanent Camp I crew. This cookhouse could seat 150 men. Camps II and III had their own kitchens. A full blown pig farm existed and cattle drives were common, consisting of 50 to 150 animals driven from as far away as Hot Springs.

Railways were built into the forests. During the winter, trees were harvested and the logs hauled to the shore of Swan Lake and stacked. Along the Swan River horses were used to achieve the same process. At spring high water, the logs were floated down Swan Lake, then down the Swan River to Flathead Lake. Three tugboats were kept busy moving logs to the Somers Mill from Bigfork Bay. Each and every log passed beneath Bigfork's two steel bridges. To avoid damage, pilings were built upstream from the Kearney Rapids Bridge. Logs were attached to the pilings and to shore. These "wings" helped steer the logs beneath the bridge preventing log jams that might wash the bridge out. These pilings still exist.

The harvest proceeded at an increasingly rapid rate, even as inflation associated with World War I reduced profits. By 1919 the harvest was nearly completed. The last log drive of any consequence was in 1920. For five fast and furious years the bridges of Bigfork carried an enormous amount of traffic, the Kearney Rapids Bridge being the key way into the Swan Valley.

In the time period when the Swan River was being used for transporting logs, a sluiceway was built to steer the logs over the diversion dam downstream from Kearney Rapids. With the end of log runs and the increase of demand of electrical power in the Flathead Valley, plans were made to update the power house and increase the size of the reservoir. In 1930, the diversion dam was raised to its present elevation of 3008 feet above sea level. The increased dam elevation inundated Kearney Rapids, lifting the depth of the Swan River at the bridge crossing by ten feet. The increase in water depth had the effect of saturating the fill approaches. Soon after erosion of the bridge abutments became a problem, particularly in high water years. In 1933, 16 feet of wooden approach was added to the original north 16 foot approach in an attempt to solve the erosion problem.

By 1930, logging trucks had become the means of transport from forest to mill. In 1940, a logging truck struck the southwest corner of Kearney Rapids Bridge. The impact severed the first vertical and displaced the second. The severed vertical was welded and a cable was placed to help carry tension loads. Heavy truck traffic was not discouraged but continued use of the bridge as before. Logging and agriculture remained the primary use for the Kearney Rapids Bridge through the 1950s.

The present day State Highway Route #83 was completed in 1957, replacing the Bigfork Canyon Road and the Kearney Rapids Bridge as the route of choice for heavy loads of supplies or logs. Use of the Kearney Rapids Bridge was generally limited to local traffic from Bigfork to Ferndale and Swan Lake. In 1964, another high water year, County Route 209 was cut through Bigfork Canyon on the south side of the Swan River, reducing the use of the Kearney Rapids Bridge even further. Since 1964, the Kearney Rapids Bridge has served the Swan River and Ferndale communities as the shortest route between the two communities via Swan River road.

In the spring of 1974, the Swan River experienced a 75-year flood. The approaches to the Kearney Rapids Bridge were seriously eroded and the Flathead County Road Department changed the wooden approaches to their present configuration. The south approach consists of two wooden spans: one is 21 feet 2 inches and the second is 20 feet 9

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section number 8

Kearney Rapids Bridge

Page 3

inches. The north approach is made up of two spans also: one of 23 feet and the second 24 feet, 3 inches. The Pratt Truss remains at 152 feet, making the total span 241 feet.

Presently, most of the Bigfork and the East Shore traffic travels Route 209 into the Swan Valley. The Bigfork Canyon Road, being in too poor repair for most automobiles, is used for recreation.

Architectural and Historical Significance

The Kearney Rapids Bridge is an excellent example of a Pratt through truss bridge. Steel truss bridges were by far the bridge of choice on Montana highways during the first quarter of the 20th century, and the Pratt through truss was second only to the Warren pony truss in the numbers built. These bridges employed technology originally developed for railway bridge construction, where strength and large spans were often critical. Easily prefabricated, durable and extremely strong, steel highway bridges were erected in increasing numbers in Montana as the highway system expanded and improved.¹

From the 1860s to the early 1880s, bridges in Montana were constructed by local builders with materials at hand, generally log or timber. The arrival of the railroads enabled out of state companies to bid on bridge contracts, and bridge builders from California and the Midwest began to win contracts in Montana. By the 1890s, when steel had become widely available, Midwestern companies, especially those based in Minneapolis, dominated the construction of larger spans. Linked to Montana by the Great Northern and the Northern Pacific Railways, these firms could ship in the necessary components and assemble the bridges on site. A. Y. Bayne and Co. of Minneapolis is known to have built at least 15 bridges in Montana between 1906 and 1911,² including the Kearney Rapids Bridge which is an excellent representative and still bears the makers nameplates for A.Y. Bayne and the Illinois Steel Company stamp.

With its steel trusses, pin connections, wooden decking, timber rails and concrete piers the Kearney Rapids Bridge typifies one of the most popular American bridge types of the early 20th century. It is an excellent example of the Pratt through truss, which is vanishing at an alarming rate from the Montana landscape. At the time of construction, these bridges represented the most modern construction technology, and helped to forge links across a vast, rural state. Transportation has always been vital to the Montana economy, overcoming the remote has been essential to establishing community.

Today, the Kearney Rapids Bridge stands as a monument to that history, and recalls the early years when the names Big Fork and Ferndale were still drying on the maps. Once the gateway to the Swan River Valley, the bridge remains a historic link between Bigfork and the Swan Valley. A local landmark now, the Kearney Rapids Bridge is much loved by many in the community, and adds richness and texture to the lives of those who cross it.

¹See *Monuments Above the Water* by Jon Axline for an excellent overview of bridge construction history in Montana.

²Quivik, Fred *Historic Bridges in Montana*, p. 33 - 40.

9. Major Bibliographic References

See continuation sheet

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 - Montana Department of Transportation
Helena, Montana
- Federal agency
- Local government
- University
- Other -- Specify Repository:

10. Geographical Data

Acreeage of Property: less than 1 acre

UTM References:	Zone	Easting	Northing
A	11	721350	5326740
B	11	721480	5326700
C	11	721320	5326510
D	11	721500	5326440

Legal Location: The Kearney Rapids Bridge is located in the SE $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$ of Section 32, T27N, R19W.

Verbal Boundary Description

National Register boundaries for the Kearney Rapids Bridge are delineated by four UTM coordinates marked on the accompanying topographic map, labelled Kearney Rapids Bridge, Big Fork vicinity, Flathead County, Montana.

Boundary Justification

Boundaries for the Kearney Rapids Bridge were drawn to encompass the bridge and its approaches, as well as that portion of the Swan River spanned by the bridge. Piers in the river, associated with the historic practice of floating mill-bound logs downstream are included in these boundaries. UTM points were used for reference, since visual and geographic points did not lend themselves well for marking the boundaries.

11. Form Prepared By

name/title: Neal Brown, with Chere Jiusto (SHPO)
organization: _____ date: January 1994
street & number: P.O. Box 1066 telephone: 406/837-5018
city or town: Big Fork state: MT zip code: 59911

Property Owner

name/title: Flathead County
street & number: Flathead County Courthouse telephone: 406/444-6201
city or town: Kalispell state: MT zip code: 59901

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 9

Kearney Rapids Bridge

Page 1

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