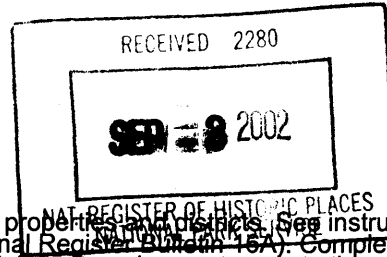


United States Department of the Interior
National Park Service



National Register of Historic Places Registration Form

This form is for use in nominating or requesting determination for individual properties and districts. See instruction in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 15A). 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 Little Thompson River Bridge

other names/site number CDOT No. C-17-N; 5WL2985

2. Location

street & number Interstate Highway 25 Service Road at milepost 249.90 [N/A] not for publication

city or town Berthoud [X] vicinity

state Colorado code CO county Weld code 123 zip code

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, 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 [] statewide [X] locally. ([] See continuation sheet for additional comments.)

Georgina Contiguglia State Historic Preservation Officer August 19, 2002 Date

State Historic Preservation Office, Colorado Historical Society
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 _____
[] See continuation sheet.

Edson Beall Signature of the Keeper 10/15/02 Date of Action

Little Thompson River Bridge
Name of Property

Weld County, Colorado
County/State

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 count previously listed resources.)

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 in Colorado

Number of contributing resources previously listed in the National Register.

0

6. Function or Use

Historic Function

(Enter categories from instructions)

Road-related

Current Functions

(Enter categories from instructions)

Road-related

7. Description

Architectural Classification

(Enter categories from instructions)

Other: Steel rigid-connected camelback
pony truss

Materials

(Enter categories from instructions)

foundation
walls
roof
other Steel
Concrete
Asphalt

Narrative Description

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

Little Thompson River Bridge
Name of Property

Weld County, Colorado
County/State

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 one or more continuation sheets.)

Areas of Significance
(Enter categories from instructions)

Transportation
Engineering

Periods of Significance
1938-1952

Significant Dates
N/A

Significant Person(s)
(Complete if Criterion B is marked above.)
N/A

Cultural Affiliation
N/A

Architect/Builder
Colorado Department of Highways
Midwest Steel & Iron Works
Gardner Brothers

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:
Colorado Historical Society
Colorado Dept. of Transportation

Little Thompson River Bridge
Name of Property

Weld County, Colorado
County/State

10. Geographical Data

Acreage of Property less than one

UTM References

(Place additional UTM references on a continuation sheet.)

1. 13 501787 4460936
Zone Easting Northing

3. Zone Easting Northing

2. Zone Easting Northing

4. Zone Easting Northing

[] 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 Office of Archaeology and Historic Preservation and Clay Fraser, principal

organization Colorado Historical Society and Fraser Design date May 21, 2002

street & number 1300 Broadway telephone 303-866-4681

city or town Denver state CO zip code 80203

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 SHPO or FPO.)

name Colorado Department of Transportation

street & number 4201 E. Arkansas Avenue telephone _____

city or town Denver state CO zip code 80222

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 USC. 470 et seq.)

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

**National Register of Historic Places
Continuation Sheet**

Little Thompson River Bridge
Weld County, Colorado
Highway Bridges in Colorado, MPS

Section number 7 Page 1

DESCRIPTION

Location: Interstate Highway 25 Service Road at milepost 249.90, 6.7 miles north of the junction with State Highway 56

Setting: The north-south bridge crosses the Little Thompson River in an area of irrigated, high plains agriculture. Interstate Highway 25 parallels the service road and crosses the river directly to the west of the bridge.

Structure length: 104 feet
Structure width: 34.2 feet
Roadway width: 30 feet

Main span number: 1
Main span length: 100 feet

Superstructure: Steel rigid-connected camelback pony truss
Substructure: Concrete abutments and wingwalls
Floor/decking: Concrete deck with asphalt overlay
Other features: Upper chord – 2 channels with cover plate and double lacing
Lower chord – 2 channels with batten plates
Vertical and diagonal – wide flange
Floor beam and stringers – steel I-beam
Steel lattice guardrails

Erected: 1938
Designer: Colorado Department of Highways
Fabricator: Midwest Steel & Iron Works
Contractor: Gardner Brothers

Alterations: Flex beam guardrails added in circa 1980

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Little Thompson River Bridge
Weld County, Colorado
Highway Bridges in Colorado, MPS

Section number 8 Page 2

SIGNIFICANCE

The 1938 Little Thompson River Bridge on the Interstate Highway 25 Service Road five miles east of Berthoud, meets the registration requirements under Criteria A and C as set forth in *Highway Bridges in Colorado*, Multiple Property Documentation Form. The bridge is eligible in the area of transportation for its association with the development of US Highway 87 north of Denver. The highway served as a major north-south route joining the major population centers along the western edge of Colorado's high plains by serving as an alternative to the older and more congested US 285 and US 85. The period of significance begins in 1938 with the completion of the bridge and extends through its historic use to 1952, a date fifty-years-of-age in keeping with National Register criteria.

The Little Thompson River Bridge is also eligible in the area of engineering as a rare intact example of a steel rigid-connected camelback pony truss bridge. The truss design that the Highway Department used was a decade-old standard state design. The Little Thompson River Bridge is one of the last surviving examples in the state and the only surviving truss on US Highway 85. In structurally unaltered condition, the bridge is an important engineering and transportation-related resources.

CONSTRUCTION HISTORY

Colorado has been historically crossed and re-crossed by all manners of roads and highways. The focus of early travel through the region was primarily east-west, and mainline routes such as the Santa Fe Trail and the Overland Trail carried travelers through the territory. After gold was discovered in the Rocky Mountains, routes such as the Smoky Hill Trail brought boomers into the region from the East. In the early 20th century these were followed by such quasi-public automobile routes as the Lincoln Highway, the Midland Trail and the Ocean-to-Ocean Highway, which all crossed the state on their way across America. None of these early roads was more important to Colorado's development than the north-south route that stretched along the Front Range. Called the Great North and South Highway, it linked many of the state's most important cities—Fort Collins, Denver, Colorado Springs, Pueblo, Trinidad—along a single strand from Wyoming to New Mexico.

Tracing the evolution of a highway by name and number can be a confusing process. Most state highways have had more than one official state number and many were later converted to the federal numbering system. Occasionally, a highway number would be transferred to a different route. All these things happened to the North-South Highway north of Denver.

Before the turn of the 20th century, the North-South Highway had been developed on a piecemeal basis as a series of separate segments. Little had been done either by the state or by the individual counties and municipalities to coordinate construction and maintenance

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Little Thompson River Bridge
Weld County, Colorado
Highway Bridges in Colorado, MPS

Section number 8 Page 3

efforts. This began to change in 1907, when the state legislature authorized the construction of a highway beginning at the southern boundary of the state and running north through Trinidad, Walsenburg, Pueblo, Colorado Springs, Denver, Longmont, Loveland and Fort Collins to the Wyoming line." As stipulated in the act, the state engineer was responsible for locating and surveying the road, designing it, approving plans for all bridges on it, and supervising its construction. The legislature ordered the road built by convict labor and appropriated \$10,000 to defray the costs for equipment and extra men to guard the prisoners. This money was used up entirely on work within Las Animas County that year, leaving maintenance of the rest of the route up to the individual counties.

The State Highway Commission designated the first seven state primary roads in May 1910. Three of these first routes formed contiguous legs of the North-South Road. State Primary Road No. 2 ran from Denver to Fort Collins (and later extended to the Wyoming state line); State Primary Road No. 3 from Denver to Colorado Springs; and State Primary Road No. 4 from Colorado Springs to Pueblo. In 1912 State Primary Road No. 26 was designated between Pueblo and the New Mexico state line via Walsenburg and Trinidad. After the state began receiving Federal Aid funds for road construction in 1917, it subdivided the route into relatively short federal aid projects and improved the roadway incrementally during the 1920s and 1930s. For instance, Federal Aid Project I involved four miles of concrete paving between Denver and Littleton in Arapahoe County; FAPs 14 and 36 paved three miles south of Longmont; and FAP 33 paved three miles south of Fort Collins.

In 1922 the US. Bureau of Public Roads approved Colorado's first federal aid highway system. Under the new system, the North-South Road was redesignated as State Highway 1, reflective of its importance to Colorado. Three years later the Highway Department again renumbered the state's routes to integrate with the newly designated federal highway network. The North-South Road was incorporated into US. Highway 85 from the New Mexico state line to Denver and into US. 285 from Denver north to Fort Collins, Mile by mile, the Highway Department slowly upgraded the North-South Highway during the 1920s, with an emphasis on the stretch between Denver and Colorado Springs. Built under sixteen separate federal aid projects between 1917 and 1928, this route featured a concrete roadway 18 feet wide, and it eliminated dangerous on-grade railroad crossings with seven underpasses and one overpass. Finally, in August 1928, the Highway Department ceremoniously opened the last 17-mile-long stretch of concrete highway between the two cities "Colorado motorists now drive over an unbroken ribbon of cement pavement stretching from Denver to Colorado Springs, a distance of 73 miles," the Department stated. It was, according to CHD, the fourth longest unbroken stretch of concrete paving in the world.

The Highway Department had been upgrading or rebuilding other legs of the North-South Highway as well. Paving was then completed on the road between Denver and Fort Collins, and five miles of concrete paving were almost complete south of Colorado Springs

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Little Thompson River Bridge
Weld County, Colorado
Highway Bridges in Colorado, MPS

Section number 8 Page 4

Additionally, work was underway elsewhere between Colorado Springs and Pueblo, with completion of the leg anticipated in 1930 or 1931.

In 1936 US Highway 285 north from Denver through Fort Collins to the state line was redesignated as US 87. About the same time the Highway Department began building an alternative route for US 87 that bypassed the growing congestion as the highway bisected the towns of Lafayette, Longmont, Berthoud and Loveland. The new route ran straight north from Denver approximately five to seven miles east of the existing US 87. In 1942 the new alternative route officially became US 87 and the former US 87 was redesignated as US 287.

In 1937 the Highway Department began planning an improvement of seven miles of the alternative highway route between Loveland and Longmont, as part of Public Works Administration Project 352-F. A major part of the project entailed construction of a bridge over the Little Thompson River five miles east of Berthoud.

The Highway Department budgeted for the Little Thompson River Bridge in 1937, but for some reason delayed letting the construction contract until the following year. In late February CHD announced that the plans would be completed soon, and in June the agency awarded a contract for the project to the Gardner Brothers Construction Company of Longmont for \$120,000. Using steel members rolled in Pueblo by Colorado Fuel and Iron, the Midwest Steel and Iron Works of Denver fabricated the truss. The contractors excavated for the substructure, formed and poured the abutments, erected the truss, and then poured the concrete deck. They reportedly finished the Little Thompson River Bridge later in 1938. Since its completion, the structure has functioned in place, in essentially unaltered condition. With the construction of Interstate 25 in the 1960s, the highway has been re-routed from this bridge. Today it carries a service road.

BRIDGE ENGINEERING

The truss design that the Highway Department used for the Little Thompson River Bridges was a standard that the state had been using for over ten years. The camelback truss had been developed during the late 19th century by the railroad industry and later adapted to roadway use. With the upper chords, endposts and verticals of its webs acting in compression and lower chords and diagonals acting in compression, the camelback was a sub-type of the venerable Pratt design. Structurally, it was defined as a Parker truss with exactly five facets in its upper chord. The camelback's distinctive profile was initially disdained by many engineers for its ungainly appearance and its tendency under certain conditions to reverse compressive and tensile forces acting on individual members. As a result, pin-connected versions of the camelback truss never gained widespread acceptance in the 19th and early 20th centuries.

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Little Thompson River Bridge
Weld County, Colorado
Highway Bridges in Colorado, MPS

Section number 8 Page 5

Rigid connections, which eliminated the truss's negative structural proclivities, made the camelback more palatable to highway engineers of the 1920s. The Colorado Highway Department and its predecessors had been using Pratts and their sub-types since the 1880s, and the camelback was a logical choice for its standard long-span pony truss.

The structure that CHD delineated for the Little Thompson River crossing was made up of a rigid-connected camelback pony truss, supported by reinforced concrete abutments with angled wingwalls. The truss spanned 100 feet, subdivided into six 16'-8" panels, and the roadway was 30 feet wide between the truss webs. The upper chords and inclined endposts consisted of two back-to-back 12-inch steel channels, covered by a continuous 3/8-inch steel plate on top and joined by double bar lacing underneath. The verticals and diagonals were 10-inch wide flanges, the lower chords two back-to-back channels with batten plates. Wide flange floor beams were riveted to the verticals at the panel points; these were reinforced beneath the deck by steel angle lateral braces. The floor beams supported six lines of wide flange stringers, on which the concrete slab deck rested. This deck was flanked on each side by an integrally poured concrete curb and steel lattice guardrail with steel plate hub rail. Concrete bulkheads with recessed rectangular panels framed the guardrails at both ends. The truss carried standard CHD iron plates on its endposts.

CHD delineated camelback ponies in 80-foot, 100-foot and 125-foot span lengths, with a range of roadway widths, and built hundreds of them around the state during the 1920s, 1930s and 1940s. In structurally unaltered condition, this bridge in Weld County illustrates this construction trend. Subsequent bridge replacements in Colorado reduced the number of surviving examples to a relative few.

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Little Thompson River Bridge
Weld County, Colorado
Highway Bridges in Colorado, MPS

Section number 9 Page 6

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United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Little Thompson River Bridge
Weld County, Colorado
Highway Bridges in Colorado, MPS

Section number 10 Page 7

GEOGRAPHICAL DATA

VERBAL BOUNDARY DESCRIPTION

The Little Thompson River Bridge is located on the Interstate Highway 25 Service Road at milepost 249.90 The boundaries of this nomination consist of a rectangle of land 10 feet out in each direction from the footprint of the bridge.

BOUNDARY JUSTIFICATION

The nomination includes all the land directly and historically associated with the bridge.

PHOTOGRAPH LOG

The following information pertains to photograph numbers 1- 2:

Name of Property: Little Thompson River Bridge
Location: Weld County, Colorado
Photographer: Clayton Fraser
Date of Photographs: March 1999
Negatives: Colorado Department of Transportation

Photo No. Photographic Information

- 1 Looking across bridge and down road; view to the south.
- 2 View to the southwest from north bank of Little Thompson River

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Little Thompson River Bridge
Weld County, Colorado
Highway Bridges in Colorado, MPS

Section number ___ Page 8

USGS TOPOGRAPHIC MAP
Johnston Quadrangle, Colorado
7.5 Minute Series, 1988

UTM: Zone 13 / 501787E / 4460936N
PLSS: 6th PM, T4N, R68W, Sec. 23, W $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$
6th PM, T4N, R68W, Sec. 22, E $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$
Elevation: 4,860 feet

