

United States Department of the Interior  
National Park Service

APR 10 1989

National Register of Historic Places  
Registration Form

NATIONAL  
REGISTER

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Town Branch Bridge  
other names/site number n/a Site #FD-71

2. Location

street & number crosses Levisa Fork at County Road 1334 n/a  not for publication  
city, town Prestonsburg n/a  vicinity  
state Kentucky code KY county Floyd code 071 zip code 41653

3. Classification

<b>Ownership of Property</b>	<b>Category of Property</b>	<b>Number of Resources within Property</b>	
<input type="checkbox"/> private	<input type="checkbox"/> building(s)	<b>Contributing</b>	<b>Noncontributing</b>
<input type="checkbox"/> public-local	<input type="checkbox"/> district	_____	_____ buildings
<input checked="" type="checkbox"/> public-State	<input type="checkbox"/> site	_____	_____ sites
<input type="checkbox"/> public-Federal	<input checked="" type="checkbox"/> structure	<u>1</u>	<u>0</u> structures
	<input type="checkbox"/> object	_____	_____ objects
		<u>1</u>	<u>0</u> Total

Name of related multiple property listing:  
Historic Resources of Prestonsburg

Number of contributing resources previously listed in the National Register 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, 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.  See continuation sheet.

David L. Morgan  
Signature of certifying official David L. Morgan Date 3-30-89  
State Historic Preservation Officer, Commonwealth of Kentucky  
State or Federal agency and bureau \_\_\_\_\_

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

\_\_\_\_\_  
Signature of commenting or other official Date \_\_\_\_\_  
State or Federal agency and bureau \_\_\_\_\_

5. 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.

removed from the National Register.

other, (explain:) \_\_\_\_\_

Shelene Byers Entered in the National Register 5/18/89  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Signature of the Keeper Date of Action \_\_\_\_\_

**6. Function or Use**

Historic Functions (enter categories from instructions)

Transportation: Road Related

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Current Functions (enter categories from instructions)

Transportation: Road Related

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**7. Description**

Architectural Classification

(enter categories from instructions)

n/a

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Materials (enter categories from instructions)

foundation \_\_\_\_\_

walls \_\_\_\_\_

roof \_\_\_\_\_

other Concrete

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Describe present and historic physical appearance.

**8. Statement of Significance**

Certifying official has considered the significance of this property in relation to other properties:

nationally     statewide     locally

Applicable National Register Criteria     A     B     C     D

Criteria Considerations (Exceptions)     A     B     C     D     E     F     G    n/a

Areas of Significance (enter categories from instructions)

Engineering

Other: Community Development

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

Period of Significance

1932

Cultural Affiliation

n/a

Significant Dates

1932

Significant Person

n/a

Architect/Builder

Contractor: Steel & Leiby Contracting  
Company, Engineer: Mac McHenry

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

See continuation sheet

**9. Major Bibliographical References**

See Overview Form.

- Previous documentation on file (NPS): n/a
- 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 # \_\_\_\_\_

See continuation sheet

- Primary location of additional data:
- State historic preservation office
  - Other State agency
  - Federal agency
  - Local government
  - University
  - Other

Specify repository:  
Kentucky Heritage Council

**10. Geographical Data**

Acreeage of property Less than one acre

UTM References

A 

1	7
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3	4	3	6	0	0
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4	1	6	9	7	8	0
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Zone Easting Northing

C 

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B 

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Zone Easting Northing

D 

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See continuation sheet

Verbal Boundary Description

See continuation sheet

Boundary Justification

See continuation sheet

**11. Form Prepared By**

name/title Margaret Warminski, Historic Preservation Consultant

organization \_\_\_\_\_ date December 1988

street & number 340 East Second Street telephone 606/581-2883

city or town Newport state Kentucky zip code 41071

**United States Department of the Interior  
National Park Service****National Register of Historic Places  
Continuation Sheet**

Town Branch Bridge, Historic Resources of Prestonsburg

Section number 7 Page 1

The Town Branch Bridge, constructed c. 1932, is one of two nearly identical single-span, one-lane concrete highway bridges in the city of Prestonsburg. It carries County Road 1334 (a continuation of South Front Street) across the Levisa Fork, connecting Prestonsburg with rural Floyd County. Like its counterpart, the West Prestonsburg Bridge, it is an example of an open-spandrel rainbow or through arch span. Since their arches extend below deck and are anchored by the abutments, both are examples of "fixed arch" construction. This sub-type is distinguished from the "tied" design, in which the arch does not continue below the deck and is not attached to the abutments.

The bridge's approaches are angled. The approach spans and arch rest on concrete piers and abutments, with the arch itself constructed of reinforced concrete. Its slender vertical supports are reinforced concrete tension hangers that tie into the floor beams to support the deck. The floor beams are also of reinforced concrete. The bridge's concrete post and rail balustrade, with rounded post caps and streamlined flared corners, exhibits a Moderne influence. The bridge has an overall length of 554 feet; the arch is 161 feet long. Its roadway is 20.2 feet wide.

The Town Branch Bridge possesses a grace that surpasses many other examples of the style. Since many rainbow arch bridges are characterized by a squat, sturdy appearance, the delicacy of the Town Branch Bridge's overall appearance and the slenderness of its vertical members is noteworthy. The soaring height of the arches and the sharp radius of their curve are dramatic in impact.

The Town Branch Bridge underwent structural upgrading in the 1970's, at which time steel I-beams were introduced into its superstructure of its approaches, and a section of the balustrade along the north approach was replaced with a modern metal railing. These modifications, which may well have prolonged the bridge's useful life, do not measurably lessen its overall integrity.

Although the bridge remains in active use, and serves as a vital link in Prestonsburg's road network, it suffers from deferred maintenance. Sections of concrete have begun to spall, portions of the railing have crumbled away, and in several places reinforcing rods are exposed. Nonetheless, the bridge retains a high degree of integrity and, like the West Prestonsburg span, remains an important element in the landscape.

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Town Branch Bridge, Historic Resources of Prestonsburg

Section number 8 Page 1

The Town Branch Bridge (c. 1932), one of two nearly identical open-spandrel concrete through or rainbow arch bridges in the city of Prestonsburg, is significant at the state level under Criterion C and the theme of engineering as a rare survivor of a once-common bridge design: it is the only span of its type still in use on a Kentucky highway. The Town Branch Bridge is a work of the prolific bridge-building firm of Steel and Lebbly of Knoxville, Tennessee. The bridge is also significant under Criterion A in the context of the community development of Prestonsburg, Kentucky because of its importance in the development of the city's transportation system. The Town Branch Bridge and its counterpart the West Prestonsburg Bridge (c. 1928), the city's first modern highway bridges, were constructed during the city's greatest period of growth and expansion.

The Town Branch Bridge was one of three concrete through or rainbow arch bridges constructed in the Prestonsburg area during the late 1920's and early 1930's, in the aftermath of the city's greatest period of growth and expansion. Of these three spans, two are still standing. A third at the nearby settlement of Harold was replaced in the 1970's. Prior to their construction, the only bridges in the area were primitive wire suspension spans. Both the Town Branch and West Prestonsburg spans originally displayed bronze plaques listing their construction dates, builder's names, and other pertinent information, but these features have since been removed. However, their history has been well documented by local residents. The Town Branch Bridge was constructed by the Steel and Lebbly Contracting Company of Knoxville, Tennessee in 1932, with Mac McHenry acting as engineer and Tom Lackey as foreman.

The construction of the Town Branch Bridge brought some notoriety to Prestonsburg because of the unusual method employed. Although the span now carries County Road 1334 across the Levisa Fork, that road did not exist prior to the bridge's construction. As it was being built, its approach was anchored into a hill on the south bank of the river. When the bridge was completed, the road was then built leading up to it. This strange circumstance was noted by Ripley's "Believe It or Not" newspaper column during the 1930's. The bridge played a vital role in the city's transportation system since the road it carried was the city's main thoroughfare. That function has since been taken over by other, newer roadways, and the Town Branch Bridge now carries only local traffic.

The concept of concrete bridge construction was developed in Europe in the late 1800's and began to be studied in the United States in mid-1890's. But like many technical innovations, it was slow to find acceptance. One of the country's first documented concrete bridges was built in Cincinnati's Eden Park in 1895. Another early example, the Walnut Lane Bridge, was completed in Philadelphia in 1908. Both these pioneering spans utilized the open spandrel arch form in which the bridge deck was supported by a series of open arches. The first example of the through or "rainbow" arch bridge, in which the arch continued above deck level, was constructed in 1908 after a design by Howard M. Jones,

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Town Branch Bridge, Historic Resources of Prestonsburg

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engineer for the Cumberland River Bridge Commission in Nashville, Tennessee. Jones's design does not appear to have been readily accepted, however, and in 1909 was criticized in *ENGINEERING NEWS* for purported defects. As this debate continued the Commissioners of Hamilton County, Ohio (near Cincinnati) chose to replace an aging truss bridge in the community of Lockland with a reinforced concrete through arch span. The Lockland bridge, believed to be the first example of its type in Ohio and one of the first in the nation, was completed in the fall of 1910.

In 1912 a patent was issued to engineer James Marsh for the design of a concrete through arch bridge. Marsh, formerly of the King Bridge Company, later became president and chief engineer of the company he founded, the Marsh Bridge Company (later Marsh Engineering Company). His patent actually specified what came to be called the "fixed arch" design in which the arch flowed below deck level and was anchored to the abutments. These massive abutments or piers resisted both the horizontal and vertical thrust of the arch. A variant developed later was called the "tied" arch, in which the arch did not continue below the deck line and was not fixed directly into the abutments. Both the fixed and tied subtypes utilized the same basic construction method. The core of the arch ribs was a steel lattice work, likely assembled on the ground and erected much in the same manner as the steel trusses of the period. Once the lattice work was constructed on the abutments or piers, the superstructure was encased in concrete, beginning with the arch ribs, then the intermediate beams and floor slab, bridge railing, and intermediate hangers. Although single spans were most common, some through arch bridges featured multiple spans. On longer spans (over 100 feet in length) horizontal ties between the arches provided greater stability.

During the 1910's and 1920's the rainbow arch bridge enjoyed great popularity with highway bridge builders. This was especially true in Ohio where a standardized design similar to the one developed by Marsh was created by the state highway department in 1921. J. R. Burkey of the state's Bureau of Bridges claimed the design was "popular" with Ohio residents because of its "graceful and substantial" appearance. Although the basic design of the Town Branch Bridge clearly derives from Marsh's patented design, and resembles the standardized type developed by the Ohio highway department, it is distinguished for its longer length, greater height, and fixed arch design as opposed to the somewhat more common tied arch form.

In 1982 a survey of historic bridges in Kentucky found only one concrete through span--the Town Branch Bridge--still serving its original function. The Town Branch Bridge was subsequently determined eligible for listing in the National Register through a consensus opinion between the Kentucky Heritage Council and state Transportation Cabinet.

The bridge-building firm of Steel and Leiby was founded by civil engineers John Steel and Thomas D. Leiby in Knoxville, Tennessee in 1924. The firm worked primarily in Kentucky,

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Town Branch Bridge, Historic Resources of Prestonsburg

Section number 8 & 10 Page 3 & 1

Tennessee, West Virginia, North Carolina, and Mississippi. Steel studied engineering at Duke University and the University of Minnesota and was influenced by the concept of concrete arch bridges during a stay at France's Ecoles Ponts et Chaussées (School of Bridges and Causeways). Prior to his involvement with Leiby, Steel had been in partnership with contractor Otto Roehl in the Roehl and Steel Bridge Company.

During the early 1930's the bank in which Steel and Leiby had their operating capital collapsed, and the partnership was dissolved. Leiby then became an engineer with the newly founded Tennessee Valley Authority. Steel turned to farming for a short time and later worked for the V. L. Nicholson Company, a Knoxville contractor.

The work of Steel, Leiby and Roehl in Tennessee has been well documented by the state's Department of Transportation. Entries in the state's historic bridge database illustrate the diversity of their work. Fifteen concrete bridges constructed by Steel and Roehl between 1921 and 1924 are listed in the Tennessee historic bridge inventory. Of these, thirteen are filled concrete arches, and the remaining two are open spandrel spans. Two of these, a 127-foot single span rainbow arch dating from 1921 and a dual-ribbed 170-foot open spandrel arch from 1923-24, have been determined to possess historic significance. Eight Steel and Leiby concrete bridges, built between 1924 and c. 1930, are listed in the survey database. Of these, five are open spandrel arches, three are filled concrete arches, and one uses the closed spandrel ribbed arch form. One of these bridges, a 218.3-foot three-span open spandrel arch structure from 1927, has been determined to be historically significant. Based on the unusual physical design of the bridge within Kentucky, and in comparison with evaluations of through arch bridges in surrounding states, the Town Branch Bridge is eligible for listing in the National Register of Historic Places.

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**Section 10. Geographic Information.**

Beginning at the north terminus of the Town Branch Bridge on County Road 1334 south of West Graham Street, proceed in a southerly direction approximately 554 feet to the bridge's south terminus on County Road 1334 on the south bank of the Levisa Fork. The nomination includes the approach spans, piers and primary span.

The nominated area includes the property visually associated with the bridge. Since there are no natural or man-made boundaries, an imaginary one was drawn to enclose the site.

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Historic Resources of Prestonsburg MPS, Floyd Co., KY

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Photo 15

Prestonsburg Multiple Properties Submission (same for all photos)

Town Branch Bridge

County Road 1334 (Town Branch Road) at Levisa Fork, Prestonsburg (same for photos 15 through 17)

Prestonsburg, Kentucky (same for all photos)

Margaret Warminski (same for all photos)

February 1988

Negative location: Kentucky Heritage Council, Frankfort, Kentucky (same for all photos)

View of bridge, north approach, and balustrade, looking south from South Front and West Graham Streets

Photo 16

Town Branch Bridge

February 1988

Overall view of bridge (arch, east approach and lower structure) looking south from hillside at north end of bridge.

Photo 17

Town Branch Bridge

February 1988

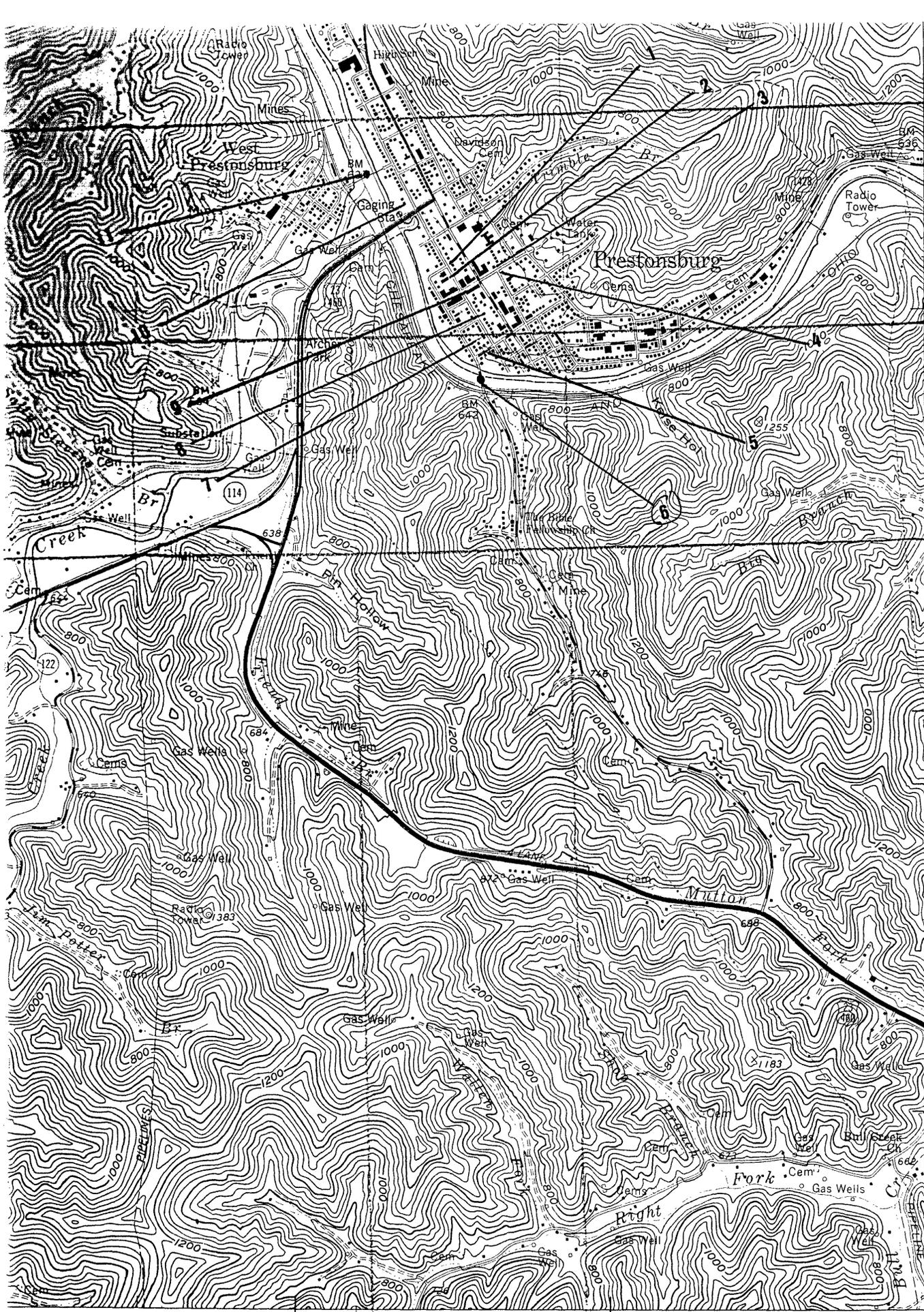
View of bridge arch, looking north toward Prestonsburg from bridge deck.

Photo 21

Town Branch Bridge

February 1988

Overall view of bridge, showing south approach, balustrade and lower structure, looking northwest from hillside at south end of bridge.



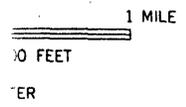
4171  
40'  
4170  
#6 Town Branch  
Bridge  
Floyd Co., KY  
17/343600/4169780  
4169  
4168  
NEW ALLEN 1.2 MI.  
PIKEVILLE 22 MI.  
4166000m.N.  
37°37'30"

47'30" 342

343

● INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1978  
344 345000m.E.

82°45'



ROAD CLASSIFICATION

- Primary highway, hard surface
- Secondary highway, hard surface
- Light-duty road, hard or improved surface
- Unimproved road

(HAROLD)  
4/59 11 SW