

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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RECEIVED

JUL 30 1979

DATE ENTERED

SEP 10 1979

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC Ponakin Bridge

AND/OR COMMON

Ponakin Bridge

2 LOCATION

STREET & NUMBER

Ponakin Road

NOT FOR PUBLICATION

CITY, TOWN

Lancaster

near

VICINITY OF

CONGRESSIONAL DISTRICT
2nd

STATE

Massachusetts

CODE

025

COUNTY

Worcester

CODE

027

3 CLASSIFICATION

CATEGORY

 DISTRICT BUILDING(S) STRUCTURE SITE OBJECT

OWNERSHIP

 PUBLIC PRIVATE BOTH

PUBLIC ACQUISITION

 IN PROCESS BEING CONSIDERED

STATUS

 OCCUPIED UNOCCUPIED WORK IN PROGRESS

ACCESSIBLE

 YES, RESTRICTED YES, UNRESTRICTED NO

PRESENT USE

 AGRICULTURE COMMERCIAL EDUCATIONAL ENTERTAINMENT GOVERNMENT INDUSTRIAL MILITARY MUSEUM PARK PRIVATE RESIDENCE RELIGIOUS SCIENTIFIC TRANSPORTATION OTHER:**4 OWNER OF PROPERTY**

NAME

Town of Lancaster

STREET & NUMBER

Town Hall

CITY, TOWN

Lancaster

VICINITY OF

STATE

Massachusetts

5 LOCATION OF LEGAL DESCRIPTIONCOURTHOUSE,
REGISTRY OF DEEDS, ETC.

Worcester County Registry of Deeds

STREET & NUMBER

2 Main Street

CITY, TOWN

Worcester

STATE

Massachusetts

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Inventory of Historic Assets of the Commonwealth

DATE

1975

 FEDERAL STATE COUNTY LOCALDEPOSITORY FOR
SURVEY RECORDS

Massachusetts Historical Commission

CITY, TOWN

294 Washington Street, Boston

STATE

Massachusetts 02108

7 DESCRIPTION

CONDITION

EXCELLENT
 GOOD
 FAIR
 DETERIORATED
 RUINS
 UNEXPOSED

CHECK ONE

UNALTERED
 ALTERED

CHECK ONE

ORIGINAL SITE
 MOVED DATE _____

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Ponakin Bridge is a single span Post through truss constructed in 1871. The bridge serves automobile traffic crossing the north branch of the Nashua River in Lancaster. Originally on the main route from Lancaster to Lunenburg, the bridge is now on a winding country road. It is now approximately 400 feet from a by-pass highway constructed in 1965.

The eight truss paneled structure has a span of 100 feet and width of 20 feet. The vertical end posts are riveted in sections. The bridge is typical of Post trusses with pinned end diagonals in compression and diagonal dual eye bars extending two panels in tension. Secondary tension rods running between the dual eye bolts extend across one panel. Struts connecting each side hip are riveted; top lateral diagonal cross bars provide additional bracing. Floor construction consists of three inch deck planking supported by tranverse cross timbers atop wood stringers which in turn rest on riveted cross floor beams. Floor beams are attached at the panel points. Abutments are 20' granite blocks.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION	
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE	
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE	
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN	
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER	
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION	
<input type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)	
		<input type="checkbox"/> INVENTION			

SPECIFIC DATES	1871	BUILDER/ARCHITECT	Watson Manufacturing Company
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STATEMENT OF SIGNIFICANCE

The Ponakin Bridge possesses integrity of location, design, setting, materials, and workmanship and is associated with major transportation routes and the development of Lancaster. The bridge also possesses significance in being the only remaining pure version of a Post truss known to the Historic American Engineering Record.

In 1871 the town of Lancaster contracted with Watson Manufacturing Company, Builders of Patterson, New Jersey to construct a new bridge replacing the last in a series of wooden bridges that had been there since the seventeenth century. That year the Ponakin Bridge was built for the sum of \$5981 following the design of Simeon S. Post which was patented c. 1866. S.S. Post was a well known New Hampshire born civil engineer "whose work in addition to bridge design and building included surveys and construction of railroads, particularly the New York and Erie. He was the originator of the system of railroad baggage checking universally adopted and drew the first design for making railroad time tables. He was also a founding member of the original (1852) American Society of Civil Engineers."¹ The Post truss is distinguished by compression members that incline toward the center of the bridge. The Post truss bridge was a major bridge form in the second half of the nineteenth century and was the most frequently used bridge form for the transcontinental railroad. Other important Post truss bridges include the Union Pacific Railroad's crossing of the Missouri River at Omaha. Two and one-half miles in length, this bridge was the largest on the line. The Missouri River crossing of the Missouri-Kansas-Texas Railroad was also a Post patented bridge with a span of 256'. Despite the truss' popularity, The Ponakin and the nearby Atherton Bridges (NR-eligible) are the only known surviving examples in the country. Taken together, the bridges comprise a unique pair of structures representing an important era in American engineering.

The town of Lancaster has demonstrated its commitment to upkeep of the bridge through town-funded repairs over the years. The load limit today is four tons, and trucks and heavy loads are excluded from crossing the bridge.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Allen, Richard S., Iron Bridges on S.S. Post's Patent
 Condit, Carl, American Building Art, 19th c., vol. I, pp. 145-6, N.Y.: Oxford Univ. Press, 1960
 Marvin, Abijah P., History of Lancaster 1652-1879, Lancaster, 1879
 Town clerk and selectmen's records
 Correspondence with Donald Jackson, HAER

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY approx. 1/4 acre

QUADRANGLE NAME Clinton, MA

QUADRANGLE SCALE 1:24000

UTM REFERENCES

A 19 279245 4706480
 ZONE EASTING NORTHING

B
 ZONE EASTING NORTHING

C

D

E

F

G

H

VERBAL BOUNDARY DESCRIPTION

Ponakin Bridge is located on Ponakin Road where the road crosses the Nashua River.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME/TITLE Elizabeth T. Durfee with Phyllis and Lee Farnsworth
Inventory Coordinator Lancaster Historical Commission

ORGANIZATION Massachusetts Historical Commission DATE June 29, 1979

STREET & NUMBER 294 Washington Street TELEPHONE 617-727-8470

CITY OR TOWN Boston, STATE MA 02108

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL STATE LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE Robert R. Westlow DATE 7/18/79

TITLE Executive Director, Mass. Historical Commission DATE

FOR NPS USE ONLY	
I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER	
<u>Michael Shull</u>	DATE <u>9-10-79</u>
KEEPER OF THE NATIONAL REGISTER	
ATTEST: <u>Margaret Ouelly</u>	DATE <u>9/10/79</u>
CHIEF OF REGISTRATION	

Property Ponakin Bridge

State Mass. (Worcester) Working Number 7.30.79.1810

TECHNICAL

Photos
Maps

CONTROL

OK 7.30.79

HISTORIAN

Accept 9/10/79
Ouley

An intact Post tuss bridge, the only remaining
good example of such a tuss known to HAER, and
one of only 2 surviving in U.S. The Post tuss was

popular in transcontinental RR construction
in latter 1/2 of the 19th C.

ARCHITECTURAL HISTORIAN

ARCHEOLOGIST

OTHER

HAER

Inventory
Review

REVIEW UNIT CHIEF

Accept Ouley 9/10/79

BRANCH CHIEF

KEEPER

National Register Write-up
Federal Register Entry 10-2-79

Send-back
Re-submit

Entered SEP 10 1979



Ponakin Bridge
Lancaster, MA
Wendell Bartlett
May 1975

Lancaster Historical Commission

#1071
JUL 30 1979
WORCESTER
COUNTY

SEP 10 1979

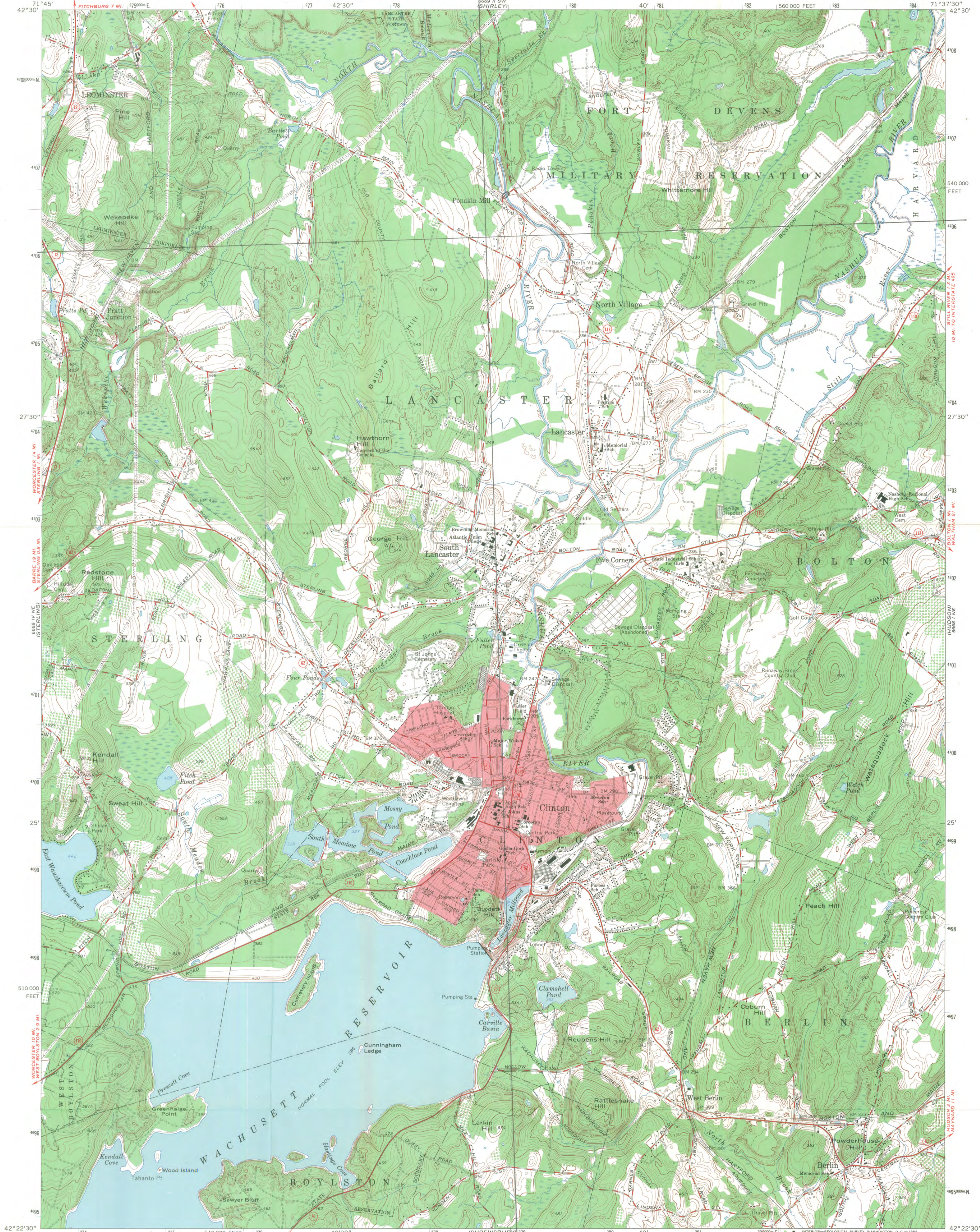
(condition unchanged since 1975)

Photographer: Wendell Bartlett

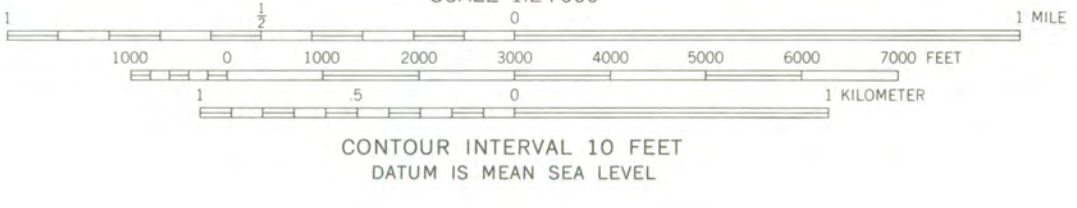
May 1975

Ponakin Bridge
over the Nashua River

Ponakin Bridge
Lancaster, MA
19/279245/4706480



Mapped, edited, and published by the Geological Survey
Control by USGS, USC&GS, and Massachusetts Geodetic Survey
Planimetry by photogrammetric methods from aerial photographs
taken 1939. Topography by planimetric surveys 1923 and 1940
Revised 1965
Polyconic projection. 1927 North American datum
10,000-foot grid based on Massachusetts coordinate system,
mainland zone
1000-meter Universal Transverse Mercator grid ticks,
zone 19, shown in blue
Red tint indicates area in which only landmark buildings are shown



CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL



ROAD CLASSIFICATION
Heavy-duty ——— Light-duty ———
Medium-duty ——— Unimproved dirt ———
○ State Route

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

CLINTON, MASS.
N4222.5—W7137.5/7.5
1965
AMS 6668 1 NW—SERIES V814



SEP 10 1979

473 Harvard Road
Lancaster, Mass. 01583
31 July 1978



To the Board of Selectmen and the Road Commissioners
Lancaster, Massachusetts 01523

Gentlemen:

I have just received confirmation from the Chief of the Historic American Engineering Record (HAER) of the Department of the Interior in Washington, D. C., that both the Atherton and Ponakin Bridges are of significant historical importance and should be saved if at all possible. He states that "Both bridges date from the early 1870's and are rare examples of the Post truss." "Taken together, the bridges comprise a unique pair of structures representing an important aspect of America's engineering heritage." "Many Post trusses were built throughout America, but the two in Lancaster are the only ones the HAER knows to survive."

The town already has provided repair funds to maintain the Ponakin Bridge operational at a minimum restricted load, and it is on a roadway that has very little traffic now since the new Lunenburg Road has been opened.

The Atherton Bridge, however, has been closed for a number of years and is planned to be torn down and replaced, and is on a roadway that would have heavy traffic if it were opened again. With this confirmation of its significance, we should initiate new plans to save it.

A way to do this would be first to leave the Atherton Bridge in its present location, and repair it enough to use it for foot traffic, horseback riding and other recreational uses. These uses would tie-in well with the Master Plan for the town, and the uses of the Nashua River Greenway in this area. Then second, move the highway south and build a new bridge there to support the traffic expected on this roadway.

Enclosed is further information on historic truss bridges and their preservation.

Sincerely,

Phyllis A. Farnsworth

Phyllis A. Farnsworth
National Register Coordinator for
Lancaster Historical Commission

Encl: Ltr dtd 7/26/78 from
Douglas L. Griffin, HAER
Information on Simeon S. Post
Article, Sec 3, Executive Order 11593, Historic Bridge
Preservation at the Community Level

ENTRIES IN THE NATIONAL REGISTER

MASSACHUSETTS

STATE

Date Entered SEP 10 1979

<u>Name</u>	<u>Location</u>
Atherton Bridge	Lancaster Worcester County
Ponakin Bridge	Lancaster vicinity Worcester County
International Trust Company Building	Boston Suffolk County

Also Notified

Honorable Paul G. Tsongas

Honorable Edward M. Kennedy
Honorable Edward P. Boland
Honorable John J. Moakley

State Historic Preservation Officer
Mrs. Patricia L. Weslowski
Executive Director
Massachusetts Historical Commission
294 Washington Street
Boston, Massachusetts 02108

NR Byers/bjr 9/18/79