Form No. 10-300 (Rev. 10-74)

PH# 36763

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

DATA SHEET

FOR NPS USE ONLY
RECEIVED NOV 23 1976
DATE ENTERED JUL 26 1977

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

1 NAME

HISTORIC
New Hampton Pony Pratt Truss Bridge
AND/OR COMMON

2 LOCATION

STREET & NUMBER
~~New~~ Hampton over Musconetcong River — NOT FOR PUBLICATION
CITY, TOWN
~~Lebanon Township and Washington Township~~ — VICINITY OF Hampton
CONGRESSIONAL DISTRICT
~~14th~~ 13th
STATE
New Jersey
CODE
34
COUNTY
Hunterdon - 019 Warren -041
CODE

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	XPUBLIC	XOCCUPIED - in use	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	__UNOCCUPIED	__COMMERCIAL	__PARK
XSTRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	PUBLIC ACQUISITION	ACCESSIBLE	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	__YES: UNRESTRICTED	__INDUSTRIAL	X TRANSPORTATION
		__NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME
Hunterdon County Courthouse Warren County Courthouse
STREET & NUMBER
Main Street
CITY, TOWN
Flemington — VICINITY OF Belvidere
STATE
New Jersey

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
same as #4
STREET & NUMBER
CITY, TOWN
STATE

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
New Jersey Historic Sites Inventory (#1743.4)
DATE
1974
__FEDERAL XSTATE __COUNTY __LOCAL
DEPOSITORY FOR SURVEY RECORDS
Historic Sites Section, Dept. of Environmental Protection
CITY, TOWN
P.O. Box 1420, Trenton
STATE
New Jersey

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
__EXCELLENT	__DETERIORATED	__UNALTERED	X ORIGINAL SITE
X GOOD	__RUINS	X ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Built in 1868 by William Cowin of Lambertville, New Jersey the New Hampton pony Pratt truss Bridge spans the Musconetcong River from Lebanon Township, Hunterdon County into Washington Township, Warren County.

The end posts of this bridge are octagonal vertical iron tubes capped with a square decorative cap. The cap has the date on one face and relief flower design on the other two. The top chord, of course, projects from the fourth face. This chord is also a hollow octagonal iron tube approximately eighty feet long. The intermediate posts which divide the truss up into eight panels are two flat iron bars connected at spaced intervals, tapering slightly with a box-like cap at the top which encases the diagonal chords. Sometime in the 20th century the intermediate posts were braced with additional welded steel supports which now partially obscure these box caps. Two steel guard rails on each side presently protect the structural supports from vehicular damage. The first rail is about 1 1/2 feet above the road surface and the second perhaps 2 feet above the first.

The diagonal bars project from the top of one vertical post to the bottom of that of the next panel.

The diagonals are all connected by pins at the base of the intermediate and end posts.

Beneath each pin connection the sub-structure supports are provided by steel I floor beams which cross the width of the bridge. Above these steel beams are additional I beams which span the length of the bridge. While these structural beams beneath the roadbed are possibly original or at least 19th century the bed itself is modern asphalt and a metal plank deck, added in 1966.

Description

The foundation on the banks is stone and built up slightly on the Warren County side to make a level roadway.

On the whole, the bridge has had very few alterations and considering its age is in excellent condition, capable carrying up to ten tons, according to engineering estimates.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
__PREHISTORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	__LANDSCAPE ARCHITECTURE	__RELIGION
__1400-1499	__ARCHEOLOGY-HISTORIC	__CONSERVATION	__LAW	__SCIENCE
__1500-1599	__AGRICULTURE	__ECONOMICS	__LITERATURE	__SCULPTURE
__1600-1699	__ARCHITECTURE	X EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN
__1700-1799	__ART	X ENGINEERING	__MUSIC	__THEATER
X 1800-1899	__COMMERCE	__EXPLORATION/SETTLEMENT	__PHILOSOPHY	X TRANSPORTATION
__1900-	__COMMUNICATIONS	X INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)
		__INVENTION		

SPECIFIC DATES 1868 BUILDER/ARCHITECT William Cowin

STATEMENT OF SIGNIFICANCE

The New Hampton pony Pratt truss is one of three Pratt bridges in New Jersey and one of America's few existing early iron Pratt trusses.

Transportation/Engineering

As the United States increased its industrial might in the 19th century transportation throughout the nation developed correspondingly and as the means and methods of travel became more and more sophisticated increased demands for improved highways encouraged engineers to develop improved roadbeds, canals, railways, and bridges.

Increasingly heavy modes of travel, especially in the railways, forced engineers to consider increased weight capacity of bridges.

At first the pragmatic American, often scornful of abstract theory, was reluctant to adopt technological innovations. Massive weight and resultant structural collapses, however, compelled Americans to master the scientific and mathematical tools necessary for safe bridge design. With engineering and metallurgy lagging behind construction requirements in the United States collapsing bridges prior to 1870 were not an uncommon phenomenom in the country.

The Pratt truss, originally introduced as a wooden bridge, later using combination wood and iron, and finally completely constructed of iron members, was America's first scientifically designed truss bridge.

(Iron had a number of advantages over wooden-being strong, durable, fire-resistant, and resiliant.)

9 MAJOR BIBLIOGRAPHICAL REFERENCES

See attached

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY ~~not applicable~~ less than 1

UTM REFERENCES

	ZONE	EASTING	NORTHING
A	18	503030	4507500
B			
C			
D			

VERBAL BOUNDARY DESCRIPTION

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

STATE	CODE	COUNTY	CODE
New Jersey	34	Warren	041
New Jersey	34	Hunterdon	019

11 FORM PREPARED BY

NAME / TITLE

Terry Karschner, Historian-Curator

ORGANIZATION — DATE

Historic Sites Section, Dept. of Environmental Protection — 12/16/75

STREET & NUMBER — TELEPHONE

P.O. Box 1420 — (609) 292-2023

CITY OR TOWN — STATE

Trenton — New Jersey

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL X 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 David J. Bardt

TITLE — DATE

Commissioner, Dept. of Environmental Protection — SEP 13 1976

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE 7/26/77

~~DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION~~

ATTEST: Charles A. Blanchard DATE 8.05.77

~~KEEPER OF THE NATIONAL REGISTER~~

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New Hampton Pny Pratt Truss Bridge
Lebanon and Washington Towsnhips
Hunterdon and Warren Counties New Jersey 034

Significance Cont' 1

Accepted reluctantly by Railroad engineers when first presented in the mid 19th century, the iron Pratt truss gradually gained national favor by 1870, becoming a common feature on the Pennsylvania Railroad and numbers of their affiliates.

Later, in modified and perfected forms the Pratt bridge became the standard all-steel truss bridge for American highways and railroads.

While the primary adoption of the iron truss was generated by the rapid development, of the railroads the enormous weights of the trains eventually led to their replacement. Vehicular truss bridges, however, were not subject to the enormous stresses which railroad bridges were exposed (particularly on secondary level) and consequently survived more frequently.

Still, for an early Pratt truss bridge to exist today is rare.

The wording on the New Hampton bridge is difficult to read because of wear and numerous paintings, but in part, it says:

"___D.N. _____, _____, _____
___Committee for Hunterdon County
___J.B. Bowers, _____, _____
___Committee for Warren County
___Built for Freeholders of Hunterdon and Warren
___Counties by Wm. Cowin, Lambertville, New Jersey
___1868 "

Industry

Little is known of William Cowin, builder of three extant Pratt-type iron truss bridges in Hunterdon County.

Born in England in 1825 to William and Sarah Cowen the family apparently came to the United States between 1830 and 1840, but did not settle in New Jersey until a few years later.

William Cowen, Sr. was a molder in a foundry in Lambertville in 1850 while William Jr. was listed as being a pattern maker.

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Significance Cont' 2

By 1860, however, William Cowin had changed his name slightly and became owner of a foundry and machine shop in Lambertville making primarily coal railroad car Cowin's business, which employed some forty men, also made and erected five iron bridges in 1860.

The 1870 Census also records William Cowin as being the owner of an Iron Foundry in Lambertville, now employing 80 men. Unfortunately, while the records note that the foundry made car wheels and other castings, no mention is made of his bridge building activities, although it is known that he enacted at erected least one iron bridge (Glen Gardner) in 1870.

Cowin became involved in at least two other industrial interprises, the Lambertville Paper Manufacturing Co. (est. 1870) and the Amwell Mills Co. (cotton-mill est. 1866), but by 1880 he disappeared from the Lambertville scene.

Today, only the bridges remain as an artifact providing a glimpse into Cowin's bridge erecting enterprises.

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Bibliography

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New York: 1974 (pp. 65,84,85)
Condit, Carl W., American Building Act: The 19th Century
New York: 1960 (chapter IV)
Snell, James P., History of Hunterdon and Somerset Counties
New York: 1881 (p. 283)
7th United States Census (1850) New Jersey, Hunterdon County
Schedule #1; Population
8th United States Census (1860) New Jersey, Hunterdon County.
Schedules #1 and 5 (Population and Products of Industry).
9th United States Census (1870). New Jersey, Hunterdon County.
Schedule #4; Products of Industry.

data also derived from inscriptions on bridge itself.