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

Theme: America at Work
Subtheme: Transportation and Communications

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

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

1 NAME

HISTORIC
Delaware Canal

AND/OR COMMON
Roosevelt State Park

2 LOCATION

STREET & NUMBER
Parallels west bank of Delaware River — __NOT FOR PUBLICATION

CITY, TOWN
from Easton to Bristol — __ VICINITY OF

CONGRESSIONAL DISTRICT
8th and 15th

STATE	CODE	COUNTY	CODE
Pennsylvania	42	Bucks-Northampton	017-095

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	__PUBLIC	XX OCCUPIED	__AGRICULTURE	XX MUSEUM
XX BUILDING(S)	__PRIVATE	XX UNOCCUPIED	__COMMERCIAL	XX PARK
XX STRUCTURE	X BOTH	__WORK IN PROGRESS	XX EDUCATIONAL	XX PRIVATE RESIDENCE
XX SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	XX YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	__YES: UNRESTRICTED	__INDUSTRIAL	__TRANSPORTATION
		__NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME
Commonwealth of Pennsylvania and others

STREET & NUMBER
Department of Environmental Resources

CITY, TOWN
Harrisburg — __ VICINITY OF

STATE
Pennsylvania

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Bucks County Courthouse — Northampton County Courthouse

STREET & NUMBER
Court Street

CITY, TOWN
Doylestown (Bucks Co.) — Easton (Northampton)

STATE
Pennsylvania

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
National Register of Historic Places

DATE
February 1974

XX FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS
NPS, OAHP, National Register

CITY, TOWN
Washington,

STATE
D. C.

(66)

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
XX EXCELLENT	__DETERIORATED	XX UNALTERED	XX ORIGINAL SITE
__GOOD	__RUINS	__ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

In 1830 an official associated with the construction of the Delaware Canal described the canal as it was originally built. In his 1830 report he wrote:

This description of the appearance of the Delaware Canal is taken from the 1974 National Register nomination form. The form was prepared by Mr. C. P. Yoder, the author of Delaware Canal Journal, A Definitive History of the Canal and the River Valley Through Which it Flows.

> On this Division (of the Pennsylvania Canal) the width of the canal at bottom is 25 feet, at top water line, 40 feet, and its depth of water is 5 feet. In its course there are 23 lift locks, ranging from 6 to 10 feet lift, also 2 outlet and 2 guard locks. The Canal and locks are arranged for boats of 67 tons burden. Eighteen lock keepers are necessary in this division.
>
> The lift locks are 11 feet wide and 95 feet long, clear in the chamber. They are constructed of rubble masonry layed in cement on timber bottoms with longitudinal sills and upright posts with planks spiked to the timbers. The tide lock at Bristol, guard lock at Easton, and the outlet lock into the Delaware River from the pool at Easton are 22 feet wide by 100 feet long, clear in the chamber. The guard lock at New Hope is 18 feet wide by 100 feet long and affords a communication with the Delaware River.
>
> Nine aqueducts, the shortest 25 feet, the longest 178 feet between abutments. The abutments and piers are of rubble masonry, the superstructure of wood trunks 20 feet wide, towpath bridge forming part of the superstructure. Twenty culverts, rubble masonry layed in cement. Nineteen waste weirs with slide gates, woodwork with protective masonry. Sixteen lock houses built. Tide basin of 5½ acres constructed in the Delaware and the pier at Bristol nearly finished. Forty-seven Roas bridges, stone abutements, superstructures of wood. Forty-nine bridges, three turnpike and three footbridges.

With a number of important exceptions the above report summarizes the status of the canal during the historic period. Various exceptions are:

> The narrow 11 foot locks of the Delaware Canal were a source of irritation to the operators of the Lehigh Canal where the locks were 22 feet wide. As various locks deteriorated, the legislature was persuaded to authorize improvements. In 1852, the two locks, numbers 22 and 23, at Ground Hog, were replaced by a single lock 22 feet wide with a lift of 17.3 feet, the highest of the canal. The same year the four locks at New Hope were rebuilt and enlarged to 22 feet.

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	__EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN
__1700-1799	__ART	X ENGINEERING	__MUSIC	__THEATER
X 1800-1899	__COMMERCE	__EXPLORATION/SETTLEMENT	__PHILOSOPHY	X TRANSPORTATION
X 1900-	X COMMUNICATIONS	__INDUSTRY	__POLITICS/GOVERNMENT	X OTHER (SPECIFY) Recreation
		__INVENTION		

SPECIFIC DATES 1831-1931 ~~XXXXXXXXXXXXXXXXXX~~ ENGINEER Unknown

STATEMENT OF SIGNIFICANCE

Prior to the first decades of the 19th century the major means of transportation in the United States were natural waterways, crude roads, and simple trails. Until the 1820's, the lack of economic transportation means in an east-west direction hindered the settlement of the western territories. In 1817, New York's DeWitt Clinton conceived the idea of building a canal from the Hudson River at Albany to Lake Erie at Buffalo. The purpose of the Erie Canal was to make New York City the commercial center for manufactured goods moving west and agricultural products coming east. Started in 1817, and completed to Buffalo in 1825, the canal was an immediate success. Other States noted New York's achievement and moved rapidly to copy its example. Among them was Pennsylvania. The State's fathers recognized the Erie Canal's potential and became anxious to preserve Philadelphia's position as a leading Atlantic seaport. In addition, they desired to build Pennsylvania's infrastructure which would promote the internal development of the State's industrial and agricultural potential. Between 1826 and 1834, Pennsylvania built a system of canals and portages from Philadelphia to Pittsburg. By 1842, the State had constructed approximately 1,200 miles of canals at a cost of some $53,000,000, a very large capital investment for the period. Among these canals was the Delaware Division of the Pennsylvania Canal, or, as it was simply called, the Delaware Canal. The significance of the Delaware Canal was that it opened up the coal riches of the Lehigh Valley to markets in Pennsylvania and New York.

The Delaware Canal

In 1791, anthracite coal was discovered in Pennsylvania's Lehigh Valley, but it was not until 1818 that a company was formed to exploit the new natural resource. In that year an entrepreneur named Josiah White formed the Lehigh Coal and Navigation Company. In 1822 the company received a State charter granting it coal mining rights and, in addition, sole control of the Lehigh River to transport coal. At first White employed arks to transport his coal from a point on the Lehigh called Mauch Chunk down the Lehigh to the Delaware and then down the Delaware to Philadelphia. However, the arks were unsatisfactory carriers. They could not carry coal in quantity and they were dependent on freshets in the rivers. As soon as the Erie Canal was built Pennsylvania officials and politicians recognized the potential of the new means of transportation. They immediately began promoting the construction of canals from the Lehigh Valley coal mines to the eastern urban centers.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

1. A.F. Harlow. Old Towpaths. (New York, 1926).
2. Robert J. McClellan, The Delaware Canal, (New Brunswick, 1967)
3. C.P. Yoder. Delaware Canal Journal, A Definitive History of the Canal and the River Valley through which it Flows. (Bethlehem, 1972).

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 400

UTM REFERENCES

A	ZONE	EASTING	NORTHING	B	ZONE	EASTING	NORTHING
C				D			

VERBAL BOUNDARY DESCRIPTION

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

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE
James Sheire, Historian — June 1976

ORGANIZATION — DATE
NPS, Historic Sites Survey

STREET & NUMBER — TELEPHONE
1100 L Street, NW.

CITY OR TOWN — STATE
Washington, D.C.

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL XX 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.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE — DATE

FOR NPS USE ONLY

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

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST: DATE

KEEPER OF THE NATIONAL REGISTER

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During the historic period, 1831-1931, normal deterioration and expecially floods damaged the original canal structures necessitating repairs and reconstruction. Nevertheless, none of the work performed during these years significantly changed or altered the original canal.

Since 1931, a number of changes have taken place. Among the more important are:

1. The elimination of the last 3/4 mile of the canal as well as the tide basin and docks at Bristol.

2. The construction of several new acqueducts.

3. The stabilization and reconstruction of several locks.

4. The construction of several culverts at various points on the canal, the most important being a culvert that carries the canal under a shopping center parking lot in the Bristol area.

With these major exceptions the canal remains today much as it was in the historic period. Although changes have taken place in the canal since 1931, when viewed in its entirety the Delaware Canal possesses integrity.

Throughout almost all its length the Delaware Canal runs alongside the Delaware River in what local literature designates "the scenic and historic Delaware Valley." From Easton to Bristol the Pennsylvania side of the Delaware Valley is predominately a rural environment. In addition to the Delaware Canal the area contains numerous historic properties, among them the site of Washington's famous crossing of the Delaware. Historic buildings range from inns and taverns to homes and grist mills. Many of these historic resources in turn are today located near the Delaware Canal within the boundaries of the proposed Delaware Canal national historic landmark. In addition to the canal itself with its attendant locks, aqueducts, camel back bridges, and the like, the following structures are part of the proposed landmark. All are closely associated with the history of the Delaware Canal.

1. Hydroelectric plant at Raubsville adjacent to locks no. 22-23.
2. Lock tender's house, Narrowsville lock no 20.
3. Narrows Hotel (today called Indian Rock Inn), about one mile below Narrowsville lock no. 20.
4. General store, Upper Black Eddy, on tow path just south of camel back bridge.
5. Uhlertown. All the buildings in this small village are associated with the canal. The major structures are: 1832 covered bridge, the school and Redmen's lodge (today a residence), the general store (today a residence), the Uhlertown Inn (today a residence), the Uhlertown hall (today a residence), the lock keeper's house, the home of Michael Uhler built in 1854 and still a private residence.

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6. Lock keeper's house at Smithtown adjacent to lock no. 15-16.
7. Mountainside Restaurant, Point Pleasant, locks no. 13 and 14.
8. Lock keeper's house, New Hope, lock no. 11.
9. Lock keeper's house, New Hope, lock no. 10.
10. Chez Odette, New Hope, at lock no. 8.
11. Yardley Mill, Yardley and Buck Creek aqueduct.
12. Lock houses located at: Ground Hog lock, no. 22-23; Lodi lock, no. 19; Smithtown lock, no. 15-16; and Yardley lock, no. 15.

All other structures included within the boundary of the proposed Delaware Canal national historic landmark do not contribute to the national significance of the landmark.

The Commonwealth of Pennsylvania constructed and operated the Delaware Canal from 1827 to 1858. In 1858, the Sunbury and Erie Railroad purchased the canal from the State. In the same year the railroad sold the canal to the Delaware Canal Division Canal Company, a subsidiary of the Lehigh Coal and Navigation Company. The Lehigh Coal and Navigation Company owned and operated the canal throughout the remaining years of its existence as a commercial canal. On October 9, 1931, the Delaware Canal was returned to the Commonwealth of Pennsylvania. The canal and adjacent property were designated Roosevelt State Park in remembrance of Theodore Roosevelt's contributions to conservation. Today the Delaware Canal is an historic and recreational area of the Pennsylvania State Park System. Thanks to heavy visitation (2.35 million visitors in 1975) the canal is very well maintained and is an important Delaware Valley historic resource.

On April 9, 1827, the Pennsylvania legislature passed a bill authorizing the construction of the Delaware Division of the Pennsylvania Canal. The canal would run from Easton to Bristol, a distance of approximately 60 miles. At Bristol the canal boats would either continue on down the Delaware to Philadelphia or transfer to the Delaware and Raritan Canal for the trip to New York City.

Construction of the Delaware Canal began in October 1827. However, it was not until 1832 that the first boats passed through the entire canal from Easton to Bristol and it was not until the 1834 season that fully loaded boats were able to use the canal. The major reason for the long construction period was that in the beginning much of the work was performed by local farmers and craftsmen who were not experienced canal builders. Their mistakes were numerous and much of the work, such as rebuilding the acqueducts, had to be repeated.

For 100 years, from 1831 to 1931, boats plied the Delaware Canal. Ninety percent of the cargo during this century of commercial operation consisted of coal, while the other 10 percent was made up of grain, lumber, limestone, iron and iron ore, and general merchandise for the small communities along the canal. The canal's most active period was from the 1830's to the 1860's, when the railroads became the dominent means of transportation in the United States (e.g., in 1890, approximately 356,000 tons of coal was shipped down the Delaware Canal from Mauch Chunk whereas the railroad carried 4,973,000 tons from the same source; in 1911 the tonnage was 321,000 by canal and 8,884,000 by rail).[1]

The canal's single most active year was 1866 when 792,000 tons of coal passed the guard lock at Easton on the way south. During its commercial existance, the Delaware Canal transported 33,000,000 tons of coal and some 6,000,000 tons of miscellaneous cargo.

Economically the major importance of the Delaware Canal was that it provided a means for cheaply transporting anthracite coal. The uses of anthracite, or stone coal as it was commonly called, began in the 1820's with the development of heating stoves in which the coal could be burned. The use of anthracite coal for heating grew rapidly and provided a demand for all the coal the Lehigh Valley mines could produce. Another important use for the anthracite came from the iron and steel industry. In 1838, an English smelter expert named David Thomas built an experimental furnace at Mauch Chunk for smelting iron with anthracite coal. The experiment was a success. Anthracite quickly replaced wood as the primary fuel for iron

1. C. P. Yoder, Delaware Canal Journal, (Bethlehem, 1972), p. 241.

furnaces and provided another source of demand for the coal transported down the Delaware Canal. At a canal community called Durham Furnace, which was a location for iron furnaces, a new plant was constructed in 1848 using anthracite. It continued in operation until 1908. The Delaware Canal as well as other canals in the area provided an economic means for transporting anthracite coal and thus played a significant role in the development and exploitation of this important natural resource.

The Delaware Canal also stimulated the local economies located along its route. Easton, which was located at the junction of three canals, the Lehigh, Morris, and Delaware Canals, became a transportation center. Along the canal all the communities between Easton and Bristol enjoyed prosperity. Durham Furnace, Uhlerville, and New Hope were among the more important. Bristol at the end of the canal also shared in the general economic stimulus the canal provided. A significant segment of the local population found employment as canal boatmen, as workers in the various boatyards, and as suppliers of goods and services to the people associated with the canal. The Delaware Canal thus had a multiplier effect on the economy of the area and with agriculture and industry it became an important factor in the regional economy.

From the standpoint of a civil engineering achievement the Delaware Canal did not represent an innovation or technological breakthrough in canal building. The canal itself and its attendant structures and mechanisms utilized standard canal technology of the period. When originally constructed, the prisim of the Delaware Canal measured 40 feet across at the top, 20 feet at the bottom, with a 5 foot depth of water. There were 24 locks of the lift, guard, outlet, and tide variety and one weigh lock. The typical lock was 95 feet long and 11 feet wide with a lift of from 6 feet to 10 feet. In the mid-1850's a number of locks were rebuilt to a width of 22 feet. These were double locks which allowed two boats to lock through simultaneously. At the ends of each lock two conventional miter gates were built. When the double locks were constructed, drop or fall gates were installed in these locks. Originally nine aqueducts were built on the canal. They were all for the purpose of crossing streams and they ranged in length from 25 feet to 178 feet. In addition, 20 culverts, 19 waste weirs, and numerous overflows were constructed. When completed in 1832, the Delaware Canal represented an engineering accomplishment which technologically corresponded to other canals of the canal building era.

The economic and engineering significance of the Delaware Canal is secondary to its significance as an illustration of the canal era in the history of transportation in the United States. Whereas over the course of time, most of the 19th century

canals have disappeared, the Delaware Canal remains intact for all but two to three miles of its original sixty mile length. Between 1817 and the Civil War approximately 18 major canals were constructed in the United States. Sections of many of these canals are still extant, but all of them except the Delaware Canal have long ago disappeared. The Delaware Canal retains most of its integrity. It contains water from Easton to Bristol; i.e., throughout most of its original length. Almost all of the locks, aqueducts, overflows, and the like are still extant as well as numerous historic properties associated with the canal such as gatekeeper houses and camel back bridges. Perhaps above all, the general historic rural environment of the canal era retains integrity save for a ten mile industrial-suburban section in the Bristol area. The primary significance of the Delaware Canal as an illustration of the canal era in the history of transportation in the United States is the integrity of the canal itself and the ambience of its environment. On no other canal in the United States can one walk its towpath through a setting that is as little changed from the historic period as is the Delaware Canal.