THE GREAT FALLS RACEWAY AND POWER SYSTEM Paterson, N. J.

National Historic Mechanical and Civil Engineering Landmark





DEDICATION PROGRAM MAY 20, 1977



NATIONAL HISTORIC MECHANICAL AND CIVIL ENGINEERING LANDMARK

ALEXANDER HAMILTON. WITH GREAT VISION. PROMPTED THE INCORPOR-ATION OF THE "SOCIETY FOR ESTABLISHING USEFULL MANUFACTURES" IN 1791 TO START AMERICA'S ECONOMIC AND INDUSTRIAL INDEPENDENCE. PIERRE CHARLES L'ENFANT. ENGINEER AND PLANNER OF THE NATION'S CAPITOL. AND PETER COLT DESIGNED A RACEWAY AND POWER SYSTEM TO HARNESS THE PASSAIC RIVER AT GREAT FALLS AND CREATE AMERICA'S FIRST PLANNED INDUSTRIAL CITY. THAT DEVELOPMENT SPARKED COUNTLESS ENGINEERING AND INDUSTRIAL INNOVATIONS AND PROGRESS INCLUDING THE COLT REVOLVER, THE ROGERS AND OTHER STEAM LOCOMOTIVES, THE HOLLAND SUBMARINE, THE CURTISS-WRIGHT AIRCRAFT ENGINE, ALONG WITH TEXTILE AND SILK MANUFACTURING WHICH MADE PATERSON FAMOUS AS THE "SILK CITY" OF THE WORLD.

THE GREAT FALLS RACEWAY AND POWER SYSTEM AT PATERSON IS THE BASIS OF THE OLDEST AMERICAN COMMUNITY INTEGRATING WATER POWER. INDUSTRIAL DEVELOPMENT AND URBAN PLANNING. IT IS A LANDMARK OF AMERICAN MECHANICAL AND CIVIL ENGINEERING HERITAGE.

DEDICATED 1977 BY:

THE AMERICAN SOCIETY OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS

MECHANICAL ENGINEERS

DEDICATION CEREMONY

THE GREAT FALLS RACEWAY AND POWER SYSTEM, PATERSON, NEW JERSEY

A NATIONAL HISTORIC MECHANICAL AND CIVIL ENGINEERING LANDMARK

Friday, May 20, 1977

Αt	Haines	(Overlook)	Park	by	the	Great	Falls
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At hathes (Overlook) fack by	the diede rails
8:00 - 10:30 A.M.	ASME Board of Directors meeting at former S.U.M. Administration Building. (72 McBride Avenue, Ext.)
10:45 - 11:00 A.M.	Band Music-Kennedy High School Band
11:00 - 11:05 A.M.	Dedication Ceremony starts with Flying salute over the Great Falls by the U.S. Air Force.
11:05 - 11:15 A.M.	Welcome and introduction of Paterson honored guests by Mayor Lawrence F. Kramer, Master of Ceremonies.
	Introduction of ASME honored guests by Robert A. Baker, Vice President, ASME Region II.
	Introduction of ASCE honored guests by William LaLonde, III, ASCE New Jersey Section Past President.
11:15 - 11:20 A.M.	Solo of "God Bless America" by Pat Falano; piano accompaniment by Councilwoman Marian Rauschenbach.
11:20 - 11:30 A.M.	History and National Engineering Significance of the Great Falls Raceway and Power System by Francis J. Blesso, Vice Chairman, History and Heritage Committee, ASCE New Jersey Section.
11:30 - 11:45 A.M.	Presentation of Plaque by Earle C. Miller, President ASME Joseph S. Ward, Vice President, Zone I, ASCE.
	Acceptance of Plaque by Mayor Lawrence F. Kramer.

11:45 A.M.

Dedication Ceremony Concludes.

SPECIAL EVENTS PROGRAM

In Great Falls/S.U.M. Historic District

11:45 A.M. - 4:00 P.M.

- 1- Walking tours of the Great Falls/ S.U.M. National Historic District.
- 2- Tour of S.U.M. Hydroelectric Power Generating Station.
- 3- Tour of Rogers Locomotive Erecting Shop Restoration.
- 4- Tour and exhibit at Ivanhoe Paper-mill Water Wheelhouse Restoration.
- 5- Exhibit at Great Falls Archaeology Lab., 154½ Van Houten Street.
- 6- Tour of Green Acres Upper Raceway
 Park under development.
 (Entrance to park to be site for
 permanently attaching the National
 Mechanical and Civil Engineering
 Landmark Plaque.

At Great Falls Park

11:45 A.M. - 1:00 P.M.

Picnic lunch provided by Curtiss-Wright and City of Paterson for guests of ASME, ASCE and City of Paterson.

At Rogers Locomotive Erecting Shop (Spruce and Market Streets)

1:00 - 1:30 P.M.

Theatre event preview of "On The Line" by The Learning Theatre.

MAY 20, 1977, MARKING THE 50TH ANNIVERSARY OF LINDBERGH'S FAMOUS "SPIRIT OF ST. LOUIS" NONSTOP TRANS-ATLANTIC FLIGHT WHICH WAS POWERED BY A PATERSON-MANUFACTURED WRIGHT "WHIRLWIND" J5 ENGINE, WAS CHOSEN BECAUSE IT TYPIFIED THE ENGINEERING GENIUS AND ACHIEVEMENTS WHICH TRACE THEIR DEVELOPMENT BACK TO THE GREAT FALLS RACEWAY AND POWER SYSTEM AND MADE PATERSON FAMOUS AS "THE CRADLE OF AMERICAN INDUSTRY".

ACKNOWLEDGEMENTS

The North Jersey Section of The American Society of Mechanical Engineers and the New Jersey Section of the American Society of Civil Engineers gratefully acknowledge the efforts of all the people who cooperated to make the dedication of the Great Falls Raceway and Power System a success.

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

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Robert G. Lommel Chairman, History & Heritage Committee,

North Jersey Section

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Business Administrator
Director of Economic Development
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Director, Department of Public Works David Stadtmauer John N. O'Malley William Pascrell, Jr.

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Robert Angelica Parks Foreman

Joe L. Ward

Stephen G. Warfel

Deputy Director, Div. of Economic Development Great Falls Archaeologist Director, Office of Special Events Ruth Hirshberg Grace George Director, Great Falls Tour Office

Joan Colella Secretary Henrietta Lieberman Secretary George Messier Draftsman Gordon Ash and the Rogers Construction Crew

Victor Luise and the Title X Great Falls Public Works Crew

GREAT FALLS DEVELOPMENT CORPORATION

Joseph Bograd President

Dorothy Jurewicz Corresponding Secretary

Entire Board of Directors

THE LEARNING THEATRE

Irene and Howard Sterling and entire theatre production crew

SPECIAL RECOGNITION

Dr. Russell I. Fries Former Director, Great Falls Historic District

Bruce Cavin Former Great Falls Architect

John Young Visionaries and organizers of Public

Mary Ellen Kramer movement to preserve and restore the Great

Falls/S.U.M. Historic District.

SPECIAL THANKS

The Record For cover photograph

The Historic American Engineering For inside photographs-Figs. 1,2,3,5

Record (HAER)

Passaic County Historical Society For inside photographs-Figs. 4,8,9 G.K. Livitsanos For inside photographs-Figs. 6,7,10 Congressman Robert A. Roe For arranging U. S. Air Force "Fly Over"

Pat Falano For solo Victor Palmieri and Kennedy For Band Music

High School Band

Rodney Roth & Musician's For music at picnic luncheon

Local 248

Curtiss-Wright Corporation For providing picnic lunch

Francis J. Blesso and Jack R. Stokvis Commemorative Brochure Authors and Dedication Ceremony Coordinators

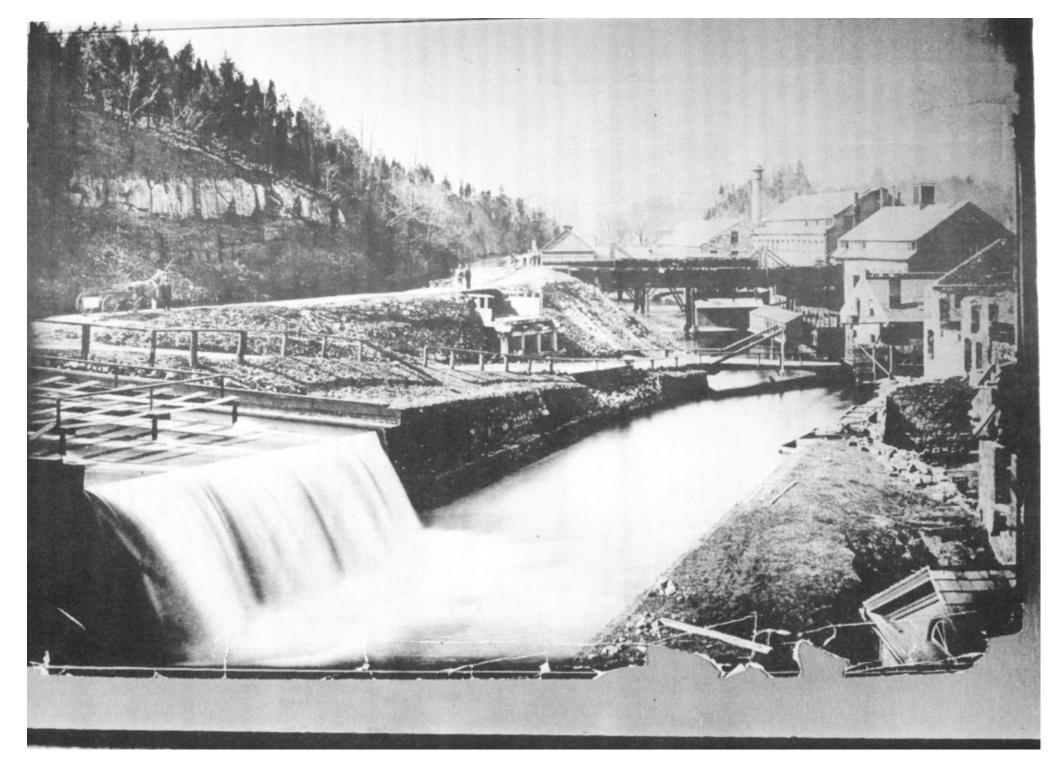


Fig. A - Upper Raceway Showing Flumes to Rogers Locomotive Buildings.

INTRODUCTION

"In Paterson people did not just invent; they tried everything - a repeating revolver, a submarine, an airplane that could fly across the Atlantic. And Paterson did not just manufacture; it produced articles that redefined the limits of life. It is impossible to think of any other city whose products cut so deeply into the texture of the United States and not only transformed its national character, but revolutionized America's relations with the world."

-Christopher Norwood, <u>About Paterson</u> (New York; Saturday Review Press, 1974), p. 41.

Although the Great Falls Raceway and Power System lies at the heart of Paterson's legacy as "The Cradle of American Industry", it was people who made the system work and grow. It was the people who sparked and stoked Paterson's daring industrial revolution which was then repeated in other American Cities and led to the industrial, social, cultural, economic, and political changes which developed America.

Early History

Alexander Hamilton visited the Great Falls of the Passaic River with George Washington long before the City of Paterson was there. The ceaseless flow and power of the 77 foot high, 280 foot wide waterfall inspired his dream of industrial strength and independence - a declaration of economic independence from foreign markets to assure the hard won gains of the Revolution.

In December, 1791 Hamilton and others founded the Society for Establishing Usefull (sic) Manufactures, commonly known as the S.U.M. and the Great Falls was selected as the choice location for the Great Falls Raceway and Power System.

The first raceway plan was designed by Pierre Charles

L'Enfant, architect and planner of Washington, D. C., and modified by

Peter Colt. They envisioned a multi-tiered raceway system that would

channel water for power to mills to be constructed and operated by the

S.U.M. along its path. The early raceway system operated from 1794 to

1799 and drew water from the Passaic through a wooden dam above the Falls

(see Fig. 1). The water than entered into a reservoir and passed through

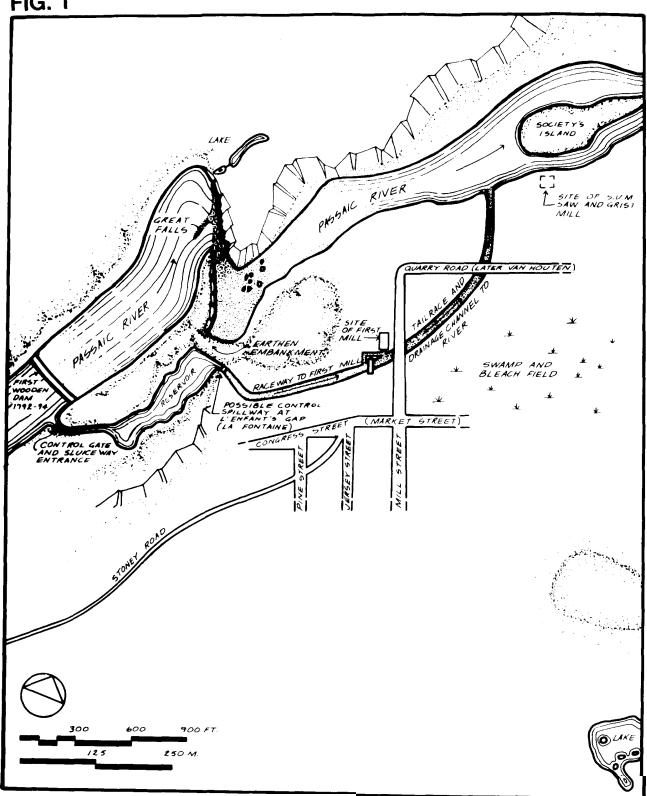
the raceway to a flume and waterwheel to provide power for operating a

mill. After leaving the mill, the water flowed back into the Passaic

River through a drainage channel.

However, by 1800 after financial and leadership difficulties operating as an active manufacturing corporation, the S.U.M. became a power developer and real estate firm. At that time, it also became evident that the raceway was too short and would have to be extended to provide water power for more mills. The S.U.M. then sold new lots and

FIG. 1



PATERSON RACEWAYS, [1792 - 99]

THIS SHEET DEPICTS THE FIRST RACEWAY PLAN ORIGINALLY DESIGNED BY PIERRE CHARLES L'ENFANT AND MODIFIED BY PETER COLT. WATER FROM THE PASSAIC WAS DIVERTED INTO THE RACEWAY SYSTEM BY A WOODEN DAM. WATER FELL INTO A RESERVOIR AND THEN PASSED THROUGH THE RACEWAY TO THE FIRST SUM MILL. AFTER LEAVING THE MILL, WATER FLOWED BACK SOURCE: CONCEPTUAL MAP BASED ON HISTORICAL DOCUMENTATION AND I'' = 100' MAP. MAP PREPARED BY THE HISTORIC AMERICAN ENGINEERING RECORD, HAER.

water rights to interested manufacturers and from 1800-1827 built a middle raceway beyond the first mill site to supply the Essex Mill located along the northwestern side of Mill Street (see Fig. 2) and built a lower raceway along Boudinot (now Van Houten) Street.

The mill activity grew rapidly and in the late 1820's the S.U.M. undertook its first major realignment of the raceway and power system in order to provide water for a new upper tier of mill sites (see Fig. 3). The S.U.M. raised the earthen embankment separating the reservoir from the Passaic River and then routed a new upper raceway around the tip of the rocks so that water could drop into a parallel tailrace below which connected to the new middle raceway (see Fig. 4).

Finally in 1838, the last modification to the Great Falls and Power Raceway System was made (see Fig. 5). Leakage through the earthen dam around the reservoir forced the S.U.M. engineer to abandon and then fill in and sell the reservoir and channels from the river.

A new channel was cut into the rocky river edge, a masonry dam was built downstream to divert the river into the new raceway, and water then flowed through a gulley on top of the earthen embankment which had earlier been a dam for the reservoir.

Throughout the 19th century the Great Falls Raceway and Power System was the primary power source for the manufacturing as historian Levi Trumbull has written:

In 1876 there was in use on the upper raceway 34 square feet of water, and on the middle and lower raceways 33 square feet each, making 100 square feet in all...In 1878 four square feet additional on the middle and four on the lower raceways

FIG. 2 SOCIET LOWER RACE ADDED 1807 COUDINGT STREET (VAN HOUTEN ESTENDED 1800-01 PASSAIC STREET TAILRACE (MARKET STREET) CONGRESS STREET ELM STREET WARD STREET 77/W OLIVER STREET

PATERSON RACEWAYS, [1800 - 27]

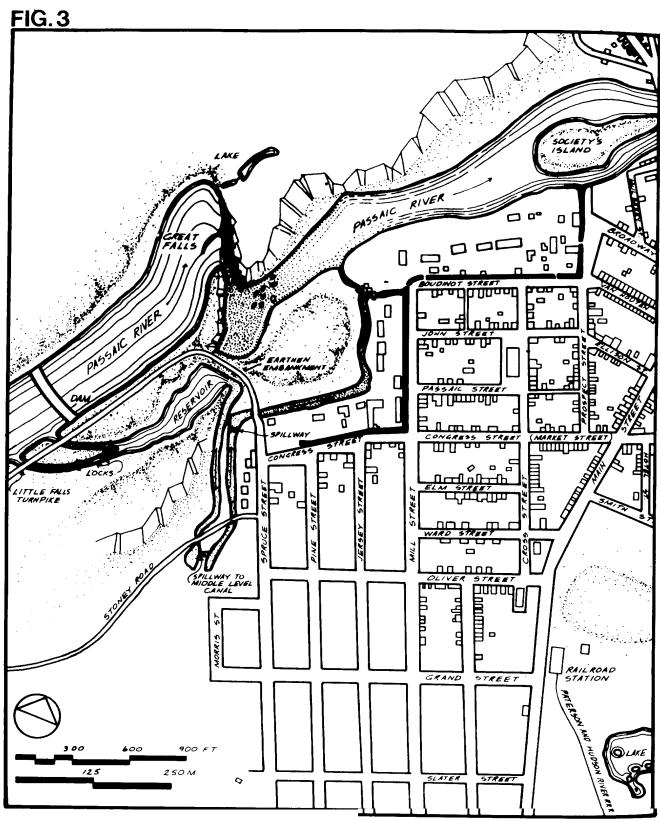
250 M.

900 FT.

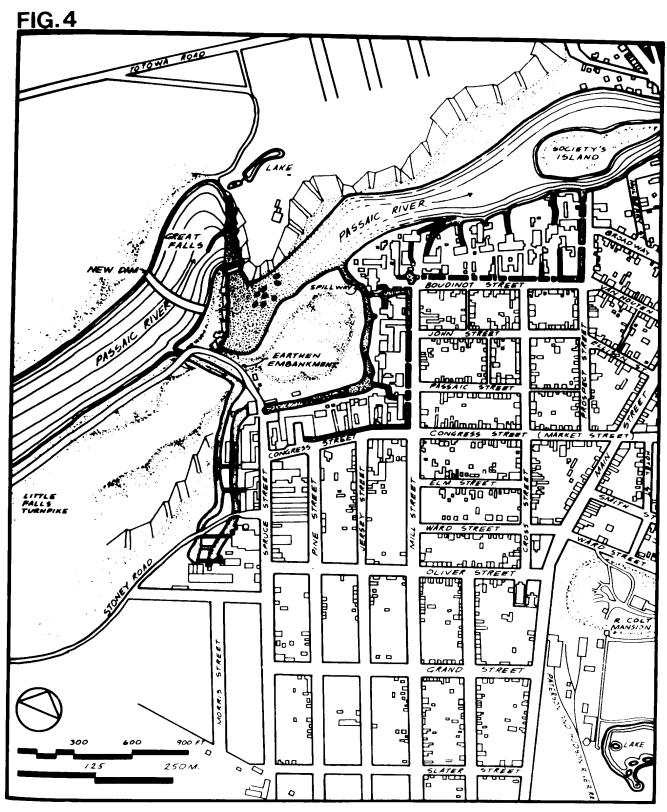
300

125

THIS SHEET SHOWS THE EXPANSION OF THE RACEWAY SYSTEM, WHICH BEGAN IN 1800, WITH THE EXTENSION OF THE RACEWAY ALONG THE SIDE OF THE HILL BEYOND THE SITE OF THE FIRST MILL TO SUPPLY THE ESSEX MILL WITH WATER. IN 1807 SUM ADDED A RACEWAY ALONG BOUDINOT (NOW VAN HOUTEN) STREET AND THE TAILRACE ALONG MILL STREET, ELIMINATING THE OLD DRAINAGE DITCH.
SOURCE: CONCEPTUAL MAP BASED ON HISTORICAL DOCUMENTATION AND I" = 100' MAP. MAP PREPARED BY THE HISTORIC AMERICAN ENGINEERING RECORD, HAER.



PATERSON RACEWAYS, [1828 - 37]



PATERSON RACEWAYS, [1838 - PRESENT]

THIS SHEET DEPICTS FINAL ALIGNMENT OF THE S.U.M. RACEWAY SYSTEM LEAKAGE THROUGH THE EARTHEN EMBANKMENT FORCED THE S.U.M. ENGINEER TO ABANDON THE RESERVOIR AND CHANNELS FROM THE RIVER. INSTEAD HE BUILT A MASONRY DAM DOWNSTREAM AND TURNED THE RIVER INTO THE RACEWAY THROUGH A NEW CHANNEL CUT INTO THE ROCKY RIVER EDGE. THE WATER WAS THEN CARRIED ACROSS THE GULLEY ON TOP OF THE EARTHEN ENBANKMENT WHICH HAD SERVED AS A DAM FOR THE RESERVOIR. IN THE LATE 1800'S SUM FILLED THE RESERVOIR AND SOLD THE LAND. SOURCE: CONCEPTUAL MAP BASED ON HISTORICAL DOCUMENTATION AND I"= 100 MAP CULTURE FROM PATERSON, N.J. MAP, 1850, BY J.C. SIDNEY, PUB. BY M. DRIPPS

were leased, to Hamil & Booth and others, making 37 square feet in use on each of these, on 108 square feet in all.

In its leases a square foot of water is estimated by the Society to equal 17 horse-power. The Society estimates its total water supply to equal 2,108 horse-power, 1,836 horse-power being now in use; not used at present, seven square feet, or 119 horse-power, and nine square feet or 153 horse-power never rented or in use. The estimate of manufacturers are that a square foot of water is equal to 21 horse-power gross, and 16 horse-power net...It is estimated that the average square foot is \$750. The estimate of manufacturers of the average cost of water is \$37.50 per horse-power per annum.

L. R. Trumbull, <u>A History of Industrial</u>
<u>Paterson</u> (Paterson, N. J.: Carleton M. Herrick,
1882), P.35.

Recent History

The abundance of inexpensive energy provided by the Great Falls Raceway and Power System attracted countless creative and innovative men and women to Paterson who built and continually improved such industries as textiles and textile machinery, the Colt revolver, Rogers and other steam locomotives, silk manufacturing, flax and jute production, early Wright aircraft engines, apparel manufacturing, and many more. In its peak more than 40,000 workers were employed in the silk manufacturing and other industries centered in Paterson.

The Great Falls Raceway and Power System has been continuously used since the 1790's. As newer types of power sources, such as steam and hydroelectric, became popular, the S.U.M. adapted and supplied these services to its customers. In 1912-14, a hydroelectric power generating station was built at the Great Falls (see Fig. 6) and was used until



FIG. 6 S.U.M. Hydroelectric Plant Under Construction - 1913

1969. In addition, a steam generating plant (the foundation of which supports the parking lot at Haines (Overlook) Park) was built to generate steam when the river was too low to run the hydro-plant at the necessary pressure (see Fig. 7).

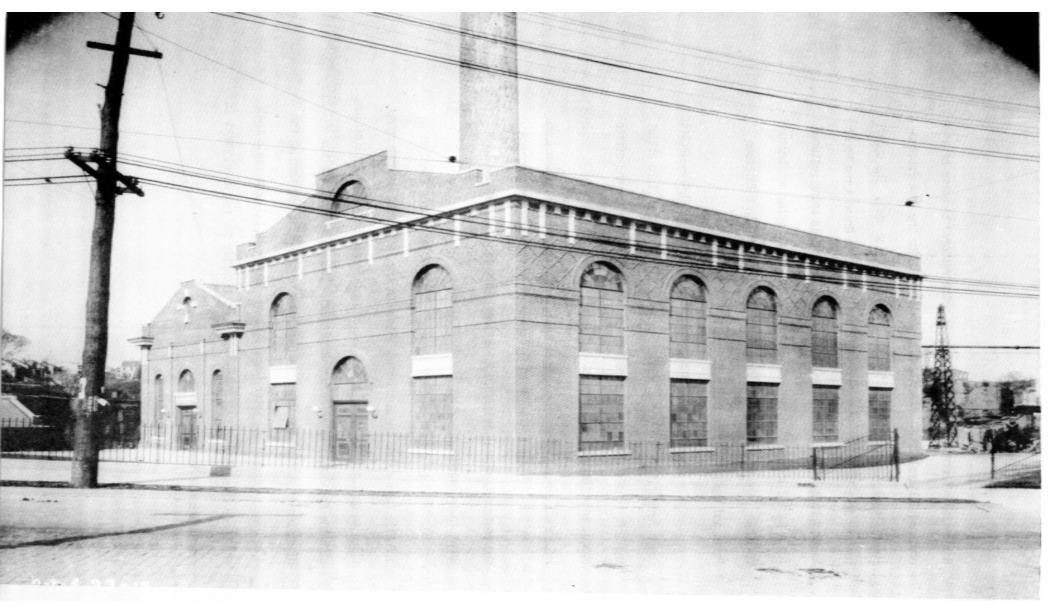
The S.U.M. continued in operation until 1945 when its property, assets, charter rights, hydroelectric power plant and raceway system were sold to the City of Paterson.

In the mid-1960's, most of the Great Falls Raceway and Power System, as well as many of the old mill buildings adjacent to it, were threatened with demolition by a planned 6 lane elevated Route 20 highway. However, an active citizen's group formed to preserve the entire area now known as the Great Falls/S.U.M. Historic District and serve as a reaffirmation of Paterson's national significance and as a catalyst for the rebirth of the city.

In 1971, the Great Falls Development Corporation was formed to guide this preservation effort and subsequently the 119 acre historic district was listed on both the New Jersey and National Registers of Historic Places. Then, on June 6, 1976, President Gerald R. Ford came to Paterson to officially designate the entire Great Falls/S.U.M. Historic District as the nation's first National Historic District.

Restoration and Redevelopment Activities Today

Today, the City of Paterson is actively restoring and redeveloping the Historic District, its old mill buildings and the Great Falls Raceway and Power System into an exciting mixed use district. The



Fig,7 S.O.M. Steam Generating Plant-1915 (now the foundation for the Haines (Overlook) Park

Rogers Steam Locomotive Erecting Shop is being restored to serve as a combined Cultural Arts Center/Museum, new offices for the Book Processing Division of the Paterson Library, and other office uses; The upper raceway area is being redeveloped into a \$1.4 million Green Acres Upper Raceway Park; The Ivanhoe Papermill Water Wheelhouse is being restored for a public information center; An 8 mile Bikeway is being constructed to link the Great Falls National Historic District with 6 Paterson Parks and the Central Business District.

The City also plans to reactivate the S.U.M. Hydro-electric Power Generating Plant and to convert several mill buildings into artist and loft housing, craft workshops, artist studios, commercial and office space, and other adaptive reuses.

The Danger And Threat Of The "Two Bridges" - Ramapo Water Diversion Plan

Today a new danger threatens the City's efforts to preserve and restore the Great Falls/S.U.M. National Historic District and the Great Falls Raceway and Water Power System.

In 1975, the North Jersey District Water Supply Commission, a Public Agency, and the Hackensack Water Company, a private water company, filed an application, known as the Two Bridges-Ramapo Diversion Application, with the New Jersey Water Policy Commission. That plan calls for the diversion of much of the water now flowing over the Falls and through the Great Falls Raceway and Water Power System. The two applicants claim that the water is needed to meet future demands primarily for new development in the Hackensack Meadowlands.

Not only would this drastic action ruin the scenic beauty of the Great Falls, itself recognized as a Natural Historic Landmark, but, by siphoning off the much cleaner Ramapo River where it joins the Passaic River at Two-Bridges, it would make the Passaic River much dirtier, increase the level of pollution, significally reduce the quantity of water in the river and subsequently force more industries out of Paterson and other cities through which the river flows. This action would severely impair the beauty of the Great Falls, inject highly polluted water into the raceways which flow through the entire historic district, and in general will jeopardize efforts to preserve and restore the National Historic District and the Great Falls Raceway and Power System.

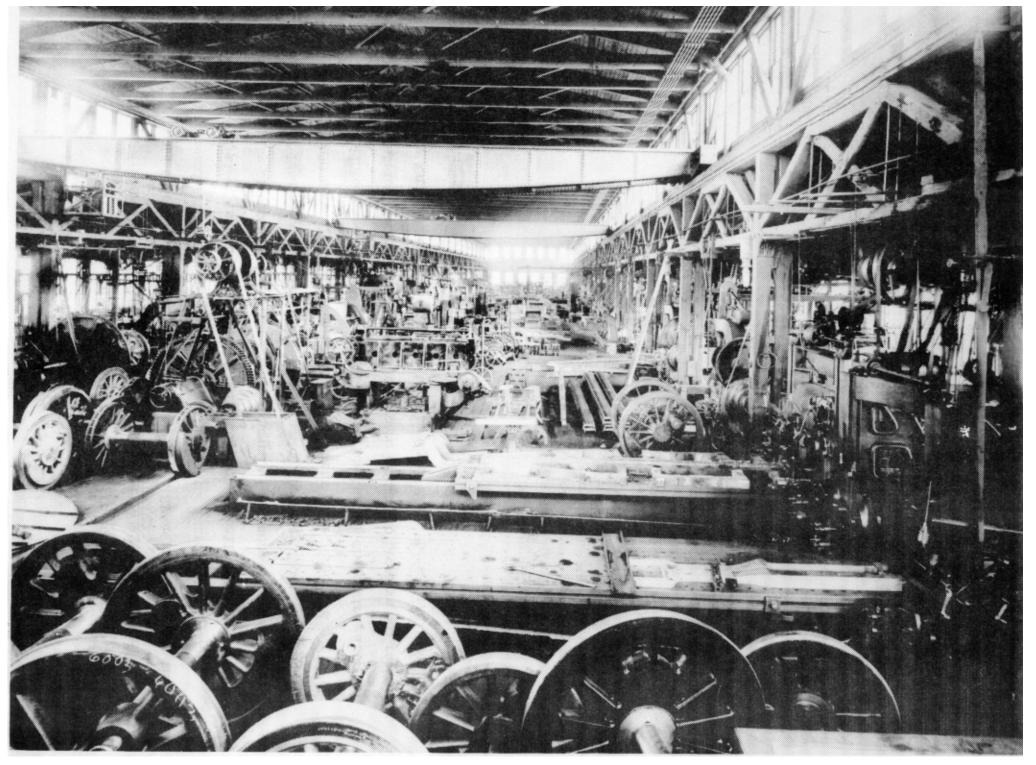


Fig. 8 - Interior Rogers Locomotive Erecting Shop No. 2 (1901-1915)

THE POWER SYSTEM'S CONTRIBUTIONS: PEOPLE AND PRODUCTS

The Great Falls Raceway and Power System was the source which provided abundant and inexpensive energy for a succession of different industries and it was the presence of these thriving industries which attracted more hard working laborers, daring entrepreneurs, and others who through diligent work, continual creative machinery tinkerings, and constant adaptive building reuses made Paterson "The Cradle of American Industry".

The following list highlights several of the many engineers, businessmen, and workers who produced better products in Paterson, New Jersey.

Alexander Hamilton - Hamilton, first as an aide to George Washington and then as Secretary of the Treasury was deeply involved with the implementation and success of the S.U.M. plan in 1791. He played a crucial role in choosing the Great Falls site, brought Pierre Charles L'Enfant and many of the principal workmen into contact with the S.U.M. and helped in the preliminary design work for the raceway system.

<u>Philip Schuyler</u> - Schuyler, Alexander Hamilton's father-in-law, was a technically knowledgeable individual, who participated in the initial engineering surveys around the Great Falls. He later promoted the Erie Canal route before his death in 1807.

<u>Pierre Charles L'Enfant</u> - L'Enfant, planner of Washington, D. C., and an engineer/architect, was suggested by Hamilton to the S.U.M. His plans were judged too elaborate and expensive and he was released by the S.U.M. in 1793, but many of his ideas and plans were used by his successor, Peter Colt.

 $\frac{\text{Peter Colt}}{\text{Peter Colt}} - \text{Colt, earlier Treasurer of the State of Connecticut,} \\ \text{was made Superintendent of all of the Society's operations in 1793. He} \\ \text{adopted L'Enfant's somewhat grandiose European-style plans to the American} \\ \text{engineering conditions and standards of that time and completed the first} \\ \text{raceway.} \\$

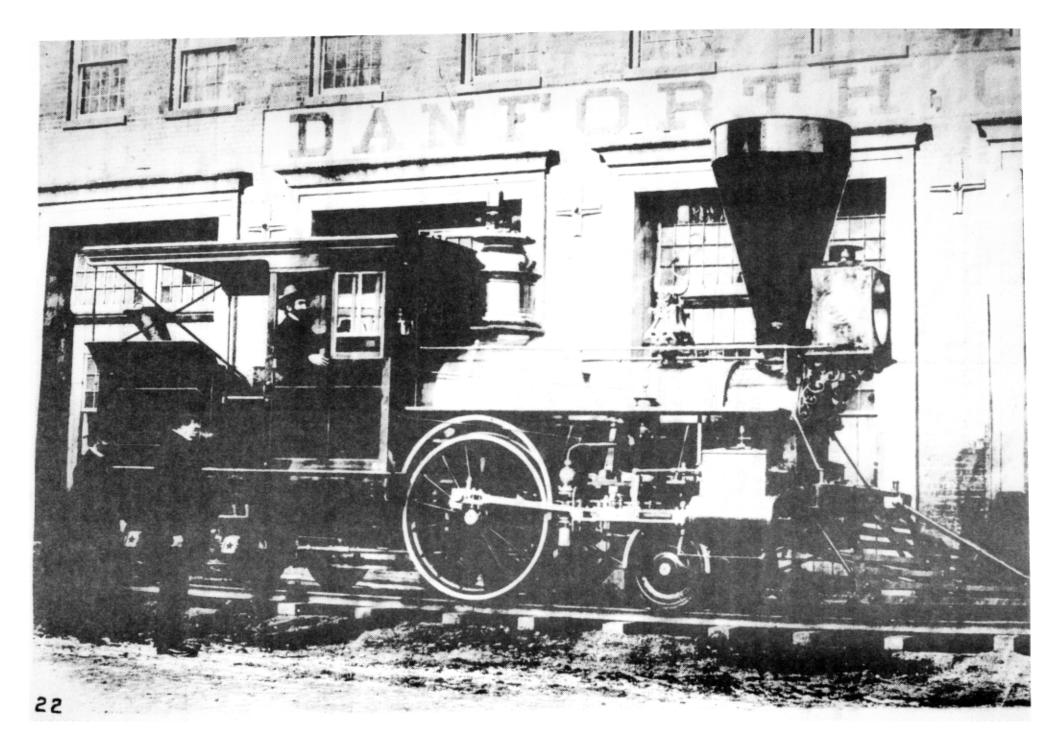


Fig. 9- Danforth-Cooke Locomotive in front of Danforth-Cooke Erecting Shop. (Taken by Reid Studio)

 $\underline{\text{John Colt}}$ - Son of Peter Colt, he became the S.U.M. hydraulic engineer during the period of the Society's greatest growth in the mid-1800's and developed the raceway and power system we know today. In the late 1820's, John Colt became famous for making cotton duck from double and twisted cotton yarn.

Samuel Colt - A relative of Peter Colt, he manufactured America's first repeating revolver in the Paterson Gun Mill of his Patent Arms Company. However, due to the lack of experienced workers and financial problems, the Paterson Colt factory closed 1850. Only the first and second stories of the Colt Gun Mill remain today as part of the Allied Textile Printers complex located at the end of Van Houten Street.

Thomas Rogers - Rogers developed the first of five successful locomotive companies in Paterson. Although initially involved in the manufacture of textile machinery, he revolutionized the locomotive industry by developing counterbalanced wheels and hollow spoke rims. Following Rogers success, he was joined by Grant, Danforth, Cooke and Swinburne who developed steam locomotive companies bearing their names. By the third quarter of the 19th century nearly 80% of all American steam locomotives were made in Paterson. Several buildings of the huge Rogers Locomotive and Machine Works complex still stand on Spruce Street. The Rogers Locomotive Erecting Shop is being restored for new adaptive uses including the book processing division of the Paterson Library and a consolidated museum/cultural arts center complex.

 $\label{eq:local_point} \underline{\text{John Ryle}} \text{ - Ryle's silk manufacturing career began at age 5} \\ \text{when he was employed as a bobbin boy in England. He then immigrated to} \\ \text{Paterson and was the first to spin silk on spools. His success as a silk merchant earned him the reputation as "the father of the Paterson silk industry". By the 1800's Paterson's silk mills employed nearly 15,000 people and became known as "the Silk City of the World".$

 $\frac{\text{Vernon Royle}}{\text{Noyle}} - \text{Royle, a native Paterson inventor, is credited} \\ \text{with nearly 200 United States and European patents. His four main interests} \\ \text{were photo-engraving, jacquard card cutting, rubber tubing, and electric} \\ \text{wire insulation. His descendants still conduct the John Royle and Sons} \\ \text{machinery business on Essex Street in Paterson.}$

John P. Holland - Holland, inventor, designer, and builder of the United States Navy's first practical submarine, immigrated to Paterson from Ireland in 1873. While teaching at St. John's Parochial School, he constructed his first submarine in a machine shop on Van Houten Street. In May, 1878 the first trial run was made in the Passaic River near the Spruce Street bridge. The submarine promptly sank but was raised 50 years later and is presently on display in the Paterson Museum. Today Holland is recognized as "the father of the modern submarine".

Catholina Lambert - Lambert, a poor English immigrant, became a very prominent Paterson silk merchant. During the peak decade of Paterson's Silk Manufacturing and Dyeing Industry up to 1913, Paterson had more than 300 silk factories employing more than 18,000 workers and producing \$30-40 million dollars of silk goods a year. Today his Belle Vista Mansion, known as Lambert's Castle on Garret Mountain, houses the Passaic County Historical Society and the Passaic County Park Police.

John H. Cook - Cook was the S.U.M. engineer during the early 20th century. A professional member of the ASCE, he supervised the design and construction of the S.U.M. hydroelectric power plant during 1912-1914. The plant operated until it was deactivated in 1969. The City of Paterson now hopes to reactivate the S.U.M. Hydroelectric Power Plant in the near future.

Wright Aeronautical Corporation - The Wright Aeronautical Corporation was established in Paterson in 1920. It manufactured the-single, air-cooled, Wright "Whirlwind" J-5C nine cylinder radial engine which powered Charles Lindbergh's famous "Spirit of St. Louis" solo nonstop trans-Atlantic flight from New York to Paris on May 20-21, 1927. In 1929 the Paterson plant produced more than 6,000 engines a year.

These are but a few of the thousands of engineers and entrepreneurs who were attracted to Paterson. In addition, there were hundreds of thousands of men, women, and children who labored long hours under the most severe conditions in Paterson mills. They, as much as any single individual, must be given credit for Paterson's success.



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ABOUT THE ASCE AND ASME HISTORY AND HERITAGE PROGRAMS

The American Society of Civil Engineers and The American Society of Mechanical Engineers conduct various programs to educate engineers and the general public about the technological heritage of the United States and the constant and important presence of engineers in the development of the nation. One way this goal is achieved is through the designation and dedication of such Civil and Mechanical Engineering "Landmarks" as machines, plants, bridges, viaducts, power systems, etc. which were engineering and technological "firsts".

The History and Heritage programs of both Societies are similar and include historical publications, cooperation with The Smithsonian Institution and the Historic American Engineering Record, and the National and Local Landmarks program.

The ASCE program was started in 1966 and is administered by the ASCE Committee on the History and Heritage of American Civil Engineering Landmarks. It has to date designated 62 National Civil Engineering Landmarks.

The ASME program was started in 1973 and is administered by the ASME National History and Heritage Committee. It has to date designated 25 National Mechanical Engineering Landmarks.

The dedication of the Great Falls Raceway and Power System is the first New Jersey Historic Engineering Landmark designation for either Society. It is also the second joint landmark dedication by the two Societies because the System meets the joint standards set for qualification as both a National Civil and Mechanical Engineering Landmark.

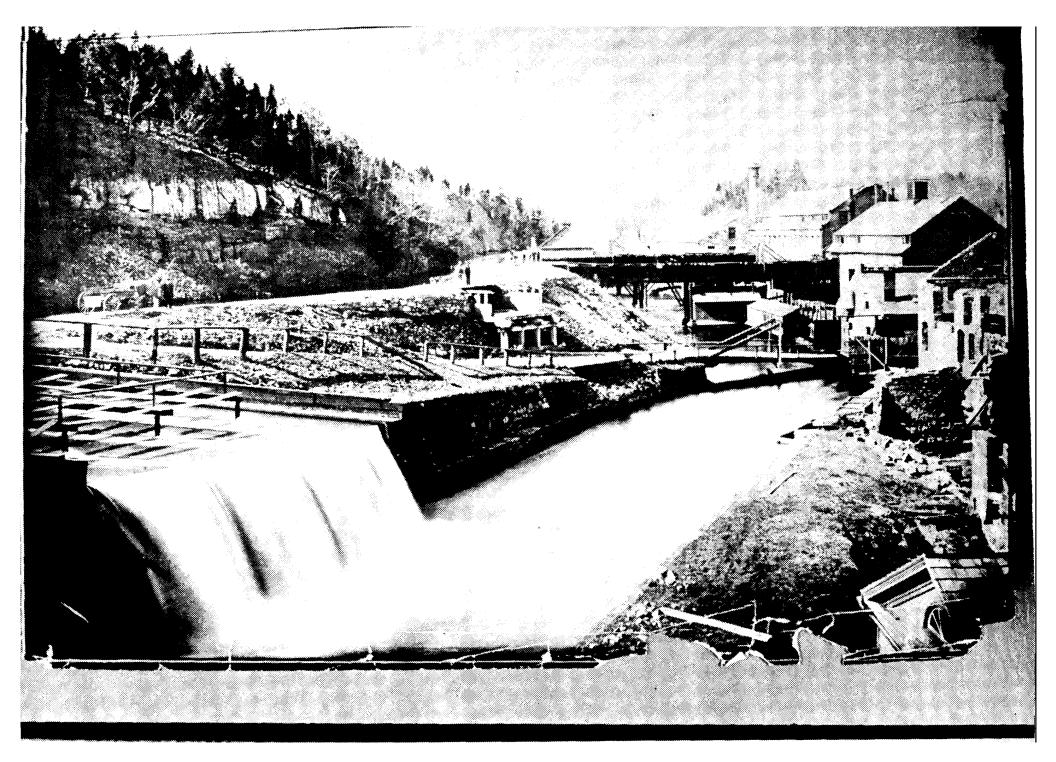


Fig. A - Upper Raceway Showing Flumes to Rogers Locomotive Buildings.