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

II A

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED APR 2 8 1987
DATE ENTERED JUN 12 1987

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

1 NAME

HISTORIC: NORWALK RIVER RAILROAD BRIDGE

AND/OR COMMON: Norwalk River Bridge

2 LOCATION

STREET & NUMBER: AMTRAK Right-of-way at Norwalk River — N/A NOT FOR PUBLICATION

CITY, TOWN: South Norwalk — X VICINITY OF South Norwalk — CONGRESSIONAL DISTRICT: 4

STATE	CODE	COUNTY	CODE
Connecticut	09	Fairfield	001

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	X OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	__UNOCCUPIED	__COMMERCIAL	__PARK
X STRUCTURE	__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
	N/A	__NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME: State of Connecticut
Department of Transportation, J. William Burns, Commissioner

STREET & NUMBER: 24 Wolcott Hill Road

CITY, TOWN: Wethersfield — N/A VICINITY OF — STATE: Connecticut

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.: Rail Operations
Connecticut Department of Transportation

STREET & NUMBER: 24 Wolcott Hill Road

CITY, TOWN: Wethersfield — STATE: Connecticut

6 REPRESENTATION IN EXISTING SURVEYS

TITLE: Northeast Corridor Aerial Reconnaissance of Historic Structures

DATE: 13-15 April, 1977 — X FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS: Federal Railroad Administration

CITY, TOWN: 2100 2nd St., S.W., Rm. 4613
Washington, D. C. 20590 — STATE

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
__EXCELLENT	X DETERIORATED	__UNALTERED	X ORIGINAL SITE
__GOOD	__RUINS	X ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Norwalk River Bridge is a rim bearing swing bridge. The superstructure is steel and the piers are stone masonry. The substructure's height above mean high water is 16 feet. Timber fenders extend about 15 feet to either side of the bridge.

From north to south the bridge consists of two deck truss spans, each 120 feet long; a rim bearing deck truss swing bridge 202 feet long; and another truss span 120 feet long. The total length is 562 feet. The swing span consists of three double intersection Warren deck trusses carrying the four tracks by means of stringers and floorbeams that frame into the top cord of the trusses. Loads from the deck trusses are transmitted to a network or cross girders at the center pier. The cross girders distribute the loads to the circular drum girder. The drum is supported on 96 rollers around its circumference. These rollers which ride on a steel track anchored to the circular center pier carry both the dead and live loads.

To open the bridge, the rail locks are disengaged, the end rails are lifted, the catenary is separated at the ends, the wedge locks are withdrawn, and the bridge locks at the ends are released. The drive pinion then swings the bridge to open position.

The turning machinery is located below track level over the center pier. The wedge lock, rail lift, and catenary separating mechanism motor drives and gear trains are at each end. The turning motors are 40-horsepower, 440-volt, 25-cycle AC and wedge lock motors are 15 horsepower. The power is supplied from the railroad generating plant at Cos Cob, Connecticut.

The bridge is presently in deteriorated condition. The lateral bracings and some of the diagonals of the outer trusses are in need of repair and the mechanical and electrical equipment is also deteriorated.

Current evaluation: The condition of the bridge appears to be at least fair.

- HRC, 5/86

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
__1900-	__COMMUNICATIONS	__INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)
		__INVENTION		

SPECIFIC DATES 1896 BUILDER/ARCHITECT Not known

STATEMENT OF SIGNIFICANCE

The Norwalk River Bridge is one of two rim bearing swing bridges on the Northeast Corridor rail line. It was constructed in 1896 for New York, New Haven and Hartford Railroad.

The movable bridge is an ancient type that can be changed in position so as to open a clear passage, or to afford an increased headway for ships and boats in navigable channels. Engineers choose this type of bridge when no other way of giving vertical clearance for the passage of vessels on a waterway exists. The introduction of railroads to the U.S. in the early 1800's greatly spurred the development and construction of this type of bridge. Along the eastern seaboard the large number of navigable rivers and inlets to be crossed resulted in the construction of fifteen movable bridges on what is today the Northeast Corridor rail line. There are three basic types of movable bridges--the bascule, the swing, and the vertical lift. On the Northeast Corridor there are nine bascule bridges, five swing bridges, and one vertical lift bridge. These bridges were prefabricated at the construction company's plant and then built by unskilled labor at the site. The machinery to operate the bridges was not standardized and each one has unique mechanical components.

Swing bridges were generally used in place of the bascule or vertical lift type when the waterway was wide enough to allow for side clearance in the channel. At the turn of the century swing bridges also allowed for economy in building and maintenance in many cases.

The two types of swing bridges are rim bearing and center bearing. In the U.S. the earliest records of iron bridges show them to be the rim bearing type. Later the use of the center bearing type increased until it became more popular than the rim bearing type.

In the rim bearing type of swing bridge such as the Norwalk River Bridge, the weight is carried by a cylindrical drum. The bridge load is transmitted from the deck trusses through cross girders at the center of the span to the circular girder which rotates with the span. The circular girder is supported by rollers around its entire circumference. When the bridge is closed, both dead and live loads are carried by the rollers.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Condit, Carl. American Building. Chicago: University of Chicago Press, 1968.

Hool, George, ed. Movable and Long-Span Bridges. New York: McGraw-Hill Book Co., Inc. 1923.

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 1

Norwalk South Quadrangle
1:24000

UTM REFERENCES

	ZONE	EASTING	NORTHING
A	18	633040	4550910
B			
C			
D			

VERBAL BOUNDARY DESCRIPTION

This bridge is on the Northeast Corridor railroad line, across the Norwalk River at South Norwalk, Connecticut.

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

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

Anne Baggerman, Cultural Resources Planner — August 10, 1977

ORGANIZATION — DATE

DeLeuw, Cather, Parsons & Associates, Northeast Corridor Project

STREET & NUMBER — TELEPHONE

1201 Connecticut Avenue — (202) 452-5242

CITY OR TOWN — STATE

Washington, D. C. 20036

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

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

GPO 892-453

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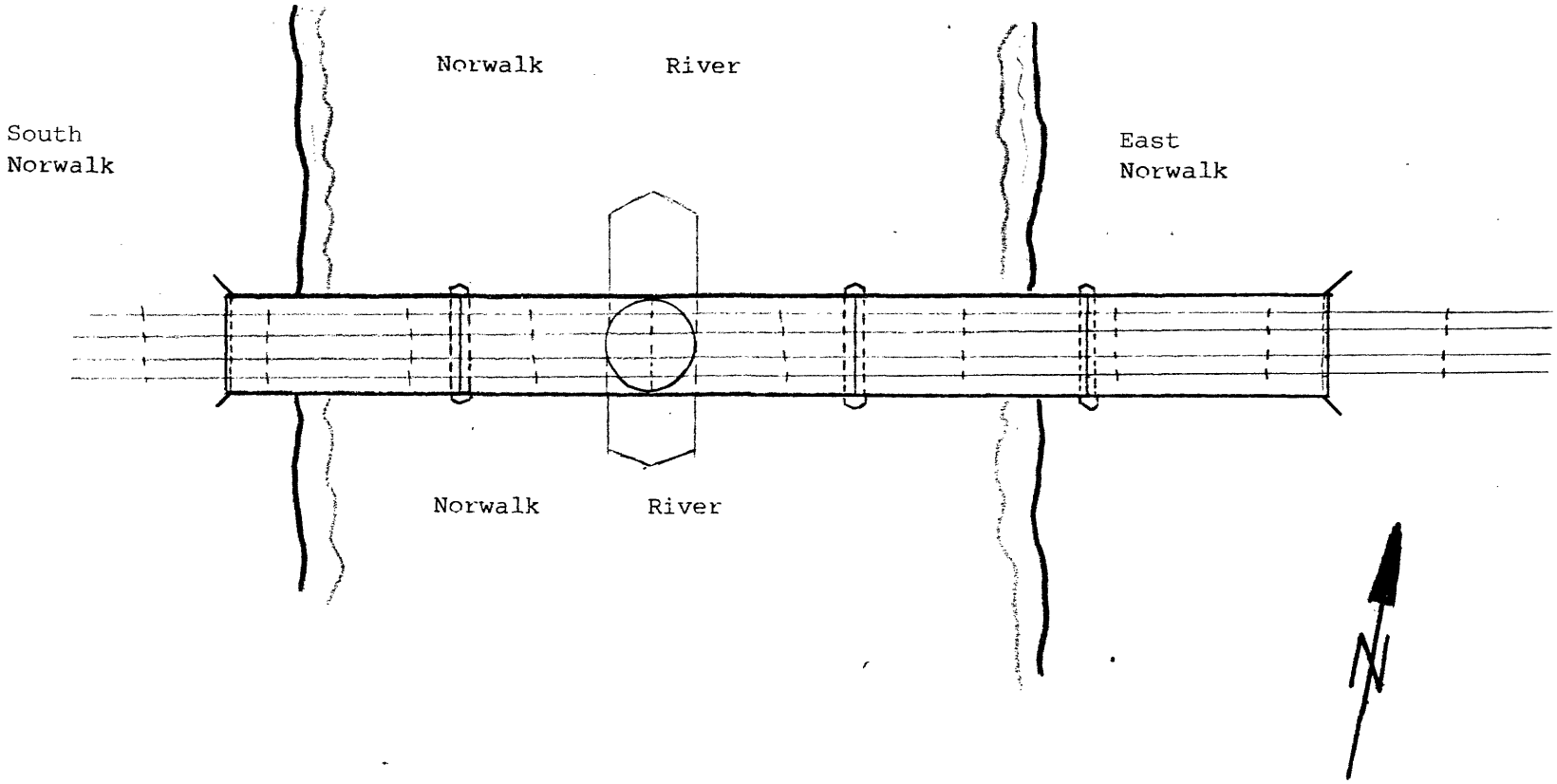
Major Bibliographical References (continued):

Hovey, Otis Ellis. Movable Bridges, Vol. I and II. New York: John wiley and Sons, Inc., 1926.

U.S. DOT, Northeast Corridor High Speed Rail Passenger Service Improvement Project, Tasks 15.1 and 15.2, Vol. VI, Jan. 1977.

NORWALK RIVER RAILROAD BRIDGE



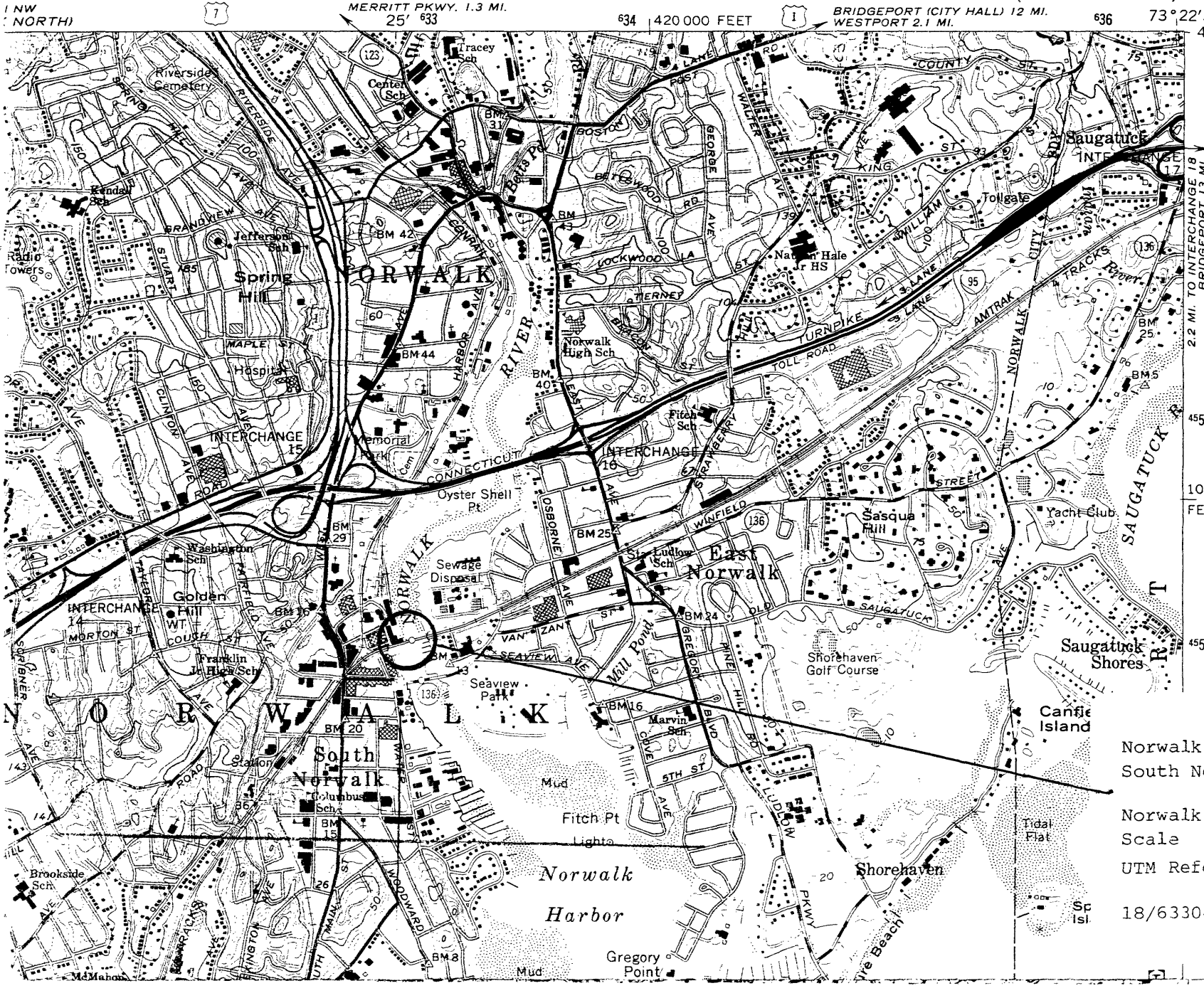
APPROXIMATE SCALE IN FEET

100 0 100

ONNECTICUT
LPARTMENT

NORWALK SOUTH QUADRANGLE
CONNECTICUT—FAIRFIELD CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

6366 III NE (WESTPORT)



Norwalk River Bridge
South Norwalk, Connecticut

Norwalk South Quadrangle
Scale 1:24000
UTM Reference:

18/633040/4550910