

EA

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FOR NPS USE ONLY
RECEIVED APR 28 1987
DATE ENTERED JUN 12 1987

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 MIANUS RIVER RAILROAD BRIDGE

AND/OR COMMON
Cos Cob Bridge

2 LOCATION

STREET & NUMBER AMTRAK Right-of way at Mianus River

CITY, TOWN Greenwich VICINITY OF Cos Cob N/A NOT FOR PUBLICATION CONGRESSIONAL DISTRICT 4

STATE Connecticut CODE 09 COUNTY Fairfield CODE 001

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL	<input type="checkbox"/> PARK
<input checked="" type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL	<input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT	<input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT	<input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL	<input checked="" type="checkbox"/> TRANSPORTATION
	N/A	<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY	<input type="checkbox"/> 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 VICINITY OF N/A 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 11-13 April 1977 FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR SURVEY RECORDS Federal Railroad Administration
2100 2nd St., Rm. 4613

CITY, TOWN Washington, D. C. STATE 20590

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input checked="" type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Cos Cob Bridge is a Scherzer rolling lift bascule with a deck girder. The superstructure is Bessemer steel and the substructure is stone masonry. The substructure is 20 feet above mean high water.

The structure consists of three deck-truss approach spans, each 105 feet long; a deck girder span 64 feet long; a deck girder movable span 107 feet long; four deck truss approach spans each 120 feet long; a deck girder span 36 feet long; and a deck girder span 56 feet long. The total length is 1,059 feet.

Two side by side leaves each carry two tracks. Each track is carried on two deck girders with top and bottom laterals. The interior girders of each leaf are connected by lateral bracing for approximately three-quarters of the span over the channel. The interior girders frame into a cross girder that spans between the segmental girders.

The moving span cantilevers 24 feet from the center of the rest bearing at the heel of the bridge. This cantilever portion moves downward as the bridge is opened. The segmental girders roll on the track girders that are supported by the masonry pier at the north end and by a cross girder at the south end. This cross girder is carried by girders parallel to the track girders that are supported on masonry piers. This arrangement of track girders and cross girders allows the cantilever portion of the deck girders to swing down behind the track girder when the bridge is opened. The counterweights are attached to the cantilever portion of the deck girders at the heel of the bridge.

The machinery to operate the bridge is located below track level at the rear floor break. Main motors, breaks, equalizers, and transfer gearing are located on a platform below the operator's house adjacent to the south approach span. The main drive motors are 30-horsepower, 3-phase, 440-volt, 25-cycle AC motors. Power is supplied from the railroad generating plant at Cos Cob, Connecticut.

The bridge is presently in deteriorated condition. Much of the superstructure is deteriorated and the mechanical workings are in need of repair.

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

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 checked="" 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 1904

BUILDER/ARCHITECT American Bridge Co.

STATEMENT OF SIGNIFICANCE

The Cos Cob Bridge over the Mianus River is one of two deck girder Scherzer rolling lift bascule bridges on the Northeast Corridor rail line. It was constructed in 1904 by the American Bridge Company for the Shore Line of the New York, New Haven and Hartford Railroad. The Chief Engineer was J.E. Kirkham and the Engineer of Structures was W.H. Moore.

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 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.

The earliest forerunners of the bascule type of movable bridge date from medieval times when they were used to cross moats to castles and forts. Some bascules were developed in Europe during the first half of the nineteenth century, but the first modern bascule bridge in this country was the Van Buren Street Bridge built in Chicago in 1893. It was designed by William Scherzer and was the first of the structures known as the Scherzer rolling lift bascule. This type of bascule bridge, of which Cos Cob is a variety, is characterized by rounded segmental girders at the rear of the bascule span which roll back on stationary track girders when opened.

Cos Cob Bridge was built as a replacement to an earlier bridge at the site which was considered unsafe. Portions of the old bridge were retained in the construction of the new bridge. The original bridge was a two-track, deck truss structure of seven fixed spans and

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM**

FOR NPS USE ONLY
RECEIVED
DATE ENTERED

Mianus River Railroad Bridge (Cos Cob Bridge)
CONTINUATION SHEET Greenwich, CT ITEM NUMBER 8 PAGE 1

one center pier movable span with two deck plate girder approach spans on the west end. The trusses on the west end were in good condition and were not restored at that time. The piers were widened on both sides by building on to the existing masonry, and the two additional trusses needed for four tracks were erected on the outside of the present trusses. On the east end, however, the old trusses were taken down and new piers were built for three spans identical with those on the east end. During construction north of the center line of the bridge, Daly and Holbrook were the contractors for the substructure.

Form No 10-300a
(Rev 10 74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM**

FOR NPS USE ONLY

RECEIVED

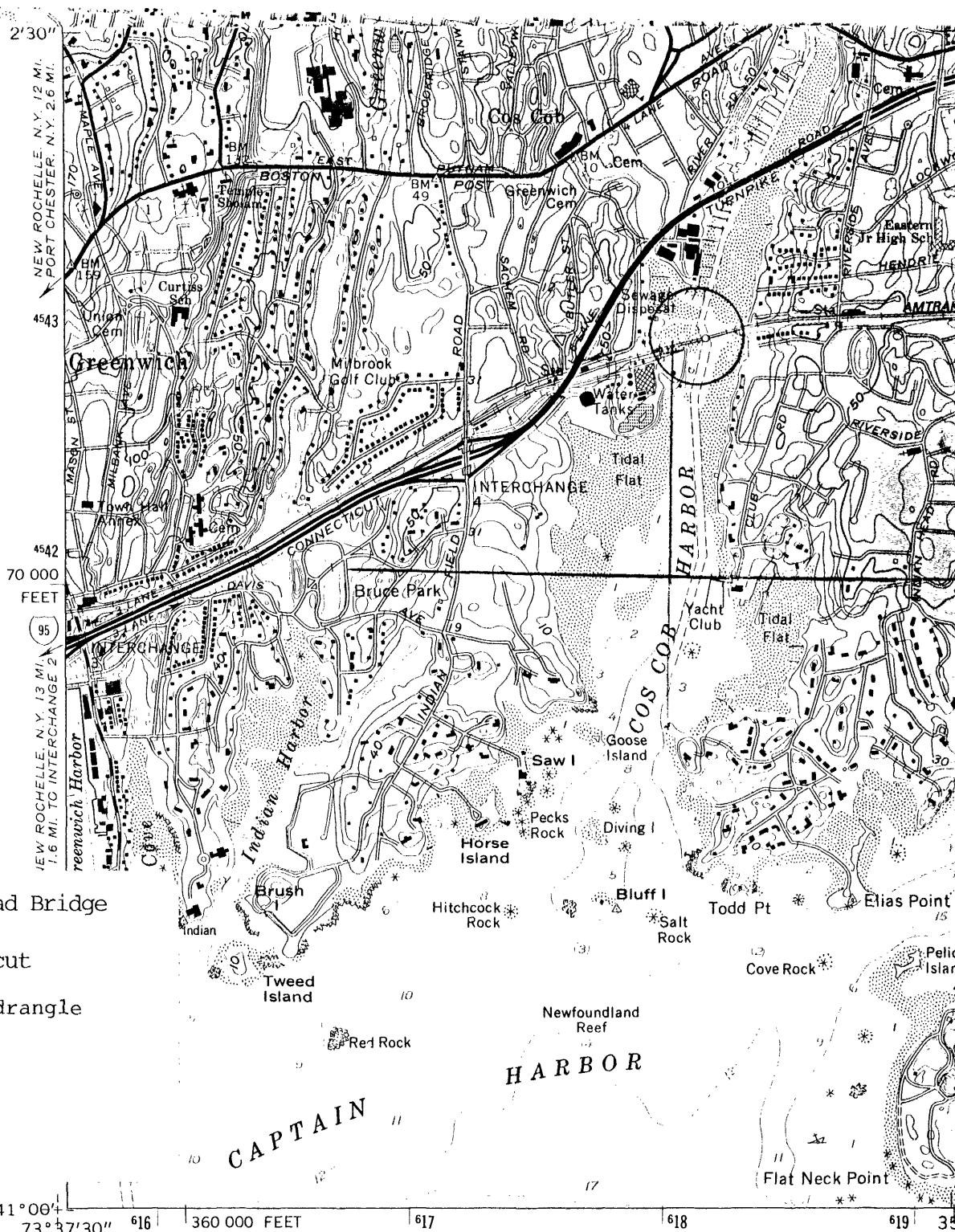
DATE ENTERED

CONTINUATION SHEET Mianus River Railroad Bridge
Greenwich, CT ITEM NUMBER 9 PAGE 1

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.



Mianus River Railroad Bridge
 Cos Cob Bridge
 Greenwich, Connecticut

Stamford, Conn. Quadrangle
 Scale 1:24000

UTM Reference:

18/618130/4542930

(MAMARONECK)
 6265 / NW

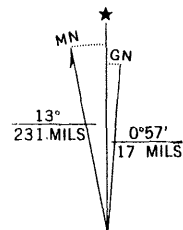
Mapped, edited, and published by the Geological Survey
 Control by USGS, NOS/NOAA, USCE, and Connecticut Geodetic Survey
 Topography by photogrammetric methods from aerial photographs
 taken 1949. Field checked 1951. Revised 1960

Selected hydrographic data compiled from NOS charts 221 and 222
 (1959). This information is not intended for navigational purposes

Polyconic projection. 10,000-foot grid ticks based on
 Connecticut coordinate system
 1000-meter Universal Transverse Mercator grid ticks,
 zone 18, shown in blue
 1927 North American Datum

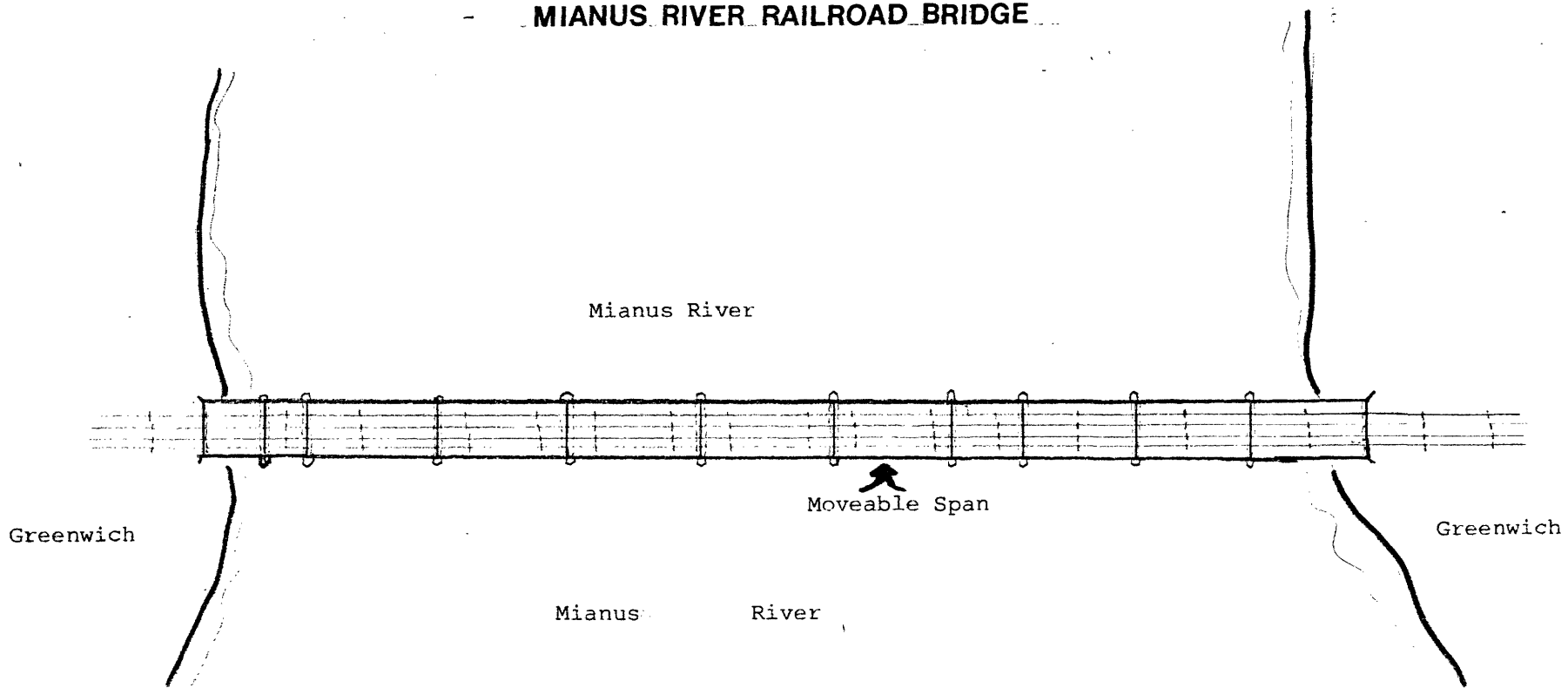
To place on the predicted North American Datum 1983
 move the projection lines 6 meters south and
 36 meters west as shown by dashed corner ticks

Fine red dashed lines indicate selected fence and field lines where
 generally visible on aerial photographs. This information is unchecked
 Red tint indicates areas in which only landmark buildings are shown



UTM GRID AND 1984 MAGNETIC NORTH
 DECLINATION AT CENTER OF SHEET

MIANUS RIVER RAILROAD BRIDGE



APPROXIMATE SCALE IN FEET

