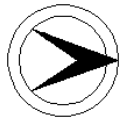


**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900002	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	WILLOW AVENUE OVER CONRAIL RIVER LINE			FACILITY	WILLOW AVENUE		
TOWNSHIP	HOBOKEN CITY						
TYPE	THRU GIRDER	DESIGN	PARTIALLY ENCASED			MATERIAL	Steel
# SPANS	22	LENGTH	731 ft	WIDTH	40 ft		
CONSTRUCTION DT	1935	ALTERATION DT				SOURCE	NJDOT
DESIGNER/PATENT				BUILDER			

SETTING / CONTEXT The bridge is located on the boundary between Weehawken and Hoboken and carries a four-lane arterial street over a busy Conrail route. South (in Hoboken) is vacant formerly industrial land. North is a small mixed neighborhood of modernized late-19th century and modern commercial/residential buildings and one 19th century brick 3-story factory interspersed with vacant lots. It lacks sufficient integrity to be an historic district.

1995 SURVEY RECOMMENDATION Not Eligible

HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED) No

CONSULT STATUS Not Individually Eligible.

CONSULT DOCUMENTS SHPO Letter 6/30/95

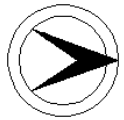
SUMMARY The 22-span bridge viaduct is composed of 3 spans of thru girders with floor beams and 19 spans (9 on one side, 10 on the other) of short enclosed stringer approaches supported on rolled section columns with encased bases. The cantilevered sidewalks have the original metal railings. The bridge is a representative example of a common bridge type, and it is not historically or technologically distinguished.

INFORMATION

PHOTO: 26:5,6,7 (05/12/91)

REVISED BY (DATE):

QUAD: Weehawken



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900006	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0		
NAME & FEATURE INTERSECTED	OGDEN AVENUE OVER HOLLAND AVENUE		FACILITY	OGDEN AVENUE					
TOWNSHIP	JERSEY CITY								
TYPE	DECK ARCH	DESIGN	ELLIPTICAL				MATERIAL	Reinforced Concrete	
# SPANS	1	LENGTH	34 ft	WIDTH	25 ft				
CONSTRUCTION DT	1905	ALTERATION DT						SOURCE	INSCRIPTION/PLANS
DESIGNER/PATENT	T. H. MCCANN (HOBOKEN)			BUILDER	UNKNOWN				
SETTING / CONTEXT	The bridge carries a 2-lane street over an old depressed road (now abandoned) that ran down the side of the Palisades. Originally known as Bowers St., it is paved with Belgian pavers, and a random-ashlar retaining wall holds back the cut. Bowers St. becomes Holland St. a short distance east of the bridge. The bridge is located in a late-19th century residential area, and there is a park on one side.								
1995 SURVEY RECOMMENDATION	Eligible			HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)	No				
CONSULT STATUS	Individually Eligible.								
CONSULT DOCUMENTS	SHPO Letter 6/30/95								

SUMMARY The handsome, well-detailed concrete arch bridge is finished with a stone veneer. It has radiating limestone voussiors and a keystone incised with the "1905" date. The iron lattice railing is also original. The bridge was designed in 1905 by T.H. McCann, an engineer from Hoboken. While the plans do not indicate the use of reinforcing bars, the shape of the arch suggests that it is one of the earliest surviving reinforced concrete spans in the county.

INFORMATION

PHOTO: 26:18-21,2s (05/12/91) REVISED BY (DATE): QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900008	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	JFK BLVD OVER CONRAIL (JERSEY CITY BRANCH) & PATH		FACILITY	JFK BOULEVARD (former HUDSON COUNTY BLVD)			
TOWNSHIP	JERSEY CITY						
TYPE	OPEN SPANDREL RIBBED ARCH	DESIGN	ELLIPTICAL	MATERIAL	Reinforced Concrete		
# SPANS	2	LENGTH	487 ft	WIDTH	106.5 ft		
CONSTRUCTION DT	1926	ALTERATION DT	1973	SOURCE	PLAQUE		
DESIGNER/PATENT	A. BURTON COHEN			BUILDER	STILLMAN DELEHANTY FERRIS		

SETTING / CONTEXT The bridge forms part of Journal Square, the business and transportation center of Jersey City, and carries a wide avenue over a major rapid transit station. Its east face is now concealed by an adjacent new bridge supporting PATH Square. A historic Loews movie theater abuts and conceals the north half of the north arch on the west side while a historic Art Deco-style theater is just north. Other surrounding buildings are modern.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Individually Eligible.
CONSULT DOCUMENTS SHPO Finding 8/2/90, Letter 6/30/95.

SUMMARY The graceful handsomely ornamented open spandrel ribbed arch forms one of the oldest elements of Journal Square. It continues the urban texture of the city over a major east-west rail line contained in a partly natural, partly artificial cut that traverses the Palisades ridge. The west side of the span appears generally unaltered, but 1973 extensions on the east conceal the arch from that side. It was designed by A. B. Cohen (d. 1956), one of the leading designers of concrete bridges.

INFORMATION

PHOTO: 22:2,4-5 (04/26/91) REVISD BY (DATE): QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900011	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	BERGEN AVENUE OVER CONRAIL (EX-CENTRAL RR OF NJ)		FACILITY	BERGEN AVENUE			
TOWNSHIP	JERSEY CITY						
TYPE	DECK GIRDER	DESIGN	OPEN WEB			MATERIAL	Wrought Iron
# SPANS	1	LENGTH	54 ft	WIDTH	36 ft		
CONSTRUCTION DT	1890ca	ALTERATION DT					
DESIGNER/PATENT				SOURCE STYLE	BUILDER UNKNOWN		

SETTING / CONTEXT The bridge is in an undistinguished late 19th-century urban residential neighborhood. It carries a wide city street over now-abandoned 1869 cut built for the CNJ RR's Newark & New York Branch (later ConRail's West Side Avenue Branch). The railroad right-of-way is not maintained.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Individually Eligible.
CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The bridge consists of 4 open web, triple-intersection deck girders with lateral bracing supported on ashlar abutments that probably predate this span. The flooring system with a concrete deck on rolled transverse beams is not original. The cantilevered sidewalks have metal picket railings. Information on when and by whom the bridge was constructed was not located, but stylistically its appears to be ca. 1890. A rare example of an early open web girder span, it is technologically significant.

INFORMATION

Bibliography:
 Schmidt, W.H. "Costliest Railroad Now Half Abandoned." Trains Magazine. November, 1948. NJDOT. Plan File.

Physical Description: The deck girder bridge consists of four triple-intersection or lattice open web girders supported on low masonry abutments resting on the solid rock walls of the railroad cut. The web diagonals are cast or rolled wrought-iron T-sections set back-to-back. The flanges are built up with plate and angles. The present flooring system is replacement, and it consists of rolled transverse beams and a concrete deck. The lateral braces set between the girders are angles, and they may also be an addition. The bridge has a cantilevered sidewalk enclosed by a metal railing that appears to date stylistically to 1913. The date attribution is based on stylistic similarities with the Ocean Avenue bridge (0950163).

Historical and Technological Significance: When the wrought-iron lattice-web deck girder bridge was fabricated has not been verified (no plans are on file with NJDOT, and the SI&A sheet indicates that no plans are available from Conrail), but stylistically it dates to at least ca. 1890. It is very similar to a lattice-web bridge over the same rail line at Ocean Avenue in Jersey City (0950163). The date of construction of the Ocean Avenue bridge is also unknown. This span is technologically significant as because it is a rare and well-preserved survivor of an early overpass bridge type, and it has the unusual T-section members. Several other examples of the T-section have been identified on late-19th century railroad bridges in the northern half of the state as well as on the Ocean Avenue span, but the detail is so rare and so early, that all spans with it have been evaluated as technologically significant.

The Bergen Avenue bridge carries a city street over a mile-long double-track cut built in 1869 for the Newark & New York Railroad through Bergen Hill, a long ridge separating the waterfront of Hudson County from the land to the west. The Newark & New York Railroad was built to give the shortest, fastest route between Newark and the Central Railroad of New Jersey (CNJ) ferry terminal at Communipaw. The line was built for and operated by the CNJ. In the 1920s, 38 daily local passenger trains traversed this route, which serviced four passenger stations in its mile-long roadway through Jersey City. Passenger service ended in 1948, and the line was single-tracked and used for freight only (Trains, p. 52). When Conrail took over the CNJ's property in 1967, the line became known as the West Side Avenue Branch. It was abandoned by Conrail in the mid-1980s.

PHOTO: 28:4-6;29:3-6;3 (05/31/91) REVISED BY (DATE): QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900012	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	MARTIN LUTHER KING DRIVE OVER CONRAIL (CENTRAL RR OF NJ)			FACILITY	MARTIN LUTHER KING DRIVE (JACKSON AVENUE)		
TOWNSHIP	JERSEY CITY						
TYPE	STRINGER	DESIGN		MATERIAL	Steel		
# SPANS	1	LENGTH	68 ft	WIDTH	34 ft		
CONSTRUCTION DT	1945	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	UNKNOWN			BUILDER	UNKNOWN		

SETTING / CONTEXT The bridge carries a four-lane city street over a deep cut built for the Newark & New York RR, which later became ConRail's West Side Ave. Branch, now abandoned. The surrounding structures are mixed urban commercial and residential, from 1880 to the present. A station stop was located beneath the bridge, with station building at street level (now used as a church) and stairs to the platform level. The bridge also carries a utility pipe.

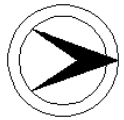
1995 SURVEY RECOMMENDATION Not Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible.
CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The steel stringer superstructure with concrete deck and concrete balustrades built in 1945 is supported on stone abutments from an earlier span. In the wingwalls are steps that provided access from the street-level station to the track side platform. Although the station building and stairways are associated with a historic rapid transit line, the bridge itself is a later replacement and has no association with the rail-related structures. It also carries a pipe in a truss-webbed frame.

INFORMATION

PHOTO: 29: 7-11 (05/31/91) REVISD BY (DATE): QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900013	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	NEWARK AVENUE OVER CONRAIL RIVER LINE		FACILITY	NEWARK AVENUE			
TOWNSHIP	JERSEY CITY						
TYPE	PONY TRUSS	DESIGN	WARREN			MATERIAL	Steel
# SPANS	1	LENGTH	90 ft	WIDTH	48.1 ft		
CONSTRUCTION DT	1915	ALTERATION DT					
DESIGNER/PATENT	UNKNOWN		SOURCE	PLAQUE			
			BUILDER	PHOENIX BRIDGE COMPANY			

SETTING / CONTEXT The bridge is part of one of the few routes leading from the lower level of Jersey City up to the higher level, atop the ridge known as Bergen Hill. This bridge carries busy Newark Avenue over ConRail's heavily-used River Line; the elevated NJ Turnpike is in full view from the east side of the bridge. A late 19th-century cemetery adjoins the bridge in the NW quadrant. On a hill to the NE is the NR-listed 1904-12 Dickinson High School.

1995 SURVEY RECOMMENDATION Not Eligible

HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED) No

CONSULT STATUS Not Individually Eligible.

CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The skewed 4-panel rivet-connected Warren pony truss consists of 3 trusses supported on ashlar abutments that predate this span. Newark Ave. makes a transition from four to three lanes on the bridge, so one side is skewed more heavily than the other. The only example of its type in the county, the heavy bridge was most likely built by the NY Central RR over its New Jersey Junction Branch. The bridge is a late example of a pony truss in an urban setting, but it is not technologically noteworthy.

INFORMATION

PHOTO: 22:15-16;1s (04/26/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900016	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	14TH STREET VIADUCT OVER CONRAIL		FACILITY	14TH STREET			
TOWNSHIP	HOBOKEN CITY						
TYPE	DECK GIRDER & DECK TRUSS	DESIGN	WARREN			MATERIAL	Steel
# SPANS	31	LENGTH	1460 ft	WIDTH	41 ft		
CONSTRUCTION DT	1910	ALTERATION DT	1938, 1987		SOURCE	NJDOT	
DESIGNER/PATENT	WADDELL & HARDESTY (1938)			BUILDER	UNKNOWN		

SETTING / CONTEXT The viaduct carries a four-lane street from the low-lying land of Hoboken up the side of Bergen Hill (also known as the Palisades) to the Jersey City Heights neighborhood. Under the viaduct are parking lots and undistinguished 20th-century industrial structures, as well as ConRail's River Line. At its foot, at the east end, is a group of 19th-century commercial structures with historic district potential.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Individually Eligible.
CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The long, 31-span bridge consists of 2 Warren deck truss spans, 27 deck girder spans, and 2 stringer spans supported on steel bents that were strengthened in 1938 and concrete abutments. The truss bearings and footings were also upgraded in 1938. While the spans themselves are not technologically innovative, the structure as a whole is impressive given its size, date of construction, and state of preservation. It was rehabilitated again in 1987, the year the roadway was widened.

INFORMATION

Bibliography:
Hudson County Engineer Office: Bridge File.

Physical Description: The viaduct consists of 31 span; 2 are Warren deck trusses, 27 are built-up deck girders, and 2 are steel stringers. It is supported on steel bents, some on concrete plinths, and concrete piers and abutments. The trusses have hinged bearings. Most of the bents are composed of four built-up steel columns with heavy lateral bracing. One bent that was rehabilitated in 1983 has only two columns that rest on heavy steel girders that distribute the load. In 1938 the viaduct was rehabilitated and strengthened by the addition of new floor beams, heavier bents and new footings, and lateral bracing. That rehab was done after plans prepared by Waddell & Hardesty. In 1987 A. G. Lichtenstein prepared plans for another rehabilitation that included changing the way the previously canted bearings work and conversion of one sidewalk to part of the roadway. Both rehabilitations were sensitive to the original design of the structure.

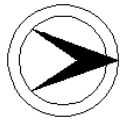
Historical and Technological Significance: The 31-span viaduct was originally built in 1910, and it forms an important route from Hoboken up the Bergen Hill to Jersey City. Bergen Hill, also called the Palisades, is a mile-wide ridge that runs parallel to the Hudson River for many miles. The approximately mile-square town of Hoboken lies between the ridge and the river. Because the east side of the hill is a steep cliff about 100' high, access from Hoboken to Jersey City was limited. At the south end of Hoboken there are old roads that scale the hill, but at the north end, there were none until the 14th Street viaduct was completed in 1910. Thus, in addition to its local historical significance, the viaduct is an impressive engineering solution to a difficult transportation problem, and it utilizes a variety of bridge types in that solution. It is technologically significant. The 1938 strengthening and rehabilitation was designed by the noted consulting engineer firm of Waddell & Hardesty.

PHOTO: 26:8-12,15,30-3 (05/17/91)

REVISED BY (DATE):

QUAD: Weehawken

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900017	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0	
NAME & FEATURE INTERSECTED	MANHATTAN AVENUE VIADUCT OVER GORGE			FACILITY	MANHATTAN AVENUE			
TOWNSHIP	UNION CITY							
TYPE	STRINGER	DESIGN					MATERIAL	Steel
# SPANS	12	LENGTH	695 ft	WIDTH	36 ft			
CONSTRUCTION DT	1939	ALTERATION DT					SOURCE	NJDOT
DESIGNER/PATENT	UNKNOWN			BUILDER	UNKNOWN			

SETTING / CONTEXT The low viaduct climbs up the side of Bergen Hill from the west end of Hoboken's 14th St. Viaduct through scrub woods, connecting the low-lying areas of Hoboken with the Jersey City Heights to the west. It is also called the North Wing Viaduct, and carries a two-lane street. Although a trolley line once ran beneath the viaduct, inspection revealed no trace of trolley resources remaining there.

1995 SURVEY RECOMMENDATION Not Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible.
CONSULT DOCUMENTS SHPO Finding 8/2/91

SUMMARY The 12-span viaduct consists of steel I-beam stringers supported by reinforced concrete piers and encased floor beams. It is not historically or technologically distinctive. It is one of over 15 stringer bridges in Hudson County.

INFORMATION

PHOTO: 26:13-14,16-17 (05/12/91)

REVISED BY (DATE):

QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900020	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	WEST HUDSON PARK ROAD OVER DAVIS AVENUE		FACILITY	WEST HUDSON PARK ROAD			
TOWNSHIP	HARRISON TOWN						
TYPE	ARCH	DESIGN	ELLIPTICAL		MATERIAL	Reinforced Concrete	
# SPANS	1	LENGTH	72 ft	WIDTH	22.7 ft		
CONSTRUCTION DT	1911	ALTERATION DT			SOURCE	PLAQUE	
DESIGNER/PATENT	UNKNOWN		BUILDER	UNKNOWN			

SETTING / CONTEXT The bridge carries a two-lane road over a 2-lane city street that divides a small urban park in two. The park is landscaped in the traditional Olmsted fashion, with trees on rolling grassy hills. It was completed by the Hudson County Park Commission in 1911, with Charles Lowrie as landscape architect. Just outside this area of the park are undistinguished 1920s apartment buildings.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No

CONSULT STATUS Individually Eligible. Potential Park Historic District. May contribute.

CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The bridge is significant as a contributing element to an early 20th century park. It is an impressive example of a concrete-arch park bridge and does not attempt to imitate stone masonry. Its decoration consists of a concrete balustrade with oval piercing and geometric colored tiles on its pylons. It is an elliptical barrel arch with solid spandrel walls, and is essentially unaltered. West Hudson Park appears to be a potential historic district because of its design and local civic history.

INFORMATION Bibliography:
Hudson County Park Commission. Second Report of the Hudson County Park Commission (covering June 23,1908-November 30, 1910). Jersey City Publishing Company.
Hudson County Engineers Office: Plan Files.

Physical Description: The handsome, well-preserved bridge is a simple elliptical reinforced concrete arch span with graceful, attenuated proportions. Its adornment consists of low balustrades with oval piercing flanking the 22'-7" wide roadway. Faience tile accents the plain posts. The wingwalls are topped by balustrades that match those used on the main span. The bridge appears unaltered.

Historical and Technological Significance: The 1911 bridge is a contributing element in a well-preserved, historically significant park that was designed by landscape architect Charles Lowrie. The span is not technologically innovative for its time, but it is representative of the high-quality, well detailed designs the plastic qualities of concrete afforded. The bridge is located in informally landscaped West Hudson Park, one of five county parks established by the Hudson County Park Commission about 1909. It was completed in 1911. Landscape architect Lowrie's description of West Hudson Park emphasized its woodland scenery, viewpoints, and the opportunity to create a picturesque lake out of several ponds already on the site. Because the park was long and narrow, Lowrie felt a direct driveway through it was essential to give access between the different sections. At the same time it was necessary to provide a transverse street, which is Davis Avenue, the road the bridge crosses. To keep Davis Avenue from disrupting the park, the park road was made to cross it. No plans for the bridge were located, so it is not known who designed the handsome arch bridge.

West Hudson Park ranks with Bayonne Park (completed about 1916) as the two most noteworthy of the original five parks. Both were important civic projects, and both retain their original planting schemes to a large extent. They also share a common design element of having bridges as prominent landscape features. Another bridge in West Hudson Park that was an original feature was rebuilt in 1991-1992. It no longer retains its historic design, so it is not a contributing resource (0900019).

PHOTO: 21:5-7 (04/26/91 JPH (5/96)) REVISED BY (DATE): QUAD: Orange



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900022	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	BAYONNE PARK ROAD OVER PARK FOOTPATH		FACILITY	BAYONNE PARK ROAD			
TOWNSHIP	BAYONNE CITY						
TYPE	ARCH	DESIGN	BARREL		MATERIAL	Reinforced Concrete	
# SPANS	1	LENGTH	24 ft	WIDTH	30.2 ft		
CONSTRUCTION DT	1916	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT	UNKNOWN		BUILDER	UNKNOWN			

SETTING / CONTEXT The bridge carries a two-lane park road over a paved footpath in the pastoral landscape of a large park completed by the Hudson County Park Commission in 1916. It was landscaped by architect Charles Lowrie. Bayonne Park is one of the five major Hudson County parks constructed as part of the City Beautiful movement of the early 20th century.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible. Potential Park Historic District. Contributing.
CONSULT DOCUMENTS SHPO Letter 03/12/01

SUMMARY The bridge is a representative example of an early 20th century concrete arch bridge, designed as an integral element of the landscaping plan for a large urban park in the Olmsted tradition. It is an elliptical arch with solid spandrels and quatrefoil-pierced balustrades. The well-preserved county park is historically significant as part of an ambitious 5-park project from the 1910s. The bridge is not individually eligible for listing in the National Register, but would be a contributing element of an urban park historic district or a County - Wide Park Multiple Property listing should either of those be defined in the future.

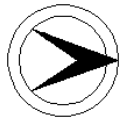
INFORMATION Bibliography:
 Second Report of the Hudson County Park Commission. 1910 (covering the period from June 23, 1908-November 30, 1910). Jersey City Printing Company.

Physical Description: The well-proportioned pedestrian bridge is an elliptical, closed spandrel, reinforced concrete arch bridge 24' long and 30' wide. Its decoration consists chiefly of the gracefully curved top concrete parapets with quatrefoil-shaped pierced panels. The bridge is well preserved.

Historical and Technological Significance: The handsome, well-proportioned 1916 reinforced concrete arch bridge is historically significant as an original element in a locally significant, picturesquely landscaped urban park. Bayonne Park, completed in 1916, is one of the five urban parks established about 1910 by the Hudson County Park Commission. It is one of two of those parks that was designed in the Olmsted style by landscape architect Charles Lowrie. The park is well preserved and is evaluated as significant because of its local civic and landscape architecture history. The bridge is an integral design element in the park, and it too is well preserved. No plans for the span were located, so the designer is not known. It is one of three concrete arch bridges in the potential historic district of Bayonne Park that were evaluated as contributing resources (0900023, 0900024).

Boundary Description and Justification: The bridge is located within an urban park that appears to have the history and integrity of original design to meet the criteria for inclusion in the National Register. Thus the bridge and its immediate setting are evaluated as significant.

PHOTO: 201:22-24 (06/07/91 JPH (5/96)) REVISIED BY (DATE): QUAD: Jersey City



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900023	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	BAYONNE PARK ROAD OVER PARK FOOTPATH		FACILITY	BAYONNE PARK ROAD			
TOWNSHIP	BAYONNE CITY						
TYPE	ARCH	DESIGN	ELLIPTICAL			MATERIAL	Reinforced Concrete
# SPANS	1	LENGTH	24 ft	WIDTH	29.7 ft		
CONSTRUCTION DT	1916	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT	UNKNOWN			BUILDER	UNKNOWN		

SETTING / CONTEXT The bridge carries a two-lane park road over a paved footpath in the pastoral landscape of a large park completed by the Hudson County Park Commission in 1916 and landscaped by architect Charles Lowrie. Bayonne Park is one of the five major Hudson County parks constructed as part of the City Beautiful movement of the early 20th century. Both the bridge and its setting are well preserved.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Individually Eligible. Potential Park Historic District. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The span is an attractive example of an early 20th century concrete arch bridge, designed as an integral element of the landscaping plan for a large urban park in the Olmsted tradition. Although it is in fact a closed spandrel arch, it has a graceful blind arcade to imitate an open spandrel arch. Ornamental geometric colored tiles are set into the bridge's pylons. The well-detailed bridge is individually distinguished and is also located in a potential historic district, a county park.

INFORMATION Bibliography:
 Second Report of the Hudson County Park Commission. 1910 (covering the period from June 23, 1908-November 30, 1910). Jersey City Printing Company.

Physical Description: The well-proportioned 24'-long bridge is an elliptical closed-spandrel reinforced concrete arch. It is well detailed with a graceful blind arcade to suggest an open spandrel arch bridge. Faience tile set in a geometric pattern accents the posts that mark the limits of the span. The concrete parapet is set behind the blind arcade. The span is well preserved, and it represents the high quality designs the plastic medium of concrete affords.

Historical and Technological Significance: The handsome, well-proportioned 1916 reinforced concrete arch bridge is historically significant as an original element in a locally significant, picturesquely landscaped urban park. Bayonne Park, completed in 1916, is one of the five urban parks established about 1910 by the Hudson County Park Commission. It is one of two of those parks that was designed in the Olmsted style by landscape architect Charles Lowrie. The park is well preserved and is evaluated as significant because of its local civic and landscape architecture history. The bridge is an integral design element in the park, and it too is well preserved. In addition to associative significance with the park, the bridge is individually distinguished as a well-designed example of its type. No plans for the span were located, so the designer is not known. It is one of three bridges in Bayonne Park that are evaluated as contributing resources in the potential historic district (0900024,0900022).

Boundary Description and Justification: The bridge is located within an urban park that appears to have the history and integrity of original design to meet the criteria for inclusion in the National Register. Thus the bridge and its immediate setting are evaluated as significant.

PHOTO: 28:33-35 (06/07/91) REVISED BY (DATE): QUAD: Jersey City



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900024	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	BAYONNE PARK ROAD OVER PARK FOOTPATH		FACILITY	BAYONNE PARK ROAD			
TOWNSHIP	BAYONNE CITY						
TYPE	ARCH	DESIGN	ELLIPTICAL			MATERIAL	Reinforced Concrete
# SPANS	1	LENGTH	24 ft	WIDTH	30 ft		
CONSTRUCTION DT	1916	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT	UNKNOWN			BUILDER	UNKNOWN		

SETTING / CONTEXT The bridge carries a two-lane park road over a paved park footpath in the pastoral landscape of a large park completed by the Hudson County Park Commission in 1916 and landscaped by architect Charles Lowrie. Bayonne Park is one of the five major Hudson County parks constructed as part of the City Beautiful movement of the early 20th century.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No

CONSULT STATUS Not Individually Eligible. Potential Park Historic District. Contributing.

CONSULT DOCUMENTS SHPO Letter 03/12/01

SUMMARY The span is a representative example of an early-20th century concrete arch bridge, designed as an integral element of the landscaping plan for a large urban park in the Olmsted tradition. It is a well-proportioned elliptical arch with solid spandrels. Decoration consists of a concrete balustrade with quatrefoil piercing and colored geometric tiles set into excedrae projecting from the parapets of the bridge approaches. The bridge is not individually eligible for listing in the National Register, but would be a contributing element of an urban park historic district or a County - Wide Park Multiple Property listing should either of those be defined in the future.

INFORMATION Bibliography:
Second Report of the Hudson County Park Commission. 1910 (covering the period from June 23, 1908-November 30, 1910). Jersey City Printing Company.

Physical Description: The well-proportioned pedestrian bridge is an elliptical, closed spandrel, reinforced concrete arch bridge 24' long and 30' wide. Its decoration consists chiefly of the concrete balustrades with quatrefoil-shaped piercing and faience tiles set into the faces of the two octagonal-ended exedrae (overlooks) at the approaches. The bridge is well preserved.

Historical and Technological Significance: The handsome, well-proportioned 1916 reinforced concrete arch bridge is historically significant as an original element in a locally significant, picturesquely landscaped urban park. Bayonne Park, completed in 1916, is one of the five urban parks established about 1910 by the Hudson County Park Commission. It is one of two of those parks that was designed in the Olmsted style by landscape architect Charles Lowrie. The park is well preserved and is evaluated as significant because of its local civic and landscape architecture history. The bridge is an integral design element in the park, and it too is well preserved. No plans for the span were located, so the designer is not known.

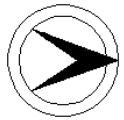
Boundary Description and Justification: The bridge is located within an urban park that appears to have the history and integrity of original design to meet the criteria for inclusion in the National Register. Thus the bridge and its immediate setting are evaluated as significant.

PHOTO: 201: 25-27 (06/07/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0900025	CO	HUDSON	OWNER	COUNTY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	JFK BOULEVARD EAST OVER FISSURE IN CLIFF		FACILITY	JFK BOULEVARD EAST			
TOWNSHIP	GUTTENBERG TOWN						
TYPE	ARCH	DESIGN	BARREL			MATERIAL	Concrete
# SPANS	1	LENGTH	65 ft	WIDTH	50 ft		
CONSTRUCTION DT	1920	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT				BUILDER			

SETTING / CONTEXT Boulevard East runs along the eastern edge of Bergen Hill, a long ridge paralleling the Hudson and rising several hundred feet above it; the east cliff of this ridge is known as the Palisades. The bridge carries half of the boulevard over a fissure in the cliff. West of the bridge is an undistinguished neighborhood of modernized detached houses and late 20th century apartment buildings; the setting is without historic significance.

1995 SURVEY RECOMMENDATION Not Eligible

HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED) No

CONSULT STATUS Not Individually Eligible.

CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY To carry the street over the fissure, a mass of concrete was placed under the west half of the roadway while the east half and the east sidewalk are supported by a segmental arch of concrete, possibly unreinforced. The arch can be seen only from far below; from the street there is no evidence that one is on a bridge. As a result no effort was made to beautify the bridge in any way; its plain solid spandrel sides were left as rough concrete. It is not technologically innovative.

INFORMATION

PHOTO: 23:29-30,41;1s (04/28/91)

REVISED BY (DATE):

QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0901150	CO	HUDSON	OWNER	NJDOT	MILEPOINT	84.3	
NAME & FEATURE INTERSECTED	US 1&9 PULASKI SKYWAY OVER HACKENSACK MEADOWS		FACILITY	US 1&9				
TOWNSHIP	JERSEY CITY							
TYPE	CANTILEVER THRU TRUSS	DESIGN	PRATT				MATERIAL	Steel
# SPANS	45	LENGTH	14900 ft	WIDTH	47 ft			
CONSTRUCTION DT	1932	ALTERATION DT					SOURCE	NJDOT
DESIGNER/PATENT	NJ STATE HIGHWAY DEPT.				BUILDER	FOUR CONTRACTORS		

SETTING / CONTEXT The Skyway carries a four-lane super highway high over the Hackensack Meadows, two navigable rivers, and industrial areas of Jersey City and Kearny. It is part of the Rt. 1\9 Corridor and was built as the highway approach to the Holland Tunnel. It no longer carries trucks, which use the alternate US 1&9T truck route. The Skyway is a multi-span structure several miles long.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes

CONSULT STATUS Individually Eligible. US Routes 1&9 Historic District. Contributing.

CONSULT DOCUMENTS SHPO Finding 09/11/91, Letter 03/12/01.

SUMMARY The elevated continuous truss plus cantilever viaduct was the first major urban elevated highway in the U.S. and was an integral part of the first true limited-access highway in the U.S. It is generally considered one of the most handsome steel continuous truss bridges. Its construction was divided into four sections and let to four different contractor (from east to west): American Bridge, Phoenix Bridge, McClintic-Marshall, and Taylor-Fichter. The impressive structure is well preserved and It is individually eligible for listing in the National Register of Historic Places under Criteria A and C. It is also a contributing element of the US Routes 1&9 Historic District .

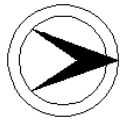
INFORMATION

PHOTO: 203:12A-14A (08/16/91)

REVISED BY (DATE):

QUAD: Jersey City

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0902150	CO	HUDSON	OWNER	NJDOT	MILEPOINT	54.75
NAME & FEATURE INTERSECTED	US 1&9 OVER NJ TRANSIT MORRISTOWN LINE			FACILITY	US 1&9 (TONNELE AVENUE)		
TOWNSHIP	JERSEY CITY						
TYPE	STRINGER	DESIGN	ENCASED			MATERIAL	Steel
# SPANS	3	LENGTH	109 ft	WIDTH	50 ft		
CONSTRUCTION DT	1938	ALTERATION DT				SOURCE	NJDOT
DESIGNER/PATENT	NJ STATE HWY DEPT BRIDGE DIV			BUILDER			

SETTING / CONTEXT The bridge carries a busy four-lane arterial highway over the NJT Morristown line, the former main line of the Lackawanna RR, electrified for commuter service circa 1930. The surrounding commercial neighborhood is undistinguished, except St. Peters Cemetery, with many old monuments, which dates from prior to 1887 and is northwest of the bridge. US 1&9 at this point is not part of the original Rt 1 corridor.

1995 SURVEY RECOMMENDATION Not Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible. Delaware, Lackawanna & Western Railroad Old Main Line Historic District, Eligible, May contribute.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Opinion 09/24/96.

SUMMARY The encased stringer bridge on a concrete substructure replaced an older bridge during a 1930s upgrading of Tonnele Ave. to serve as the US 1 approach to the George Washington Bridge. With its concrete balustrades, it is a representative example of the most common pre-World War II bridge type in the state. Although an important type, there are better examples elsewhere in New Jersey.

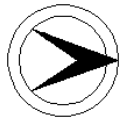
INFORMATION

PHOTO: 25:26-29;21:29- (05/03/91)

REVISED BY (DATE):

QUAD: Jersey City

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0904150	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	JFK BLVD (NJ 501) OVER NJ 139			FACILITY	JFK BOULEVARD (NJ 501)		
TOWNSHIP	JERSEY CITY						
TYPE	STRINGER	DESIGN	ENCASED			MATERIAL	Steel
# SPANS	1	LENGTH	102 ft	WIDTH	60 ft		
CONSTRUCTION DT	1932	ALTERATION DT				SOURCE	INSCRIBED
DESIGNER/PATENT	NJ STATE HWY DEPT BRIDGE DIV			BUILDER			

SETTING / CONTEXT This bridge carries JFK Boulevard (formerly Hudson Boulevard) over NJ 139, the highway approach to the Holland Tunnel. The surrounding area contains undistinguished recent commercial structures. The bridge crosses a historically and technologically important highway (US 1&9, the Holland Tunnel approach).

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. US Routes 1&9 Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Finding 09/11/91, Letter 03/12/01.

SUMMARY With its concrete-encased steel stringers and geometric pierced concrete balustrade, the bridge is a representative example of the most common type of bridge built in the state prior to World War II. It is not technologically innovative. However, it is a contributing, original element of historic Rt. 1, the approach to the Holland Tunnel that is the first true limited-access highway in the United States which is eligible for listing in the National Register of Historic Places under Criterion A. The chain link pedestrian fence is a 1980's addition. This structure is within the boundary, although not a contributing resource to, the NRHP eligible Erie Railroad Bergen Archways / Bergen Hill Tunnel Historic District.

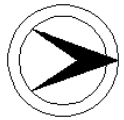
INFORMATION

PHOTO: 21: 31-32 (04/26/91)

REVISED BY (DATE):

QUAD: Jersey City

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE # 0904151 **CO** HUDSON **OWNER** NJDOT **MILEPOINT** 0.35
NAME & FEATURE INTERSECTED NJ 139 OVER CONRAIL BERGEN ARCHWAYS LINE **FACILITY** NJ 139
TOWNSHIP JERSEY CITY
TYPE DECK TRUSS **DESIGN** PRATT ENCASED **MATERIAL** Steel
SPANS 1 **LENGTH** 485 ft **WIDTH** 57.4 ft
CONSTRUCTION DT 1927 **ALTERATION DT** **SOURCE** NJDOT
DESIGNER/PATENT NJ STATE HWY DEPT BRIDGE DIV **BUILDER**

SETTING / CONTEXT The bridge carries NJ 139, the approach highway to the Holland Tunnel. It is part of the Rt. 1&9 Corridor, and it is over the Bergen Archways, the 4-track approach to the Jersey City waterfront built through Bergen Hill by the Erie RR 1907-10. The bridge is within the walls of the Bergen Archways cut, except on the west, where the highway opens onto Tonnele Circle, that is surrounded by modern commercial structures & some 1920s factories.

1995 SURVEY RECOMMENDATION Eligible

HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED) No

CONSULT STATUS Individually Eligible. Erie RR Bergen Archway / Bergen Hill Tunnel and US Routes1&9 Historic Districts. Contributing.

CONSULT DOCUMENTS SHPO Finding 09/11/91, Letter 03/12/01.

SUMMARY The skewed, deep, concrete-encased Pratt deck truss bridge on a concrete substructure has its original concrete balustrade and pylon defining the middle of the span. It ranks as one of the impressive examples of its type in the state, and is well-preserved. The bridge is individually eligible for listing in the National Register of Historic Places. In addition, the bridge is an original and thus contributing element of the U.S. Routes 1 & 9 Historic District comprised of intact portions of the country's first true super highway, and the Erie Railroad Bergen Archways / Bergen Hill Tunnel Historic District under Criteria A and C..

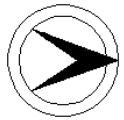
INFORMATION

PHOTO: 21:33,34;25:23; (04/26/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0904152	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	LOCAL STREETS OVER NJ 139 DEPRESSED ROADWAY			FACILITY	HOBOKEN AVE, CENTRAL AVE, AND OTHER LOCAL STREETS		
TOWNSHIP	JERSEY CITY						
TYPE	DECK GIRDER	DESIGN	ENCASED	MATERIAL	Steel		
# SPANS	190	LENGTH	3380 ft	WIDTH	27 ft		
CONSTRUCTION DT	1927	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	NJ STATE HWY DEPT BRIDGE DIV			BUILDER	PUBLIC SERVICE PROD. CO.		

SETTING / CONTEXT This structure carries the local streets of an urban commercial and residential area over a portion of NJ 139 (the approach to the Holland Tunnel) that is depressed into a cut through the bedrock of Bergen Hill. This structure is part of the historic Routes 1 & 9 highway. South of the highway is the Bergen Archways, a tunnel-cut built by the Erie Railroad 1907-1910 and part of the NRHP eligible Erie Railroad Bergen Archways / Bergen Hill Tunnel Historic District.

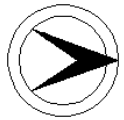
1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible. Erie RR Bergen Archways / Bergen Hill Tunnel and US Routes 1&9 Historic Districts, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Finding 09/11/91, Letter 03/12/01.

SUMMARY The long complex span founded on solid rock and carrying local roads overhead is a contributing element of the US1&9 historic district. It consists of one encased Warren half thru truss span carrying one side of a street and a series of 190 transverse encased deck girders. The north ends of the girders rest on a concrete retaining wall/abutments while the south ends rest on encased steel columns. The upper level that carries the local streets has a concrete balustrade on the open side. The bridge is not individually eligible for listing in the National Register of Historic Places. However, the bridge is an original, and thus contributing, element of the U.S. Routes 1 & 9 Historic District, comprised of intact portions of the country's first true super highway, and the Erie Railroad Bergen Archways / Bergen Hill Tunnel Historic District under Criteria A and C.

INFORMATION

PHOTO: 21:35;22:20,25- (05/26/91 JPH (5/96)) REVISED BY (DATE): QUAD: Jersey City

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0904153	CO	HUDSON	OWNER	NJDOT	MILEPOINT	1.3
NAME & FEATURE INTERSECTED	NJ 139 EB (12TH STREET VIADUCT) DOWN TO STREET LEVEL			FACILITY	NJ 139 EASTBOUND		
TOWNSHIP	JERSEY CITY						
TYPE	DECK TRUSS & DECK GIRDER		DESIGN	PRATT ENCASED		MATERIAL	Steel
# SPANS	24	LENGTH	1702 ft	WIDTH	48.5 ft		
CONSTRUCTION DT	1927	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	NJ STATE HWY DEPT BRIDGE DIV			BUILDER	F. SNARO, INC, CONTRACTOR		

SETTING / CONTEXT The viaduct carries former US 1 & NJ 139, the Holland Tunnel approach routes, from a depressed cut across Bergen Hill down to lower Jersey City. Underneath its upper reaches is mainly abandoned land (formerly extensive Erie RR yards). As it descends, the eastbound ramp of the 1960 New Jersey Turnpike Extension joins it on the south side. At its lower end, it is adjacent to 1920s and 1930s industrial structures.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Individually Eligible. US Routes 1&9 Historic District. Contributing.
CONSULT DOCUMENTS SHPO Finding 09/11/91, Letter 03/12/01.

SUMMARY In addition to its significance as a contributing element of the Rt 1&9 district, the long viaduct is a technologically complex and significant structure in itself. Four of its spans are concrete-encased Pratt deck trusses while 20 spans are encased deck girders on steel and concrete pier bents. The east end contains concrete slab spans. The predominantly elevated Rt. 1&9 is America's first super highway, built as the approach to the Holland Tunnel in 1927-1932. This span is individually eligible for listing in the National Register of Historic Places under Criterion C. and is a contributing element of the US Route 1&9 Historic District under Criteria A and C.

INFORMATION

PHOTO: 25:32-35;27:8-1 (05/17/91)

REVISED BY (DATE):

QUAD: Jersey City



NEW JERSEY HISTORIC BRIDGE DATA

that one of the railroad bridges (carrying a freight line) would be built parallel and adjacent to the Highway bridge, and that to save on the cost one set of piers would be built to carry both bridges, the costs of the piers to be divided proportionately. The railroad followed essentially the same procedure for floating the new spans into place and removing the old spans, at the same time (Eng. News-Record, 778-780; Annual Report 1927, p. 403). The highway was opened for traffic on Nov. 5, 1930, and the previous bridge was removed (Annual Report, 1930, p. 480, 483).

W.J. Sloan was chief engineer for the State Highway Department, and he gave final approval to all plans for the bridge while Sigvald Johannesson was the "engineer of design," according to Engineering News-Record. Consulting engineers for the lift bridge portion were Harrington, Howard and Ash of Kansas City and New York. The firm was noted for its vertical lift bridges, and they designed many in the state built between 1925 and 1942. The contractor for the bridge superstructure (river spans and east approach) were Stroebel Steel Construction Co. (1929 AR, p. 527). It was fabricated by Mt. Vernon Bridge Co. (Ohio).

PHOTO: 21:13-15;27-34 (04/26/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0905151	CO	HUDSON	OWNER	RAILROAD	MILEPOINT	1.2
NAME & FEATURE INTERSECTED	CONRAIL MEADOWS BRANCH 1 OVER US 1&9T			FACILITY	CONRAIL MEADOWS BRANCH 1 (PENNSYLVANIA RR)		
TOWNSHIP	KEARNY TOWN			DESIGN			
TYPE	THRU GIRDER	LENGTH	191 ft	WIDTH	12.6 ft	MATERIAL	Steel
# SPANS	2	ALTERATION DT		SOURCE	JOURNAL REFERENCE		
CONSTRUCTION DT	1918-post	BUILDER	AMERICAN BRIDGE COMPANY				
DESIGNER/PATENT							

SETTING / CONTEXT The bridge takes an active Conrail industrial spur across US 1&9T, a busy arterial route, in an area of sprawling modern industrial plants and overgrown vacant land. A modern firehouse is to the northeast. It is the southernmost of two closely spaced spans that originally crossed the Morris Canal (abandoned in 1924 and subsequently drained and filled) as well as the eastbound lanes of US 1&9T.

1995 SURVEY RECOMMENDATION Not Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible.
CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The 2 simple span thru girder bridge with floor beams is supported on a concrete substructure and decorative concrete pylons at the girder ends. It has a ballasted deck. Not original to this location, the bridge was moved here for the rail spur which was built quickly to service the WW I federal shipyard. The yard has been redeveloped and does not retain its historic character. While the bridge has historical association with WW I, it is an example of a common type and is distinguished.

INFORMATION

Bibliography:
 "Temporary bridge of old girders has suspended floor." Engineering News-Record. Vol. 81, pp. 538-39.
 Parsons, Floyd W., ed: New Jersey: Life, Industries and Resources of a Great State. Newark, NJ: New Jersey State Chamber of Commerce, 1928.

Physical Description: The bridge consists of two thru riveted girder spans with a total span of 191 ft. The bridge is built for heavy railroad loads and has a ballasted deck. The pier and abutments are of concrete. The sides of the abutments continue up in concrete pylons about 6-8 ft. above the deck of the bridge; these four pylons serve no functional purpose and are decorative features unusual for a bridge carrying an industrial rail siding. The bridge is an apparently unaltered example of the thru girder type as built by and for a railroad. The bridge carries an industrial branch of the former Pennsylvania RR over what was then called the Lincoln Highway, now US 1&9T, a busy arterial highway. The surroundings were originally the open marshes of the Hackensack Meadows, but by this date these had been diked and filled to form a low-lying, largely vacant area.

Historical and Technological Significance: In 1917, U.S. Steel began the emergency construction of the Federal Shipbuilding Yard at Kearny, a 160-acre facility intended to produce large numbers of ocean-going cargo vessels to assist the war effort in WW I. The facility included a number of large brick buildings a few hundred feet south of the Lincoln Highway. Some of these buildings remain, but the facility, which achieved its historical significance during World War I, is not well preserved, and does not have the integrity to be evaluated as a potential historic district.

At the time the shipyard was under construction, the Morris Canal was still in limited use. In this area the canal had been constructed in 1836, and it ran along the south side of the Lincoln Highway. The southern span of the railroad bridge therefore had to be long enough to span the canal as well as the eastbound lanes of the highway. In 1922, the canal was officially abandoned, and not long thereafter it was filled in. Presently a billboard stands just east of the bridge in the filled-in canal bed. A casual observer would not be aware that the Canal was once here, and might therefore wonder why the bridge is so much longer than necessary to span the three eastbound highway lanes.

The Federal Shipbuilding Yard at Kearny was built quickly, and 30 vessels of 10,000 ton capacity were constructed in a short time (it performed the same function in WW II). The urgent measures that had to be undertaken by the United States following our entry into WW I in 1917 included the construction of large numbers of cargo vessels to replace those lost to German submarines, in order to convey quantities of war material and supplies to Europe.

Such a large industrial enterprise naturally required railroad service, both to provide construction materials for original construction of the shipyard and to supply it with raw materials for its operations. The Pennsylvania RR built a spur south from Meadows Yard in Kearny toward the shipyard. The spur had to bridge the Lincoln Highway to get access to the new ship yard. In order to complete the spur as quickly as possible, the railroad constructed a temporary bridge of 85' span with trestle approaches using, in an ingenious way, some old bridge girders it had. This bridge was to be replaced as soon as possible by a more permanent structure (the site and the temporary bridge are described in Engineering News-Record. 1918).

The present bridge was built after 1918, but almost certainly before 1924, the year the Morris Canal was officially abandoned. The girders of the new bridge, were not new but had been built by the American Bridge Co. in 1915, according to a plate mounted on the girders. It is not known how or where they were used before being incorporated into the present bridge. The thru girder bridge is not a technologically distinguished example of its type and is thus not individually noteworthy.

The bridge can be considered one of the last remnants of the Canal era in Hudson County, as when built it was made long enough to span the still existing Canal adjacent to the highway. The Federal Shipbuilding Yard is now closed, but south of it is a BASF chemical facility that still requires regular rail service using the bridge.

In summary, neither the site nor the structure appear to meet National Register criteria. The bridge is a representative example of a common type, and the shipyard does not retain its historic appearance, including the filling of the Morris Canal. Much of the site has been



NEW JERSEY HISTORIC BRIDGE DATA

redeveloped for modern industrial purposes.

PHOTO: 27:25-33 (05/31/91)

REVISED BY (DATE):

QUAD: Jersey City



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0910152	CO	HUDSON	OWNER	UNKNOWN	MILEPOINT	5.29
NAME & FEATURE INTERSECTED	AMTRAK NORTHEAST CORRIDOR OVER NJ 7			FACILITY	AMTRAK NORTHEAST CORRIDOR RAIL LINE		
TOWNSHIP	KEARNY TOWN			DESIGN			
TYPE	DECK PLATE GIRDER			MATERIAL	Steel		
# SPANS	2	LENGTH	90 ft	WIDTH	No Data		
CONSTRUCTION DT	1907	ALTERATION DT		SOURCE	PLAQUE		
DESIGNER/PATENT	PA RR OFFICE OF ENGINEER			BUILDER	PENNSYLVANIA STEEL COMPANY		

SETTING / CONTEXT The bridge carries Amtrak's high speed double track passenger railroad over NJ 7 in the midst of the Hackensack Meadows, with some undistinguished modern industrial structures among the reeds surrounding the bridge. The northernmost of the structure's two spans bridges the Jersey City water supply aqueduct.

1995 SURVEY RECOMMENDATION Not Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible.
CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY Although built as part of the Pennsylvania RR's 1905-1910 extension to New York City via a "high line" over the Hackensack Meadows, the bridge is a representative example of a common type. It consists of a deck plate girders with floor beams and is supported on concrete abutments and pier with ashlar cap stones, a common ca. 1905 detail. The span appears to be in its original state, but the metal railing does not appear to date to 1907. The bridge is not technologically significant.

INFORMATION Bibliography:
 Temple, E.B. "The New York Tunnel Extension of the Pennsylvania RR Meadows Division and Harrison Transfer Yard." Transactions of the American Society of Civil Engineers. Vol. 68 (1909), pp.75-90.

Physical Description: The 2-span built-up deck girder with built-up floor beams bridge carries Amtrak's electrified double-track Northeast Corridor line toward the tunnels under the Hudson River. It is supported on concrete abutments with stone caps. The abutments were built wide enough for more sets of girders, but the were never added. The deck is ballasted and is enclosed by low pipe railings affixed to the top flanges of the girders. The span appears unaltered, and it has no distinguishing details.

Historical and Technological Significance: The technologically undistinguished built-up deck plate girder bridge was built in 1907 as part of the development of the Pennsylvania Railroad's New York Extension project. One of the largest and most costly construction projects ever undertaken by a private company, the project, part of the development of Pennsylvania Station, consisted of an elevated double-track line from Harrison across the Jersey Meadows to Bergen Hill (the Palisades) and then under the Hudson river to the massive new through station being built in Manhattan. The extension line then continued under Manhattan and the East River to a large new passenger station train-servicing yard on Long Island. The line is still in operation and is part of the busiest and most significant passenger rail corridor on the East Coast.

Despite its historical association with the development of the line and its continued use, the span and most sections of the right-of-way are not technologically significant. While there are some technologically distinguished features to the New York Extension, like the subaqueous tunnels and the subterranean right-of-way in Manhattan, this stretch of road and the bridge over NJ 7 are not. The bridge is a representative example of a common bridge type and design.

The basis for the 1935 date of construction assigned to the span by NJDOT is unknown. The span was designed by the Pennsylvania Railroad Office of Engineer of Bridges and Buildings. H. R. Leonard signed the plans which are dated 1907. The Pennsylvania Steel Company was the fabricator (bridge plaque).

PHOTO: 203:15A-21A (07/28/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917150	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.9
NAME & FEATURE INTERSECTED	NJ 495 OVER US 1&9 (TONNELE AVENUE) AND CONRAIL			FACILITY	NJ 495		
TOWNSHIP	NORTH BERGEN TOWNSHIP						
TYPE	DECK GIRDER	DESIGN		MATERIAL	Steel		
# SPANS	9	LENGTH	1152 ft	WIDTH	92.5 ft		
CONSTRUCTION DT	1939	ALTERATION DT	1956	SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER	AMERICAN BRIDGE COMPANY		

SETTING / CONTEXT The bridge is at the edge of the Hackensack Meadows that is crisscrossed with interconnecting highways. It carries the approach from the west toward the Lincoln Tunnel, taking traffic from the Meadows level up to a cut through Bergen Hill. This viaduct is an integral part of the Lincoln Tunnel approach route built in the late 1930s, a historic and vital artery in the region's highway transportation network.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes

CONSULT STATUS Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.

CONSULT DOCUMENTS SHPO Letter 6/30/95 11/17/99.

SUMMARY The bridge consists of nine deck plate girder spans, two of which include cantilevered sections. The longer spans have haunched girders. The bents are rigid frame steel arches. The structure was widened in 1956, but the original design is well preserved, and it is an eligible resource as an innovative design to the problem of carrying an important traffic artery from one general level (the Hackensack Meadows) to another (the surface of Bergen Hill, also known as the Palisades).

INFORMATION

Bibliography:

- Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
- Port Authority of New York. Annual Report. 1956.
- Dunham, Clarence. "Viaduct Approach to Lincoln Tunnel," Engineering News-Record. Vol. 124 (20 Feb. 1940), pp. 311-314.

Physical Description: The viaduct consists of a 1,152,-long straight section and a 2-lane ramp at the east end and a curved ramp off the north side near the center of the span. Clarence Dunham, one of the engineers who helped design and build the viaduct, called it "an unusual structure and a rather striking departure from the types of viaduct that have been used in the past" (Dunham, p. 41). According to him the reason for its unusual design was twofold: toe foundations could not be designed for heavy loads, and at the same time it was desired to "give the most pleasing aesthetic effect possible" (Ibid.).

Most of the viaduct was to rest on the clay of the Jersey Meadows, which was not suitable for heavy foundations unless they were supported on piles or caissons going down to rock. Instead the engineers chose to use the lightest practical type of construction, with relatively long spans. Where rock was less than 50' from the surface at the easterly end of the viaduct, the foundations went down to rock. Elsewhere they were supported on piles. It was expected that differential settlement would occur under the piles, and the western abutment. Intermediate piers and the superstructure itself were carefully designed so the bridge would not be endangered by possible movements of the foundations, and adjustments were allowed for the expected settlement of the embankment connecting to the viaduct at its western end.

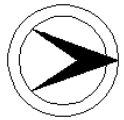
The viaduct is a series of spans combining continuous rigid frame and simple beam spans, all composed of deck girders. These are not of constant depth but rather vary according to the bending moment; they have curved bottom flanges which are deepest at the joints with the piers. This was done both for technical reasons and for a graceful appearance, according to Dunham. In the two rigid frames the pier legs are securely fastened to the deck girders between the rigid frames are suspended spans. The other piers are arranged in one of two ways: either as two-hinged bents or with a fixed top connection (to the adjacent deck girders) but with a hinge at the bottom. The piers that are part of the rigid frames are also hinged at their bases (Dunham, p. 41-43).

In addition to the main viaduct, the structure includes two off-ramps, one forming three quarters of a circle as it descends toward southbound Route 1.

Aesthetic considerations in the design of the viaduct include emphasis of the flanges of the girders by use of a secondary angle on the outside web of the exterior girders, giving appearance of deep, wide chords instead of a plain girder. Also, the legs of the piers are tapered from B" at top to 2' at bottom. This together with their flanges and the vertical angles at their centers are intended to give them pleasing lines. Another contribution to pleasing lines is the replacement of cross-bracing with portal bracing, which has double webs and diaphragms for torsional resistance (Dunham, p. 42).

An extra lane has been added in each direction in 1956, the time the third tube was being added to the Lincoln Tunnel. The exit ramps from the north side prevented expanding in that direction, so all the space was added on the south side, where an additional leg was added south of each pier to support an additional girder along the south side, braced to the original external girder. In addition, new floor beams were added with great cantilevered overhang on the east side, giving additional space. The sidewalks were modified as well. Efforts were made during the reconstruction to maintain the original appearances of the structure. The deck was reconstructed in the mid-to late-1980s.

Historical and Technological Significance: The viaduct is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). Technologically the viaduct is a significant engineering solution of a difficult problem of carrying an important traffic artery over the soft Jersey Meadows up to the level of Bergen Hill. It was done in a successful and visually pleasing manner. The road itself is also technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It



NEW JERSEY HISTORIC BRIDGE DATA

was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is individually distinguished as well as a contributing resource to the potential historic route (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 24:4-12,19;25:8 (05/03/91)

REVISED BY (DATE):

QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917152	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	KENNEDY BLVD SECOND LEVEL SOUTHBOUND OVER NJ 495		FACILITY	KENNEDY BOULEVARD SECOND LEVEL SOUTHBOUND			
TOWNSHIP	NORTH BERGEN TOWNSHIP						
TYPE	RIGID FRAME	DESIGN		MATERIAL	Reinforced Concrete		
# SPANS	2	LENGTH	79 ft	WIDTH	30 ft		
CONSTRUCTION DT	1938	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries part of the intermediate level of an unusual 3-level interchange between a local street and a depressed section of the Lincoln Tunnel approach road. The intermediate level serves as a kind of circle for vehicles changing from one road to another. The bridge carries a ramp over NJ 495, as does the identical span (0915155) to which it is connected via short roadways built on bedrock.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes

CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.

CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The 2-span rigid frame bridge with scored exposed concrete and stone-faced concrete wingwalls is detailed like other bridges on the corridor designed and built for the Port of New York Authority in 1938 as the approach to the Lincoln Tunnel. The bridge is significant as part of an innovative 3-level grade separation structure, with turning lanes forming a traffic circle located vertically between intersecting roadways, that accommodates both through and local traffic. It is well preserved.

INFORMATION

Bibliography:
Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
Port Authority of New York. Annual Report. 1956.

Physical Description: The bridge is a 2-span reinforced concrete rigid frame. It is one of eight similarly detailed rigid frame spans on the limited access highway, and it is finished with a random ashlar stone veneer on the abutments, granite facing on the fascia and the ends of the pier, scored exposed concrete and pipe railings in an Art Moderne style on the parapets. The pedestrian fence is a recent addition. The bridge is well preserved.

Historical and Technological Significance: The rigid frame bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 24:20-22 (05/03/91)

REVISED BY (DATE):

QUAD: Weehawken



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917155	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	KENNEDY BLVD SECOND LEVEL NORTHBOUND OVER NJ 495		FACILITY	KENNEDY BOULEVARD SECOND LEVEL NORTHBOUND			
TOWNSHIP	UNION CITY						
TYPE	RIGID FRAME	DESIGN		MATERIAL	Reinforced Concrete		
# SPANS	2	LENGTH	79 ft	WIDTH	30 ft		
CONSTRUCTION DT	1938	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER	UNKNOWN		

SETTING / CONTEXT The bridge carries a ramp from a depressed section of the Lincoln Tunnel approach road to the middle level of a 3 level intersection between NJ 495 and JFK Boulevard, a city street. It is really part of a mid-level circle that links the two roads, and it is paired with an identical span (0917152) that carries south bound traffic across the depressed roadway. They are connected by short roadways built on bedrock.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The 2-span rigid frame bridge with a sleek metal railing is finished with scoring in the exposed concrete and dressed stone facing on the concrete wingwalls that is common to all spans on the roadway, designed and built by the Port Authority to access the 1937 Lincoln Tunnel. The bridge is part of an unusual grade separation design where turning lanes form part of a traffic circle located vertically between the intersecting arteries. It is technologically and historically significant.

INFORMATION Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The bridge is a 2-span reinforced concrete rigid frame. It is part of a three-level bridge. The bridge carries the southbound part of the intermediate level of an unusual type of grade separated traffic interchange between JFK Boulevard and NJ 495, the Lincoln Tunnel approach highway, in which the intermediate level serves as kind of circle for all vehicles making turns from one route to the other. It carries this traffic over NJ 495.

Examples of aesthetic considerations in building this bridge include cut stone facings on the abutments, granite facing on the fascia and the ends of the pier, and pipe railings in an Art Moderne style on the parapets. It is detailed in the same mode as the eight other rigid frame spans on the limited-access highway.

Historical and Technological Significance: The rigid frame bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.



NEW JERSEY HISTORIC BRIDGE DATA

PHOTO: 24:24-25;2s (05/03/91)

REVISED BY (DATE):

QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917156	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	SUMMIT AVENUE OVER NJ 495			FACILITY	SUMMIT AVENUE		
TOWNSHIP	UNION CITY			DESIGN			
TYPE	RIGID FRAME	LENGTH	131 ft	WIDTH	40 ft	MATERIAL	Reinforced Concrete
# SPANS	2						
CONSTRUCTION DT	1938	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries a 2-lane city street, shoulders, and sidewalks over NJ 495, the six lane highway approach to the Lincoln Tunnel. It is located in an urban mixed residential and commercial area, with modernized row houses of various ages and one-story commercial structures. This section of the 2.8-mile long highway is an open cut through the west side of the Palisades through a congested area with a grid street pattern.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The 2-span rigid frame bridge supporting a concrete slab roadway and parapets and pipe railings exhibits Art Moderne detailing common to the other spans on the historically and technologically significant approach to the 1937 Lincoln Tunnel. Exposed concrete is scored, and the wingwalls are faced with random-coursed stone. One of 8 rigid frame spans on the route, the bridge is not individually distinguished, but it is a contributing element to the historic route.

INFORMATION Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The bridge is a 2-span reinforced concrete rigid frame. It is one of eight similarly detailed rigid frame spans on the limited access highway, and it is finished with a random ashlar stone veneer on the abutments, granite facing on the fascia and the ends of the pier, scored exposed concrete and pipe railings in an Art Moderne style on the parapets. The pedestrian fence is a recent addition. The bridge is well preserved.

Historical and Technological Significance: The rigid frame bridge, one of eight on the route, is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 24-26-7,29 (05/03/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917157	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	CENTRAL AVENUE OVER NJ 495			FACILITY	CENTRAL AVENUE		
TOWNSHIP	UNION CITY			DESIGN		MATERIAL	Reinforced Concrete
TYPE	RIGID FRAME						
# SPANS	2	LENGTH	79 ft	WIDTH	30 ft		
CONSTRUCTION DT	1938	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries a wide, 2-lane city street over NJ 495, the six-lane highway approach to the Lincoln Tunnel. The limited access approach road was built through a congested 20th-century residential area in 1938, and it is a combination of open cuts and elevated sections. The route, old NJ 3, is a well-preserved and technologically significant engineering solution to mid-20th century highway development. It has district potential.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The 2-span rigid frame bridge with a plain metal railing and stone-faced concrete wing walls is part of the late-1930s cut that carries the approach road to the Lincoln Tunnel through established areas. The span has the same Moderne detailing found on other bridges along the corridor. Exposed concrete is scored, and the stone veneer is crisp and devoid of embellishment which is in the sleek Modern taste. It is one of eight rigid frame overpasses on the technologically significant corridor.

INFORMATION

Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The bridge is a 2-span reinforced concrete rigid frame. It is one of nine similarly detailed rigid frame spans on the limited access highway, and it is finished with a random ashlar stone veneer on the abutments, granite facing on the fascia and the ends of the pier, scored exposed concrete and pipe railings in an Art Moderne style on the parapets. The pedestrian fence is a recent addition. The bridge is well preserved.

Historical and Technological Significance: The rigid frame bridge, one of seven on the route, is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 25-2-3,28;1s (05/03/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917158	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	BERGENLINE AVE OVER NJ 495			FACILITY	BERGENLINE AVENUE		
TOWNSHIP	UNION CITY			DESIGN			
TYPE	RIGID FRAME	LENGTH	79 ft	WIDTH	41.5 ft	MATERIAL	Reinforced Concrete
# SPANS	2						
CONSTRUCTION DT	1938	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries a 2-lane city street, shoulders, and sidewalks over NJ 495, the six-lane limited-access approach to the Lincoln Tunnel. It is located in a densely developed urban mixed residential and commercial area, with old but modernized row houses and modern commercial structures. The approach road is a combination of open cut and elevated sections that was integrated into an existing street pattern.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The 2-span rigid frame bridge with a plain metal railing and modern pedestrian barrier has stone-faced concrete wingwalls and scored Moderne detailing to the exposed concrete. It is one of 8 rigid frame spans built as part of the historically and technologically significant route that utilizes a variety of steel and concrete bridge types to carry local roads over the limited-access approach. While not individually distinguished, the span is eligible because of its historical associations.

INFORMATION Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The bridge is a 2-span reinforced concrete rigid frame. It is one of eight similarly detailed rigid frame spans on the limited access highway, and it is finished with a random ashlar stone veneer on the abutments, granite facing on the fascia and the ends of the pier, scored exposed concrete and pipe railings in an Art Moderne style on the parapets. The pedestrian fence is a recent addition. The bridge is well preserved.

Historical and Technological Significance: The 1938 rigid frame bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 24:30-31;25:4;1 (05/03/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917159	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	NEW YORK AVE OVER NJ 495			FACILITY	NEW YORK AVENUE		
TOWNSHIP	UNION CITY						
TYPE	RIGID FRAME	DESIGN		MATERIAL	Reinforced Concrete		
# SPANS	2	LENGTH	79 ft	WIDTH	45.2 ft		
CONSTRUCTION DT	1938	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries a wide, 2-lane city street and sidewalks over NJ 495, the six lane highway approach to the Lincoln Tunnel. It is located in an urban mixed residential and commercial area, with buildings from 1900 to the 1980s. The roadway itself was built using open cuts and elevated sections to get through a congested area built atop the Palisades. It had to be integrated into an existing grid pattern of city streets.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The 2-span rigid frame bridge with a plain metal railing is detailed in the Moderne style with scoring to the exposed concrete and random-coursed stone veneer at the concrete wing walls. Such styling is common to all structures on the old Rt 3 approach to the Lincoln Tunnel designed and built for the Port of New York Authority. The bridge is one of 8 rigid frame bridges that carry local streets over the open-cut portion of the highway. It is well preserved and is a contributing resource.

INFORMATION Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The bridge is a 2-span reinforced concrete rigid frame. It is one of eight similarly detailed rigid frame spans on the limited access highway, and it is finished with a random ashlar stone veneer on the abutments, granite facing on the fascia and the ends of the pier, scored exposed concrete and pipe railings in an Art Moderne style on the parapets. The pedestrian fence is a recent addition. The bridge is well preserved.

Historical and Technological Significance: The rigid frame bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 24:32;25:5 (05/03/91) REVISED BY (DATE): QUAD: Weehawken



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917160	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	PALISADE AVE AND HACKENSACK PLANK ROAD OVER NJ 495		FACILITY	PALISADE AVENUE AND HACKENSACK PLANK ROAD			
TOWNSHIP	UNION CITY						
TYPE	RIGID FRAME	DESIGN		MATERIAL	Reinforced Concrete		
# SPANS	2	LENGTH	79 ft	WIDTH	40 ft		
CONSTRUCTION DT	1938	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge structure carries a perpendicular 2-lane city street and a diagonally oriented city street plus two paved plazas over NJ 495, the six-lane highway approach to the Lincoln Tunnel. The limited access road the bridge crosses is located in a densely developed 20th-century residential area on the Palisades or Bergen Hill in Weehawken.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The oddly shaped 2-span rigid frame bridge of reinforced concrete has slab supported on concrete column extensions on each side to accommodate a diagonally crossing street. The extensions are finished with the same arched soffit and scored concrete as the rigid frame portion of the bridge. The wingwalls are faced with the same random-ashlar stone veneer as the rest of the 2.8-long limited access route. While not individually distinguished, the span is part of a historically significant route.

INFORMATION

Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The bridge is a 2-span reinforced concrete rigid frame with slab extensions supported on concrete columns at each side to accommodate a diagonally crossing street. The areas of the extensions not used as roadway are concrete-paved plazas. It is one of eight similarly detailed rigid frame spans on the limited access highway, and it is finished with a random ashlar stone veneer on the abutments, granite facing on the fascia and the ends of the pier, scored exposed concrete and pipe railings in an Art Moderne style on the parapets. The pedestrian fence is a recent addition. The bridge is well preserved.

Historical and Technological Significance: The rigid frame bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 24:33-34;25:6;2 (05/03/91) REVISED BY (DATE): QUAD: Weehawken



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917161	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	HUDSON AVENUE OVER NJ 495			FACILITY	HUDSON AVE		
TOWNSHIP	UNION CITY			DESIGN			
TYPE	RIGID FRAME	LENGTH	81 ft	WIDTH	74.2 ft	MATERIAL	Reinforced Concrete
# SPANS	2						
CONSTRUCTION DT	1938	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries a city street over NJ 495, the six lane highway approach to the Lincoln Tunnel. It is located in a mixed urban residential and commercial neighborhood with a variety of structures, ranging from an 1880s brick brewery a couple of blocks north to a modern used car lot, with row houses and tenements of all ages as well. The span is part of an open-cut corridor.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The 2-span rigid frame bridge has a plain metal railing and severe Moderne-style detailing to the concrete and stone facing on the concrete wing walls. While not individually significant, it is one of 8 rigid frame spans used on the Port Authority's approach to the 1937 Lincoln Tunnel. The bridge is well preserved, and it is detailed like other spans on the historic route, which relies on standard period bridge types crossing a deep open cut right-of-way through urban areas.

INFORMATION Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The bridge is a 2-span reinforced concrete rigid frame with slab extensions supported on concrete columns at each side to accommodate a diagonally crossing street. The areas of the extensions not used as roadway are concrete-paved plazas. It is one of eight similarly detailed rigid frame spans on the limited access highway, and it is finished with a random ashlar stone veneer on the abutments, granite facing on the fascia and the ends of the pier, scored exposed concrete and pipe railings in an Art Moderne style on the parapets. The pedestrian fence is a recent addition. The bridge is well preserved.

Historical and Technological Significance: The rigid frame bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 24:35-36;25:7;1 (05/03/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917162	CO	HUDSON	OWNER	NJDOT	MILEPOINT	1.95		
NAME & FEATURE INTERSECTED	SOUTH MARGINAL STREET OVER PARK AVENUE		FACILITY	SOUTH MARGINAL STREET					
TOWNSHIP	WEEHAWKEN TOWNSHIP								
TYPE	DECK GIRDER	DESIGN						MATERIAL	Steel
# SPANS	1	LENGTH	116 ft	WIDTH	30.1 ft				
CONSTRUCTION DT	1938	ALTERATION DT						SOURCE	NJDOT
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY					BUILDER			

SETTING / CONTEXT The bridge carries a service road and sidewalks for NJ 495 over a busy avenue. It is part of the Lincoln Tunnel approach and is part of a 5-component structure that carries 3 levels of NJ 495 over Park Avenue. It is contiguous to 3800021 that takes eastbound traffic from S. Margin St. up to elevated NJ 495. The area around the structure is dominated by 20th-century townhouses and apartment buildings.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The well-detailed haunched deck girder with floor beams bridge is supported on a Moderne-style stone veneer concrete substructure. The concrete parapet is topped by a plain metal railing. The detailing is identical to other spans on the old Rt 3 approach to the 1937 Lincoln Tunnel. The 116'-long bridge is not technologically distinguished, but it is historically noteworthy as part of an important, well-preserved mid-20th century highway built in a developed setting.

INFORMATION

Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, (June, 1937), pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The deck girder bridge is the south-side, middle level of a 5-component, interconnector span. This section, which carries a service road and ramp parallel to the limited-access portion of the route, is composed of a built-up deck girders with floor beams supported on concrete abutments with engaged bearing columns. The wingwalls are ashlar-faced to match the stonework used all along the route. The fascia girders are detailed with a geometric pattern to the stiffeners and a secondary flange to provide a shadow line. The outside girder is topped by a three-high metal railing. The span is contiguous to 3800021, and it, as well as the entire interconnected structure are well preserved.

Historical and Technological Significance: The deck girder bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 26:23,25,27;201 (05/17/91) **REVISED BY (DATE):** **QUAD:** Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917163	CO	HUDSON	OWNER	NJDOT	MILEPOINT	1.95
NAME & FEATURE INTERSECTED	NORTH MARGINAL STREET OVER PARK AVENUE		FACILITY	NORTH MARGINAL STREET			
TOWNSHIP	WEEHAWKEN TOWNSHIP						
TYPE	DECK GIRDER	DESIGN					
# SPANS	1	LENGTH	130 ft	WIDTH	30 ft	MATERIAL	Steel
CONSTRUCTION DT	1938	ALTERATION DT					
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			SOURCE	NJDOT		
				BUILDER			

SETTING / CONTEXT The bridge carries a 3-lane service road parallel to the north side NJ 495 over a busy city street. It is an element in a 5-component 3-level structure that takes local traffic to and from elevated NJ 495, the 1937 Lincoln Tunnel approach. The bridge is contiguous to 3800024. The densely developed surrounding area is dominated by 20th-century town houses and apartment buildings.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes

CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.

CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY A skewed haunched deck plate girder with built-up floor beams span is supported on engaged columns set into stone-faced concrete abutments. The nicely detailed girder is finished with a plain steel railing on the outside while the inside girder carries rolled section columns that support, in part, the rolled beam with stiffeners of 3800024, the parallel span. The bridge is an element in a 5-component 3-level structure. It is a contributing element to the technologically significant highway.

INFORMATION

Bibliography:

Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, (June, 1937), pp. 387-391.
Port Authority of New York. Annual Report. 1956.

Physical Description: The deck girder bridge is the north-side, middle level of a 5-component, interconnector span. This section, which carries a service road parallel to the limited-access portion of the route, is composed of a built-up deck girders with floor beams supported on ashlar-faced concrete abutments. The fascia girders are detailed with a geometric pattern to the stiffeners and a secondary flange to provide a shadow line. The inside girder supports rolled I-section columns of 3800024. The outside girder is topped by a three-high metal railing. The span and the entire interconnected structure are well preserved.

Historical and Technological Significance: The deck girder bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 26:28-29;1s (05/17/91)

REVISED BY (DATE):

QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0917164	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	SOUTH MARGINAL STREET VIADUCT OVER VACANT LAND		FACILITY	SOUTH MARGINAL STREET			
TOWNSHIP	WEEHAWKEN TOWNSHIP						
TYPE	T BEAM	DESIGN		MATERIAL	Reinforced Concrete		
# SPANS	4	LENGTH	90 ft	WIDTH	30 ft		
CONSTRUCTION DT	1938	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries a local access service road that parallels an elevated section of NJ 495, the six-lane limited access approach highway to the Lincoln Tunnel, over vacant land. The viaduct is located on the south side of the elevated highway in a residential area dominated by 3-story row houses. The structure is a part of the historically and technologically significant roadway.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The reinforced concrete T-beams with a slab deck bridge is supported on concrete columns. Its south face is covered by a random ashlar stone veneer wall set with a flight of steps, and the north side is occupied by a viaduct that carries the ramp from S. Margin Street up to NJ 495. 0917164 is hardly discernible as a separate structure, but it is an original element in the development of the significant Lincoln Tunnel approach road and its interfacing with the existing urban street pattern.

INFORMATION

Bibliography:
 Ammann, O.H. 'Planning the Lincoln Tunnel Under the Hudson,' Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The 4-span T-beam bridge with a slab deck is supported on concrete columns. It is a component of a 5 element structure that links local streets with an elevated limited-access highway. Its south face is covered by a random ashlar stone wall set with a flight of steps. The masonry matches that used all along the 1.5-mile long route. The original lamp standard is in place, but the luminaire is gone. The north side is occupied by a viaduct that carries a ramp from a local street up to the level of the limited-access highway. A modern flight of steps has been added to the west side of the structure.

Historical and Technological Significance: The T-beam viaduct is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

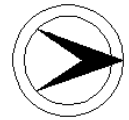
The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 201:24,26,44,45 (06/07/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0950163	CO	HUDSON	OWNER		MILEPOINT	2.21
NAME & FEATURE INTERSECTED	OCEAN AVE OVER CONRAIL (CENTRAL RR OF NJ)		FACILITY	OCEAN AVE			
TOWNSHIP	JERSEY CITY						
TYPE	DECK GIRDER	DESIGN	OPEN WEB		MATERIAL	Wrought Iron	
# SPANS	1	LENGTH	50 ft	WIDTH	40 ft		
CONSTRUCTION DT	1890ca	ALTERATION DT	Demolished		SOURCE PLANS		
DESIGNER/PATENT	CNJ RR OFF OF CHIEF ENGINEER			BUILDER	UNKNOWN		

SETTING / CONTEXT The setting consists of modernized single family homes and some 20th century apartment houses and small stores. The bridge crosses a deep cut through the city built in 1869 by the former Central RR of NJ as its Newark & New York Branch. This bridge is not the original bridge over the cut. The railroad is now abandoned and the cut is overgrown with brush and trees.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Bridge was Individually Eligible.
CONSULT DOCUMENTS SHPO Letter 03/12/01

SUMMARY The bridge is composed of six rivet-connected open web deck girders supported on ashlar abutments with concrete caps. The outermost girders have verticals while the inside ones do not. The diagonals are composed of wrought iron T sections. The railings date to 1913 as does the flooring system and concrete abutment caps. The girders were in place in 1913, and they date stylistically to ca. 1890. They represent a rare and complete example of an early railroad overpass bridge type. The bridge is individually eligible for listing in the National Register of Historic Places under Criteria A and C.

INFORMATION Bibliography:
 Schmidt, W.H.: "Costliest Railroad Now Half Abandoned." Trains Magazine. November 1948, p. 52.
 Schreiber, Mike: "Hudson County Trolley Lines" in Branford Electric Railway Journal. Vol. 26, (March-April 1980), p.8.

Physical Description: Rusticated ashlar abutments with concrete caps added in 1913 support six ca. 1890 rivet-connected wrought iron Howe truss open web deck girders, each composed of a top and bottom flange joined with riveted connections by diagonal cast or rolled T-section members. The fascia girders have verticals, built up with an unusual spacer in the center, while the inside girders do not. The flooring system of rolled floor beams and a concrete deck were part of the 1913 reconditioning of the span. The cantilevered sidewalks with iron fence-like railings were also added in 1913. A trolley line ran across the bridge until about 1938 (Schreiber, p. 8). The bridge and ashlar abutments are well preserved.

Historical and Technological Significance: When the rare wrought iron lattice deck girder bridge was constructed is not known, but it was in place in 1913, the year the structure was "reconditioned" by the Central Railroad of New Jersey (NJ). The flooring system, sidewalks, and railings were added that year as were the concrete abutment caps. The girders themselves were in place in 1913. They date stylistically to ca. 1890, and they represent a rare remaining example of a 19th-century bridge type. Another lattice or open web deck girder bridge is located at Bergen Avenue (0900011), also built over the same line. The Ocean Ave. span is technologically and historically significant as a rare example of a once-frequent bridge type (Criterion C). Approximately six of the open-web deck girders, all thought to be wrought iron, have been identified in the state, and all but one are railroad related. Other examples are located in Warren, Hunterdon, and Middlesex counties. Only three still function as deck girders.

The bridge carries a four-lane city street over a mile-long double track cut built in 1869 for the Newark & New York RR, a subsidiary of the CNJ, through Bergen Hill, a long rock ridge separating the waterfront of Hudson County from the land to the west. The Newark & New York RR was built to give the shortest, fastest route between Newark and the CNJ ferry terminal at Communipaw. In the 1920s, 38 local passenger trains traversed this route each way every weekday, stopping at four stations in the single mile of this cut in Jersey City. Passenger service ended in 1948 and the line was single tracked and used for freight only (Trains, p. 52). When Conrail took over the NJ's property in 1976, the line became the West Side Avenue Branch, but was abandoned by the mid-1980s. Track has been removed, and the right-of-way is now overgrown.

PHOTO: 29:12,23-27 (05/31/91) REVISED BY (DATE): QUAD: Jersey City

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0950164	CO	HUDSON	OWNER	UNKNOWN	MILEPOINT	2.14
NAME & FEATURE INTERSECTED	CLERK STREET OVER CONRAIL (EX-CENTRAL RR OF NJ)		FACILITY	CLERK STREET			
TOWNSHIP	JERSEY CITY						
TYPE	THRU GIRDER	DESIGN	PARTIALLY ENCASED		MATERIAL	Steel	
# SPANS	1	LENGTH	85 ft	WIDTH	30 ft		
CONSTRUCTION DT	1938	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT			BUILDER				

SETTING / CONTEXT The neighborhood is residential with many early-20th century structures, most of them with modern siding. It carries 2-lane street over a deep railroad cut constructed through Jersey City in 1869 by the Central Railroad of New Jersey as its Newark & New York branch. It is now abandoned and heavily overgrown with brush and trees. The original Belgian block paver wearing surface survives.

1995 SURVEY RECOMMENDATION Not Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The skewed thru girders with floor beams bridge has encased floor beams, but the bottom flanges are exposed. The abutments are concrete, but they may be simply a concrete skin over earlier ashlar abutments. The wing walls are stone. The bridge is a representative example of a very common rail-carrying overpass type, and it is not technologically innovative or historically distinguished.

INFORMATION

PHOTO: 29:20-22,29-30 (05/31/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0951165	CO	HUDSON	OWNER	RAILROAD	MILEPOINT	1.24
NAME & FEATURE INTERSECTED	PALISADE AVENUE OVER CONRAIL BERGEN ARCHWAYS		FACILITY	PALISADE AVE			
TOWNSHIP	JERSEY CITY						
TYPE	ARCH	DESIGN	BARREL	MATERIAL	Reinforced Concrete		
# SPANS	2	LENGTH	97 ft	WIDTH	40 ft		
CONSTRUCTION DT	1910	ALTERATION DT	1997	SOURCE	NJDOT		
DESIGNER/PATENT	ERIE RR OFFICE OF ENGINEER			BUILDER	MILLARD CONST CO (PHILA)		

SETTING / CONTEXT The bridge is adjacent to NR-listed 1904-12 Dickinson High School. It bridges the Bergen Archways, a deep railroad cut built through Jersey City by the Erie RR 1907 - 1910 but now abandoned. The south arch spans an old trolley grade, parallel to but not as deep as the railroad cut. Stairs go from deck level to trolley grade level, suggesting the bridge served as shelter for a trolley stop.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Individually Eligible. Erie RR Main Line Historic District, Eligible. Erie RR Bergen Archway / Bergen Hill Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Opinion 02/20/98, Comments 3/10/99 4/27/00.

SUMMARY The 2-span reinforced concrete arch bridge is historically noteworthy as an original component of the Bergen Archways. It is also associated with Jersey City's former trolley network. It retains its concrete balustrade plus an old iron railing, and it is well preserved. The reinforcing is in the Monier tradition. The span ranks as the most ambitious early concrete arch bridge in the county. The bridge is individually eligible for listing in the National Register of Historic Places and is also an element of the Erie RR's technologically significant Bergen Archway / Bergen Hill Tunnel Historic District under Criteria A and C.

INFORMATION
 Bibliography:
 "Beginning of Erie's Terminal Improvements," Railway Age. Vol. 46,(28 Dec. 1906), pp. 831-834.
 "The New Four-Track Entrance of the Erie Railroad into Jersey City," Engineering Record. Vol. 57, (18 April 1908), pp. 516-518.
 Mike Schreiber: "Hudson County Trolley Lines," Branford Electric Railway Journal, Vol. 26 (March-April, 1980).
 "Erie Terminal Improvements in Jersey City" The Railroad Gazette Vol. XLIV, No. 20, May 15, 1908 pp. 669-672
 "The New Four-Track Line of the Erie Railroad Through Bergen Hill, Jersey City" Engineering News Vol. 58, No. 8 February 21, 1907 pp. 204-205

Physical Description: The bridge consists of two spans of reinforced concrete arches. It retains its original concrete parapets topped by a tall iron picket fence, also apparently original. Field inspection revealed that the bridge's reinforcing is visible where concrete has spalled on the intrados. The pattern revealed suggests that the reinforcement consists of a grid of steel rods fairly close to the surface. This type of reinforcement is reminiscent of that of the early concrete pioneer Monier, and also of present day practice. It is much lighter and more efficient than the Melan system in vogue at the time. The bridge is in deteriorating but unaltered condition.

Historical and Technological Significance: The 1910 reinforced concrete bridge is a representative example of its type, but it is historically important as an original element of the Bergen Archways, the open cut with interspersed tunnels that traverses Bergen Hill (also known as the Palisades) in Jersey City. The Bergen Archways was built 1907-1910 as a solution to the problem of getting a large quantity of commuter passenger trains from several different rail lines west of Bergen Hill to the Erie Railroad's passenger terminal on the waterfront of the Hudson River east of the hill. The Archways was a major engineering work in which more rock was removed than in any other such project up to that time; it was 4400' long, 60' wide at the bottom, and 40' to 75' deep. The bridge is individually historically significant due to its construction technology and its association with both the Bergen Archways and the trolley line it also spanned, and it is significant as a contributing resource to the potential Bergen Archways Historic District (Criterion C).

The bridges for Baldwin and Palisade Avenues were built while temporary bridges carried their traffic over the partially excavated cut. It is possible the same form work was used for the bridges as was used for the tunnel linings, since the latter was meant to be reused after each section was completed. Originally it was expected that the Palisade Avenue bridge would be a plate girder span of 80 foot, while the Baldwin Avenue bridge would be either of steel or concrete. By 1908 it had been decided to use reinforced concrete for the Baldwin Avenue bridge but the Palisade Avenue bridge was still to be of steel. In the end the Palisade Avenue bridge was also built as a reinforced concrete arch. Evidently these were the pioneering concrete arches for the Erie RR, and mark this project as a transition between the two materials. The result was a four-track route with four tunnels under major streets and street intersections, but open for most of its route to allow smoke and fumes from locomotives to escape. The route drew its name from the dramatic effect created by the "bridges of living rock" left standing over the cut, an effect emphasized by the width of the tunnels and the sheerness of the walls of the cut (Erie Railroad Magazine, P. 15).

The Archways ceased to be used for passenger trains in 1956-57 with the transfer of all Erie RR passenger trains to the Lackawanna RR's Hoboken Terminal. It continued to be used for freight trains until the mid-1980s, but is now abandoned and has become overgrown with trees and brush.

The Bergen Archways was an innovative solution to the problem of inserting a railroad corridor to accommodate a high volume of passenger traffic into a built-up urban area and through a solid rock barrier. It has two pioneering reinforced concrete arch bridges and its four-track tunnels carrying streets over the cut are probably the largest "tunnel bridges" (a tunnel primarily dug to serve instead of a bridge) in the state. It was designed by the engineering department of the Erie RR, G.H. Burgess, Principal Assistant Engineer, A.L. Moorehead, Resident Engineer, and F.L. Stuart, Chief Engineer. Millard Construction Company of Philadelphia was the contractor. The bridge is one of six structures on the Archways route (0951165-0951170), and all have been evaluated as significant because of their historic and technical associations with the significant right-of-way.

Boundary Description and Justification: The tunnel is significant within the historic context of the ambitious railroad right-of-way



NEW JERSEY HISTORIC BRIDGE DATA

development. It is part of a right-of-way that has visual, historical, and technical cohesiveness. The setting of the right-of-way is also fairly well preserved. Thus the tunnel and the entire 4400'-long Bergen Archways right-of-way are evaluated as a district with this structure being an individually eligible and a contributing resource.

PHOTO: 22:17-18 (04/26/91)

REVISED BY (DATE):

QUAD: Jersey City



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0951166	CO	HUDSON	OWNER	RAILROAD	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	BALDWIN AVENUE OVER CONRAIL BERGEN ARCHWAYS		FACILITY	BALDWIN AVENUE			
TOWNSHIP	JERSEY CITY						
TYPE	ARCH	DESIGN	ELLIPTICAL		MATERIAL	Reinforced Concrete	
# SPANS	1	LENGTH	60 ft	WIDTH	30 ft		
CONSTRUCTION DT	1910	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT	ERIE RR OFFICE OF ENGINEER			BUILDER	MILLARD CONST CO (PHILA)		

SETTING / CONTEXT The bridge carries a city street over a deep cut made by the former Erie RR 1907-1910 to provide a new passenger line approach to the Hudson River waterfront (the Bergen Archways), now abandoned and overgrown with brush and trees. It is located in an undistinguished urban mixed residential and commercial area, including modernized row houses and one-story modern commercial structures.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Not Individually Eligible. Erie RR Main Line Historic District, Eligible. Erie RR Bergen Archway / Bergen Hill Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Opinion 02/20/98, Comments 3/10/99 4/27/00.

SUMMARY The high rise reinforced concrete arch bridge has concrete parapets topped by a high decorative iron fence. The bridge is a single-span duplicate of 0951165 (located to the north), and it is an original element of the Bergen Archways route developed by the Erie RR 1907-1910. While the bridge is not individually eligible for listing in the National Register of Historic Places, the railroad route is technologically and historically significant, and the unaltered bridge is a contributing resource to the route and is eligible under Criteria A and C. It was built at the same time as 095116.

INFORMATION
 Bibliography:
 "Beginning of Erie's Terminal Improvements," Railway Age. Vol. 46, (28 Dec. 1906), pp. 831-834.
 "The New Four-Track Entrance of the Erie Railroad into Jersey City," Engineering Record. Vol.57, (18 April 1908), pp. 516-518.
 "Erie Terminal Improvements in Jersey City" The Railroad Gazette Vol. XLIV, No. 20, May 15, 1908 pp. 669-672
 "The New Four-Track Line of the Erie Railroad Through Bergen Hill, Jersey City" Engineering News Vol. 58, No. 8 February 21, 1907 pp. 204-205

Physical Description: The bridge consists of one reinforced concrete arch. It retains its concrete balustrade topped by a tall metal picket railing. The design or pattern of the reinforcement is not known. Since it was built as part of the same project as 0951165, the Monier-type reinforcing system of a grid of reinforcing rods was probably used for this span as well. This type of reinforcement is reminiscent of that of Monier, and also of present day practice. The span appears to be unaltered.

Historical and Technological Significance: In addition to being a well-preserved example of a reinforced concrete arch bridge reinforcing system, the 1910 overpass is historically important as an original element of the Bergen Archways, the open cut with interspersed tunnels that traverses as the Palisades in Jersey City. The 1907-1910 as a solution to the problem of getting a large quantity of commuter passenger trains from several different rail lines west of Bergen Hill to the Erie RR's passenger terminal on the waterfront of the Hudson River east of the hill. The Archways was a major engineering work in which more rock was removed than in any other such project up to that time; it was 4400' long, 60' wide at the bottom, and 40' to 75' deep (Criterion C). It is evaluated as significant because it is a contributing resource to the potential Bergen Archways Historic District.

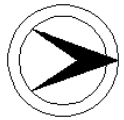
The bridges for Baldwin and Palisade Avenues were built while temporary bridges carried their traffic over the partially excavated cut. It is possible the same centering was used for the bridges as was used for the tunnel linings, since the latter was meant to be reused after each section was completed. Originally it was expected that the Palisade Avenue bridge would be a plate girder bridge of 80 foot span, while the Baldwin Avenue bridge would be either of steel or concrete (Railway Age, p. 834). Reinforced concrete bridges were not very common at the time this project was planned. By 1908 it had been decided to use reinforced concrete for the Baldwin Avenue Bridge but the Palisade Avenue Bridge was still to be of steel. In the end, the Palisade Avenue bridge was also built as a reinforced concrete arch. Evidently, then, these were the pioneering concrete arches for the Erie RR, and mark this project as a transition between the two materials.

The result was a four-track route with four tunnels under major streets and street intersections, but open for most of its route to allow smoke and fumes from locomotives to escape. The route drew its name from the dramatic effect created by the "bridges of living rock" left standing over the cut, an effect emphasized by the width of the tunnels and the sheerness of the walls of the cut (Erie Railroad Magazine, p. 15).

The Archways ceased to be used for passenger trains in 1956-57 with the transfer of all Erie RR passenger trains to the Lackawanna RR's Hoboken Terminal. It continued to be used for freight trains until the mid-1980s, but is now abandoned and has become overgrown with trees and brush.

The 1907-1910 Bergen Archways was an innovative solution to the problem of inserting a railroad corridor to accommodate a high volume of passenger traffic into a built-up urban area and through a solid rock barrier. It has two pioneering reinforced concrete arch bridges and its four-track tunnels carrying streets over the cut are probably the largest "tunnel bridges" (a tunnel primarily dug to serve instead of a bridge) in the state. It was designed by the engineering department of the Erie Railroad and built by Millard Construction Company of Philadelphia. There are six structures on the route (0951165-0961170), and all are evaluated as contributing resources to the historic right-of-way.

Boundary Description and Justification: The tunnel is significant within the historic context of the ambitious railroad right-of-way development. It is part of a right-of-way that has visual, historical, and technical cohesiveness. The setting of the right-of-way is also fairly



NEW JERSEY HISTORIC BRIDGE DATA

well preserved. Thus the tunnel and the entire 4400'-long Bergen Archways right-of-way are evaluated as a district with this structure being a contributing resource.

PHOTO: 22:22,23/154:14 (04/26/91 JPH (5/96))

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0951167	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	CENTRAL AVENUE OVER CONRAIL BERGEN ARCHWAYS	FACILITY	CENTRAL AVENUE				
TOWNSHIP	JERSEY CITY						
TYPE	TUNNEL	DESIGN					
# SPANS	1	LENGTH	60 ft	WIDTH	550 ft	MATERIAL	Concrete
CONSTRUCTION DT	1909	ALTERATION DT					
DESIGNER/PATENT	ERIE RR OFFICE OF ENGINEER			SOURCE	NJDOT		
				BUILDER	MILLARD CONST CO (PHILA)		

SETTING / CONTEXT The structure carries three city streets over the Bergen Archways, a deep cut built by the Erie RR 1907-1910 to provide a new passenger line approach to the Jersey City waterfront. The railroad is now abandoned. Along the top of the rock supported by the tunnel is a mixed commercial and residential neighborhood including a modern 4-story office building and some 1-story warehouses.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Individually Eligible. Erie RR Main Line Historic District, Eligible. Erie RR Bergen Archway / Bergen Hill Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Opinion 02/20/98, Comments 3/10/99 4/27/00.

SUMMARY The bridge, best described as a tunnel lining, consists of a concrete arch (reinforced only near its portals) supporting solid rock above. The unaltered tunnel is cut through Bergen Hill (the Palisades) and is part of the Bergen Archways rail line developed by the Erie RR in 1907-10. A tunnel was used at the site instead of a bridge to minimize disruption of the streets and buildings above. The bridge is individually eligible for listing in the National Register of Historic Places. In addition, it is a contributing element of the Erie Railroad Bergen Archways / Bergen Hill Tunnel Historic District under Criteria A and C.

INFORMATION

Bibliography:
 "Beginning of Erie's Terminal Improvements," Railway Age. Vol. 46, (28 Dec. 1906), pp. 831-834.
 "The New Four-Track Entrance of the Erie Railroad into Jersey City," Engineering Record. Vol. 57, (18 April 1908), pp. 516-518.
 "The Bergen Hill Four-Track Tunnels, Erie RR," Engineering Record, Vol. 60 (18 Dec. 1909), pp. 687-88. Erie Railroad Magazine, Sept. 1957.
 "Erie Terminal Improvements in Jersey City" The Railroad Gazette Vol. XLIV, No. 20, May 15, 1908 pp. 669-672
 "The New Four-Track Line of the Erie Railroad Through Bergen Hill, Jersey City" Engineering News Vol. 58, No. 8 February 21, 1907 pp. 204-205

Physical Description: The structure consists of an unreinforced concrete-lined tunnel through solid (diabase) rock for 250', then 300' of additional tunnel constructed by the cut-and-cover method (west of the previous portion) lined with reinforced concrete and topped with fill. Both portals are tied back into the rest of the lining with steel reinforcement. It was originally intended to drive the whole tunnel by standard tunneling methods, but the rock above the westernmost 300 ft. of the tunnel was sufficiently shallow and weak that all of it had to be removed. Rather than making this section open cut the tunnel lining was constructed anyway, with steel reinforcement added, fill was added, and the surface was restored, with a retaining wall constructed over the portal. This was done to avoid the loss of rental income from the land above.

Historical and Technological Significance: The concrete-lined tunnel is an original element of the 1907-1910 Bergen Archways tunnel-cut, an impressive engineering work and a major urban transportation corridor. It was assigned and developed by the Erie Railroad. The tunnel-cut was an innovative solution to the problem of inserting a corridor to accommodate a high volume of passenger traffic into a built-up urban area and through a solid rock barrier. The driving and lining of the tunnel, unusually wide for railroad structure, was complicated by the wide span (sufficient for four tracks), the treacherous inclination of the rock strata, and the presence of the old tunnel running just north of the work. In addition, the Archways was a major engineering work in which more rock was removed than in any other such project up to that time; it was 4400' long, 60' wide at the bottom, and 40' to 75' deep (Criterion C). The structure is evaluated as a contributing resource to the potential Bergen Archways Historic District.

The result of the improvement program was a four-track route with four tunnels, all evaluated as contributing resources, under major streets and street intersections, but open for most of its route to allow smoke and fumes from locomotives to escape. The route drew its name from the dramatic effect created by the "bridges of living rock" left standing over the cut, an effect emphasized by the width of the tunnels and the sheerness of the walls of the cut" (Erie Railroad Magazine p. 15).

The Archways ceased to be used for passenger trains in 1956-57 with the transfer of all Erie RR passenger trains to the Lackawanna RR's Hoboken Terminal. It continued to be used for freight trains until the mid-1980s, but it was abandoned and has become overgrown with trees and brush.

The Bergen Archways was an innovative solution to the problem of inserting a railroad corridor to accommodate a high volume of passenger traffic into a built-up urban area and through a solid rock barrier. The historic route also includes two pioneering reinforced concrete arch bridges with the four-track tunnels carrying streets over the cut in what is probably the largest "tunnel bridges" (a tunnel primarily dug to serve as a substitute for a regular bridge) in the region. Six structures (four tunnels and two bridges) have been evaluated as contributing resources to the potentially eligible route (0951165-0951170).

Boundary Description and Justification: The tunnel is significant within the historic context of the ambitious railroad right-of-way development. It is part of a right-of-way that has visual, historical, and technical cohesiveness. The setting of the right-of-way is also fairly well preserved. Thus the tunnel and the entire 4400'-long Bergen Archways right-of-way are evaluated as a district with this structure being an individually eligible and a contributing resource.

PHOTO: 22:24,30,31 (04/26/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0951168	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0		
NAME & FEATURE INTERSECTED	SUMMIT AVENUE OVER CONRAIL BERGEN ARCHWAYS		FACILITY	SUMMIT AVENUE					
TOWNSHIP	JERSEY CITY								
TYPE	TUNNEL	DESIGN						MATERIAL	Concrete
# SPANS	1	LENGTH	60 ft	WIDTH	43.5 ft				
CONSTRUCTION DT	1908	ALTERATION DT						SOURCE	RAILWAY AGE
DESIGNER/PATENT	ERIE RR OFFICE OF ENGINEER					BUILDER	MILLARD CONST CO (PHILA)		

SETTING / CONTEXT This structure carries the Bergen Archways route in a tunnel beneath an undistinguished 20th-century commercial area. The tunnel cut was built by the former Erie RR as part of its 1907-1910 campaign to provide a new 4-track passenger approach through the higher sections of Jersey City to the waterfront and then New York City via ferry. The railroad is now abandoned, and the cut is overgrown with brush and trees.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes

CONSULT STATUS Individually Eligible. Erie RR Main Line Historic District, Eligible. Erie RR Bergen Archway / Bergen Hill Tunnel Historic District, Eligible. Contributing.

CONSULT DOCUMENTS SHPO Letter 6/30/95, Opinion 02/20/98, Comments 3/10/99 4/27/00.

SUMMARY The structure is historically significant as an original element of the Bergen Archways. It is essentially unaltered from its original appearance and consists of a concrete-lined tunnel through rock supporting the road high above. A tunnel rather than a bridge was used at the crossing to minimize disruption to the existing neighborhood. The 1907-10 railroad route is a combination of open cuts, tunnels, and bridges over the open cuts through Bergen Hill. The bridge is individually eligible for listing in the National Register of Historic Places. In addition, it is a contributing element of the Erie Railroad Bergen Archways/Bergen Hill Tunnel Historic District under Criteria A and C.

INFORMATION

Bibliography:

- "Beginning of Erie's Terminal Improvements." Railway Age. Vol.46, 28 Dec. 1906, pp. 831-834.
- "The New Four-track Entrance of the Erie Railroad into Jersey City." Engineering Record Vol. 57., 18 April 1908, pp. 516-518.
- The Bergen Hill Four-Track Tunnels, Erie RR." Engineering Record. Vol. 60., 18 Dec. 1909, pp. 687-88.
- Erie Railroad Magazine. Sept. 1957.
- "Erie Terminal Improvements in Jersey City" The Railroad Gazette Vol. XLIV, No. 20, May 15, 1908 pp. 669-672
- "The New Four-Track Line of the Erie Railroad Through Bergen Hill, Jersey City" Engineering News Vol. 58, No. 8 February 21, 1907 pp. 204-205

Physical Description: The structure consists of a 60'-long, 200'- wide tunnel lined with unreinforced concrete (except that the portal is tied back into the rest of the lining with steel reinforcement). The tunnel runs through solid rock (diabase). The tunnel and entire right-of-way are now abandoned.

Historical and Technological Significance: The concrete-lined tunnel, one of four on the line, is historically important as an original contributing element of the Bergen Archways, the open cut with interspersed tunnels and overpasses that traverses Bergen Hill (also known as the Palisades) in Jersey City. Designed by the engineering department of the Erie Railroad, the right-of-way was built 1907-1910 as a solution to the problem of getting a large quantity of commuter passenger trains from several different rail lines west of Bergen Hill to the Erie RR's passenger terminal on the waterfront of the Hudson River east of the hill. The Archways was a major engineering work in which more rock was removed than in any other such project up to that time. The Archways route is 4400' long, 60' wide at the bottom, and 40' to 75' deep. The driving and lining of the tunnel was complicated by the wide span (sufficient for four tracks), the treacherous inclination of the rock strata, and the presence of the old tunnel running just north of the 1907 work (Criterion C). The structure is evaluated as a contributing resource to the Bergen Archways Historic District.

The result of the improvement program was an open cut four-track route with four tunnels under major streets and street intersections. The open cut allowed smoke and fumes from locomotives to escape. The route drew its name from the dramatic effect created by the "bridges of living rock left standing over the cut, an effect emphasized by the width of the tunnels and the sheerness of the walls of the cut (Erie Railroad Magazine. p. 15). At this point the Archways route parallels the Erie Railroad's original 1858 route through Bergen Hill. By the 1890s that old route was not adequate to handle the traffic volume.

The Archways ceased to be used for passenger trains in 1956-57 with the transfer of all Erie RR passenger trains to the Lackawanna RR's Hoboken Terminal. It continued to be used for freight trains until the mid-1980s, but is now abandoned and has become overgrown with trees and brush.

The Bergen Archways was an innovative solution to the problem of inserting a railroad corridor to accommodate a high volume of passenger traffic into a built-up urban area and through a solid rock barrier. It has two pioneering reinforced concrete arch bridges and its four-track tunnels carrying streets over the cut are probably the largest "tunnel bridges" (a tunnel primarily dug to serve as a substitute for a regular bridge) in the state. Six structures (four tunnels and two concrete-arch overpasses) have been evaluated as contributing resources to the potentially eligible route (0951165-0951170).

Boundary Description and Justification: The tunnel is significant within the historic context of the ambitious railroad right-of-way development. It is part of a right-of-way that has visual, historical, and technical cohesiveness. The setting of the right-of-way is also fairly well preserved. Thus the tunnel and the entire 4400'-long Bergen Archways right-of-way are evaluated as a district with this structure being an individually eligible and a contributing resource.

PHOTO: 25:25; 1s (05/17/91)

REVISED BY (DATE):

QUAD: Jersey City



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0951169	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0		
NAME & FEATURE INTERSECTED	BEVAN & ST PAUL AVE OVER CONRAIL BERGEN ARCHWAYS		FACILITY	BEVAN AND ST PAUL AVENUES					
TOWNSHIP	JERSEY CITY								
TYPE	TUNNEL	DESIGN						MATERIAL	Concrete
# SPANS	1	LENGTH	60 ft	WIDTH	260 ft				
CONSTRUCTION DT	1909	ALTERATION DT						SOURCE	NJDOT
DESIGNER/PATENT	ERIE RR OFFICE OF ENGINEER					BUILDER	MILLARD CONST CO (PHILA)		

SETTING / CONTEXT This structure carries the Bergen Archways route under a neighborhood of modern apartment houses above. The Archways tunnel-cut was built by the former Erie RR 1907-1910 to carry a new four-track passenger line through the higher sections of Jersey City to the waterfront. The railroad is now abandoned and the cut is overgrown with brush and trees.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Individually Eligible. Erie RR Main Line Historic District, Eligible. Erie RR Bergen Archway / Bergen Hill Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Opinion 02/20/98, Comments 3/10/99 4/27/00.

SUMMARY The structure is significant as an original element of the "Bergen Archways" corridor. It is essentially unaltered from its original appearance. It consists of a concrete lined tunnel through rock supporting buildings and streets above. A tunnel was chosen instead of a bridge to minimize disruption of the neighborhood above. The tunnel lining is part of the historically and technologically significant route developed by the Erie RR 1907-1910. The bridge is individually eligible for listing in the National Register of Historic Places. In addition, it is a contributing element of the Erie Railroad Bergen Archways/Bergen Hill Tunnel Historic District under Criteria A and C.

INFORMATION

Bibliography:
 "Beginning of Erie's Terminal Improvements." Railway Age. Vol.46, 28 Dec. 1906, pp. 831-834.
 "The New Four-track Entrance of the Erie Railroad into Jersey City." Engineering Record Vol. 57., 18 April 1908, pp. 516-518.
 The Bergen Hill Four-Track Tunnels, Erie RR." Engineering Record. Vol. 60., 18 Dec. 1909, pp. 687-88.
 Erie Railroad Magazine. Sept. 1957.
 "Erie Terminal Improvements in Jersey City" The Railroad Gazette Vol. XLIV, No. 20, May 15, 1908 pp. 669-672
 "The New Four-Track Line of the Erie Railroad Through Bergen Hill, Jersey City" Engineering News Vol. 58, No. 8 February 21, 1907 pp. 204-205

Physical Description: The structure consists of a 60'-long, 200'- wide tunnel lined with unreinforced concrete (except that the portal is tied back into the rest of the lining with steel reinforcement). The tunnel runs through solid rock (diabase). The tunnel and entire right-of-way are now abandoned.

Historical and Technological Significance: The concrete-lined tunnel, one of four on the route, is historically important as an original element of the Bergen Archways, the open cut with interspersed tunnels and overpasses that traverses Bergen Hill (also known as the Palisades) in Jersey City. Designed by the engineering department of the Erie Railroad, the right-of-way was built 1907-1910 as a solution to the problem of getting a large quantity of commuter passenger trains from several different rail lines west of Bergen Hill to the Erie RR's passenger terminal on the waterfront of the Hudson River east of the hill. The Archways was a major engineering work in which more rock was removed than in any other such project up to that time. The Archways route is 4400' long, 60' wide at the bottom, and 40' to 75' deep. The driving and lining of the tunnel was complicated by the wide span (sufficient for four tracks), the treacherous inclination of the rock strata, and the presence of the old tunnel running just north of the 1907 work (Criterion C). The structure is evaluated as a contributing resource to the Bergen Archways Historic District.

The result of the improvement program was an open cut four-track route with four tunnels under major streets and street intersections. The open cut allowed smoke and fumes from locomotives to escape. The route drew its name from the dramatic effect created by the "bridges of living rock left standing over the cut, an effect emphasized by the width of the tunnels and the sheerness of the walls of the cut (Erie Railroad Magazine. p. 15). At this point the Archways route parallels the Erie Railroad's original 1858 route through Bergen Hill. By the 1890s that old route was not adequate to handle the traffic volume.

The Archways ceased to be used for passenger trains in 1956-57 with the transfer of all Erie RR passenger trains to the Lackawanna RR's Hoboken Terminal. It continued to be used for freight trains until the mid-1980s, but is now abandoned and has become overgrown with trees and brush.

The Bergen Archways was an innovative solution to the problem of inserting a railroad corridor to accommodate a high volume of passenger traffic into a built-up urban area and through a solid rock barrier. It has two pioneering reinforced concrete arch bridges and its four-track tunnels carrying streets over the cut are probably the largest "tunnel bridges" (a tunnel primarily dug to serve as a substitute for a regular bridge) in the state. Six structures (four tunnels and two concrete-arch overpasses) have been evaluated as contributing resources to the potentially eligible route (0951165-0951170).

Boundary Description and Justification: The tunnel is significant within the historic context of the ambitious railroad right-of-way development. It has historical, and technical cohesiveness. The setting of the right-of-way is also fairly well preserved. Thus the tunnel and the entire 4400'-long Bergen Archways right-of-way are evaluated as a district with this structure being an individually eligible and a contributing resource.

PHOTO: 25:22,24 (05/17/91) REVISED BY (DATE): QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0951170	CO	HUDSON	OWNER	NJDOT	MILEPOINT	0.0		
NAME & FEATURE INTERSECTED	JFK BLVD OVER CONRAIL BERGEN ARCHWAYS		FACILITY	JFK BOULEVARD					
TOWNSHIP	JERSEY CITY								
TYPE	TUNNEL	DESIGN						MATERIAL	Concrete
# SPANS	1	LENGTH	60 ft	WIDTH	200 ft				
CONSTRUCTION DT	1908	ALTERATION DT						SOURCE	NJDOT
DESIGNER/PATENT	ERIE RR OFFICE OF ENGINEER					BUILDER	MILLARD CONST CO (PHILA)		

SETTING / CONTEXT The structure carries the Bergen Archways route under an arterial street. The Archways is a tunnel-cut built by the former Erie RR 1907-1910 to provide a new four-track passenger line through the higher portions of Jersey City to the waterfront. Surrounding the structure is a mid-20th century urban commercial area. The railroad is now abandoned and the cut is overgrown with brush and trees.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** Yes
CONSULT STATUS Individually Eligible. Erie RR Main Line Historic District, Eligible. Erie RR Bergen Archway / Bergen Hill Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Opinion 02/20/98, Comments 3/10/99 4/27/00.

SUMMARY The concrete-lined tunnel is significant as an original element of the Bergen Archways route. It retains its original appearance unaltered. It consists of a concrete-lined tunnel with concrete retaining wall with the boulevard above. It is one of four concrete lined tunnels the Erie RR built on the Bergen Archways route 1907-1910. The rail line is historically significant in its approach to solving a difficult crossing of Bergen Hill to get to Hudson River and New York City. The bridge is individually eligible for listing in the National Register of Historic Places. In addition, it is a contributing element of the Erie Railroad Bergen Archways/Bergen Hill Tunnel Historic District under Criteria A and C.

INFORMATION

Bibliography:
 "Beginning of Erie's Terminal Improvements." Railway Age. Vol.46, 28 Dec. 1906, pp. 831-834.
 "The New Four-track Entrance of the Erie Railroad into Jersey City." Engineering Record Vol. 57., 18 April 1908, pp. 516-518.
 The Bergen Hill Four-Track Tunnels, Erie RR." Engineering Record. Vol. 60., 18 Dec. 1909, pp. 687-88.
 Erie Railroad Magazine. Sept. 1957.
 "Erie Terminal Improvements in Jersey City" The Railroad Gazette Vol. XLIV, No. 20, May 15, 1908 pp. 669-672
 "The New Four-Track Line of the Erie Railroad Through Bergen Hill, Jersey City" Engineering News Vol. 58, No. 8 February 21, 1907 pp. 204-205

Physical Description: The structure consists of a 60'-long, 200'- wide tunnel lined with unreinforced concrete (except that the portal is tied back into the rest of the lining with steel reinforcement). The tunnel runs through solid rock (diabase). A concrete retaining wall above the west tunnel portal retains fill. The tunnel is immediately south of the Erie Railroad's original 1858 double-track tunnel which was not within the scope of this survey. The western portal of the 1858 tunnel is adjacent to the western portal of the 1907 tunnel.

Historical and Technological Significance: The concrete-lined tunnel, one of four on the line, is historically important as an original contributing element of the Bergen Archways, the open cut with interspersed tunnels and overpasses that traverses Bergen Hill (also known as the Palisades) in Jersey City. Designed by the engineering department of the Erie Railroad, the right-of-way was built 1907-1910 as a solution to the problem of getting a large quantity of commuter passenger trains from several different rail lines west of Bergen Hill to the Erie RR's passenger terminal on the waterfront of the Hudson River east of the hill. The Archways was a major engineering work in which more rock was removed than in any other such project up to that time. The Archways route is 4400' long, 60' wide at the bottom, and 40' to 75' deep. The driving and lining of the tunnel was complicated by the wide span (sufficient for four tracks), the treacherous inclination of the rock strata, and the presence of the old tunnel running just north of the 1907 work (Criterion C). The structure is evaluated as significant because it is a contributing resource to the Bergen Archways Historic District.

The result of the improvement program was an open cut four-track route with four tunnels under major streets and street intersections. The open cut allowed smoke and fumes from locomotives to escape. The route drew its name from the dramatic effect created by the "bridges of living rock left standing over the cut, an effect emphasized by the width of the tunnels and the sheerness of the walls of the cut (Erie Railroad Magazine. p. 15). At this point the Archways route parallels the Erie Railroad's original 1858 route through Bergen Hill. By the 1890s that old route was not adequate to handle the traffic volume.

The Archways ceased to be used for passenger trains in 1956-57 with the transfer of all Erie RR passenger trains to the Lackawanna RR's Hoboken Terminal. It continued to be used for freight trains until the mid-1980s, but is now abandoned and has become overgrown with trees and brush.

The Bergen Archways was an innovative solution to the problem of inserting a railroad corridor to accommodate a high volume of passenger traffic into a built-up urban area and through a solid rock barrier. It has two pioneering reinforced concrete arch bridges and its four-track tunnels carrying streets over the cut are probably the largest "tunnel bridges" (a tunnel primarily dug to serve as a substitute for a regular bridge) in the state. Six structures (four tunnels and two concrete-arch overpasses) have been evaluated as contributing resources to the potentially eligible route (0951165-0951170).

Boundary Description and Justification: The tunnel is significant within the historic context of the ambitious railroad right-of-way development. It is part of a right-of-way that has visual, historical, and technical cohesiveness. The setting of the right-of-way is also fairly well preserved. Thus the tunnel and the entire 4400'-long Bergen Archways right-of-way are evaluated as a district with this structure being an individually eligible and a contributing resource.

PHOTO: 25:21 (05/17/91) REVISED BY (DATE): QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0953163	CO	HUDSON	OWNER	UNKNOWN	MILEPOINT	0.0		
NAME & FEATURE INTERSECTED	PERSHING ROAD OVER CONRAIL RIVER LINE			FACILITY	PERSHING ROAD				
TOWNSHIP	WEEHAWKEN TOWNSHIP								
TYPE	STRINGER	DESIGN	ENCASED				MATERIAL	Steel	
# SPANS	5	LENGTH	175 ft	WIDTH	33.2 ft				
CONSTRUCTION DT	1928	ALTERATION DT						SOURCE	NJDOT
DESIGNER/PATENT								BUILDER	

SETTING / CONTEXT Pershing Road comes down the face of the cliffs of the Palisades and at the bottom turns 90 degrees toward the Hudson River to cross this bridge over rail lines, now Conrail but formerly West Shore RR. It forms the main approach to a former rail yard now being redeveloped with new buildings for mixed uses. With the cliff as a backdrop the bridge's setting is visually impressive, but it does not include historic structures.

1995 SURVEY RECOMMENDATION Not Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible.
CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The stringer bridge supported on 3-column concrete bents and concrete abutments with earlier stone wingwalls is representative of the most common pre-World War II bridge type in the state. Concrete jack arches are set between the stringer, making this a late use of jack arches, which are seldom seen after World War I. The metal picket railing is original and is a standard period design, but the concrete barriers are modern. Despite the jack arches, the bridge is not technologically noteworthy.

INFORMATION

PHOTO: 23:34-35 (04/28/91) REVISD BY (DATE): QUAD: Weehawken

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0954160	CO	HUDSON	OWNER	UNKNOWN	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	TONNELE AVE OVER PATH & CONRAIL JERSEY CITY BRANCH		FACILITY	TONNELE AVENUE			
TOWNSHIP	JERSEY CITY						
TYPE	STRINGER	DESIGN	ENCASED			MATERIAL	Steel
# SPANS	2	LENGTH	90 ft	WIDTH	35 ft		
CONSTRUCTION DT	1936	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT					BUILDER		

SETTING / CONTEXT The bridge carries a city street over 4 tracks of the PATH rapid-transit line and ConRail's Jersey City freight branch. It is located in an urban residential area with five-story 1920s apartment houses, modernized row houses, and some modern commercial structures.

1995 SURVEY RECOMMENDATION Not Eligible

HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED) No

CONSULT STATUS Not Individually Eligible.

CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The 2-span encased stringer bridge with a concrete substructure is a representative example of the most common pre-World War II bridge type in the state. A high concrete parapet frames the sidewalks. The bridge is neither historically nor technologically distinguished.

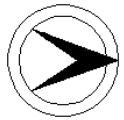
INFORMATION

PHOTO: 22:6,7 (04/26/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0954164	CO	HUDSON	OWNER	UNKNOWN	MILEPOINT	0.0		
NAME & FEATURE INTERSECTED	CHESTNUT AVE OVER PATH & CONRAIL JERSEY CITY BRANCH		FACILITY	CHESTNUT AVENUE					
TOWNSHIP	JERSEY CITY								
TYPE	THRU GIRDER	DESIGN						MATERIAL	Steel
# SPANS	1	LENGTH	103 ft	WIDTH	30 ft				
CONSTRUCTION DT	1918	ALTERATION DT	1989		SOURCE	NJDOT			
DESIGNER/PATENT					BUILDER				

SETTING / CONTEXT The bridge carries a city street over the Bergen Cut, a railroad cut shared by an ex-Pennsylvania RR line (now a Conrail freight branch) and the PATH rapid transit line. The bridge is the only outlet for a residential section isolated on two sides by railroad cuts and on the east side by the side of the hill on which it is located. The residential sections surrounding the bridge are a mix of row houses of all eras, most modernized.

1995 SURVEY RECOMMENDATION Not Eligible

HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED) No

CONSULT STATUS Not Individually Eligible.

CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The thru girder with floor beams bridge is supported on concrete abutments. The cantilevered sidewalks are enclosed by a modern metal barrier. The span was rehabilitated circa 1989. This work included installation of steel corrugated flooring pans, concrete curbs at the inner face of the girders, and the pedestrian barrier. It is one of over ten thru girder bridges in the county. The span is not historically or technologically distinguished.

INFORMATION

PHOTO: 22:12-14 (04/26/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0962155	CO	HUDSON	OWNER	STATE AGENCY	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	LINDEN AVE OVER CONRAIL BAYONNE BRANCH			FACILITY	LINDEN AVENUE		
TOWNSHIP	JERSEY CITY			DESIGN	WARREN		
TYPE	THRU TRUSS	LENGTH	167 ft	WIDTH	16.2 ft		
# SPANS	3	DESIGN	WARREN			MATERIAL	Steel
CONSTRUCTION DT	1901	ALTERATION DT				SOURCE	NJDOT
DESIGNER/PATENT	CNJ RR OFFICE OF ENGINEER			BUILDER			

SETTING / CONTEXT The bridge once carried a city street over the multi tracked main line of the CNJ railroad, but it is now closed to all but pedestrians. The rail line is now only a single-track Conrail industrial branch. East of the bridge are modern factory buildings; west of the bridge are apartment buildings with first-floor commercial uses, and modernized row houses. A utility pipe is also carried by the bridge.

1995 SURVEY RECOMMENDATION Not Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible.
CONSULT DOCUMENTS SHPO Finding 4/30/90

SUMMARY The Warren thru truss main span and continuous stringer 2-span approach is supported on an ashlar and concrete abutment on the west end, timber pile bents, and a timber abutment at the east end. The trusses are unaltered and are composed of angles riveted back-to-back. A cantilevered sidewalk with a modern metal railing is on one side only. A plank wearing surface is used, but the bridge, one of three built in the vicinity by the CNJ RR, is representative of a fairly common type in NJ.

INFORMATION

PHOTO: 28:17-22 (05/31/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	0962156	CO	HUDSON	OWNER	STATE AGENCY	MILEPOINT	0.0	
NAME & FEATURE INTERSECTED	GATES AVE OVER CONRAIL BAYONNE BRANCH			FACILITY	GATES AVENUE			
TOWNSHIP	JERSEY CITY							
TYPE	THRU TRUSS	DESIGN	WARREN				MATERIAL	Steel
# SPANS	2	LENGTH	183 ft	WIDTH	17.8 ft			
CONSTRUCTION DT	1906	ALTERATION DT	Demolished		SOURCE	NJDOT		
DESIGNER/PATENT	CNJ RR OFFICE OF ENGINEER				BUILDER	UNKNOWN		

SETTING / CONTEXT The bridge carried a city street over the multi tracked main line of the CNJ railroad. It is now closed, and the railroad is reduced to a Conrail freight branch. The span is located on the east edge of an undistinguished urban residential area of late-19th and early-20th century rowhouses, all remodeled. To the east is vacant land formerly used for railroad purposes, and a busy highway (NJ 440).

1995 SURVEY RECOMMENDATION Not Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No

CONSULT STATUS Bridge was Not Individually Eligible.

CONSULT DOCUMENTS SHPO Letter 6/30/95

SUMMARY The 2-span rivet-connected bridge is composed of a Warren thru truss and a Warren pony truss supported on a stone abutment on the south and a concrete abutment on the north. Neither span exhibits unusual design details, but they are good, unaltered examples of their type and are thus technologically distinguished. The bridge is one of three thru trusses built in the vicinity by the CNJ RR between 1901 and 1910. Similar bridges built for the CNJ are in Union County.

INFORMATION

Bibliography:
Anderson, Elaine. The Central Railroad of New Jersey's First 100 Years. Center for Canal History and Technology. 1984.

Physical Description: The slightly skewed 2-span bridge is composed of one 5-panel rivet-connected Warren thru truss span and a Warren pony truss approach span. The pony truss is unusual in that the end posts are not inclined. The southern abutment is stone while the one on the northern end is concrete. A built-up steel bent supports the middle portion. The verticals and diagonals of the thru truss are composed of laced back-to-back angles while the inclined end posts and top chord are built-up box sections. The portal braces are lattice, and the lateral braces are laced. The cantilevered sidewalk on one side only is enclosed with the original lattice railing. The bridge is closed to all traffic, but it appears to be in unaltered condition. Its details are not distinctive and are typical of the early 20th century.

Historical and Technological Significance: The 1906 two-span bridge is a representative example of common bridge types; the Warren thru truss and the Warren pony truss. Neither span exhibits any distinctive construction details. They are both typical of the type and details used by the CNJ throughout both Hudson and Union counties.

Historically the bridge chronicles Hudson County's important position in the transportation history of the greater metropolitan area, as do the four other metal trusses bridges the line built that survive in the county (0900003(demolished), 0962152(demolished), 0962154, 0962155). The county is rich in major rail corridors because of its location opposite New York City. The Central Railroad of New Jersey was chartered in 1847, after which it developed its route from Elizabeth to Jersey City and west to the anthracite coal region of eastern Pennsylvania. The route to Jersey City was completed in 1864. The bridge carries a city street over the former CNJ main line to an industrial area containing primarily the CNJ's locomotive facilities, once said to be the largest in the U.S. The yard, begun in the 1860s, was developed on filled land to handle passenger as well as freight trains. All elements of that facility were destroyed in the creation of Liberty State Park. This is one of four thru truss bridges the CNJ built in the area between 1901 and 1910. 0962152 (demolished Communipaw Avenue bridge built in 1908) has been evaluated as significant. CNJ thru truss bridges of similar age, type, and design are also extant in Union County.

PHOTO: 201:28-31 (06/07/91)

REVISED BY (DATE):

QUAD: Jersey City

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	3800019	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	1.9
NAME & FEATURE INTERSECTED	NJ 495 OVER PLEASANT AVENUE			FACILITY	NJ 495		
TOWNSHIP	WEEHAWKEN TOWNSHIP						
TYPE	MULTI GIRDER	DESIGN		MATERIAL	Steel		
# SPANS	1	LENGTH	70 ft	WIDTH	68.5 ft		
CONSTRUCTION DT	1937	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries NJ 495, the divided six-lane approach highway to the Lincoln Tunnel, over a busy urban street. It is located in an urban area of 1920s houses with some post-1950 infill, plus some commercial and residential buildings from other eras nearby. The bridge is part of the limited access corridor that links US 1&9 with the 1937 Lincoln Tunnel through congested Hudson County.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The bridge is composed of four well detailed haunched deck girders with built-up floor beams and is supported on bearings on concrete columns. Outer portions of the substructure, which includes columns faced with a Moderne-style stone veneer, is similar to the detailing on other bridges along the 1937-38 approach to the Lincoln Tunnel. The bridge is not individually distinguished, but it is significant as part of an important limited-access highway that is technologically noteworthy.

INFORMATION Bibliography:
 Ammann, O.H. (Chief Engineer of the PA): "Planning the Lincoln Tunnel Under the Hudson" in Civil Engineering, 7, June 1937, 387-391).
 Condit, Carl: American Building Art, Twentieth Century (NY: Oxford Univ. Press, 1961).
 Port Authority: Annual Reports, 1956

Physical Description: The single-span haunched deck girder bridge composed of four girders with rolled floor beams is supported on engaged columns set into stone-faced concrete abutments. The stringer and floor beam connections are riveted. The girders are nicely detailed, and the roadway is enclosed by a metal fence-like railing. The bridge carries the elevated limited access highway over a city street, and it is linked to other sections of the highway by T-beam viaducts. The bridge is well preserved.

Historical and Technological Significance: The girder bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

PHOTO: 201:40-41 (06/07/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	3800020	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	2.3
NAME & FEATURE INTERSECTED	NJ 495 VIADUCT OVER VACANT LAND		FACILITY	NJ 495 VIADUCT			
TOWNSHIP	WEEHAWKEN TOWNSHIP						
TYPE	T BEAM	DESIGN					
# SPANS	7	LENGTH	172 ft	WIDTH	69 ft	MATERIAL	Reinforced Concrete
CONSTRUCTION DT	1937	ALTERATION DT					
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			SOURCE	NJDOT		
				BUILDER			

SETTING / CONTEXT The structure carries an elevated portion of NJ 495, a divided 6-lane highway serving as the approach to Lincoln Tunnel, over vacant land between two city streets. It connects 3800019, a deck girder span over a city street, with 3800024 over Park Avenue. The surrounding residential area is mainly early-20th century row houses with post-1950 houses and apartment buildings added as infill.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The 172'-long viaduct composed of T-beam spans on concrete piers is finished with arched fascia beams. A concrete parapet encloses the roadway, and a stone-faced parapet serves as a curb on the lower level. The bridge is a well-preserved original element of the 1937-38 corridor to link US 1&9 with the newly opened first tube of the Lincoln Tunnel. The highway is a historically significant and technologically innovative solution to building a superhighway through a congested area.

INFORMATION

Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, (June, 1937), pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The approximately 13-span T-beam and slab structure is finished with arched fascia beams, concrete columns, and concrete parapets. The viaduct is part of a large, continuous structure, so the exact number of spans was not determined. The slab is used where the viaduct, used to maintain grade between two deck girder bridges over local streets, is founded on bedrock. The bridge is detailed to match other spans on the 2.8-mile long limited access route. It appears to be unaltered.

Historical and Technological Significance: The T-beam and slab viaduct is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

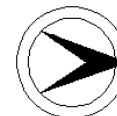
The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 201:42,43 (06/07/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	3800021	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	2.55
NAME & FEATURE INTERSECTED	SOUTH RAMP OF NJ 495 OVER PARK AVENUE			FACILITY	NJ 495		
TOWNSHIP	WEEHAWKEN TOWNSHIP						
TYPE	DECK GIRDER	DESIGN		MATERIAL	Steel		
# SPANS	1	LENGTH	428 ft	WIDTH	22 ft		
CONSTRUCTION DT	1938	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries an eastbound entry ramp from a local street up to an elevated section of NJ 495, the divided 6-lane highway approach to the Lincoln Tunnel. The 5-component span that includes this structure crosses a busy city street in a densely developed 20th century residential area of row houses. The span handles three levels of local and through traffic. NJ 495 has the visual and historical cohesiveness to be a district.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The bridge, part of a 5-component interconnected structure, is composed of a simply supported built-up deck girder with floor beams on the inside (north), and a much shallower outside girder that is carried on varying length rolled I-section columns that bear on the girder of 380023. In turn, the north side girder for the bridge also supports Bridge 3800024 via the same I-section posts. The well-preserved bridge is part of a historically and technologically significant thoroughfare.

INFORMATION Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, (June, 1937), pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The deck girder bridge is part of a 5-component, interconnected span. This section is composed of a simply supported built-up deck girder with floor beams on the inside (north) and a much shallower outside girder that is supported on a series of varying height rolled I-section columns that bear of the girder for 3800023. In turn, the north girder of this bridge serves as the bearing for columns that support 3800024. The roadway is enclosed by a metal railing that matches that used all along the roadway. The structure appears unaltered.

Historical and Technological Significance: The deck girder bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 201:33-36; also (06/07/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	3800024	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	NJ 495 OVER PARK AVENUE			FACILITY	NJ 495		
TOWNSHIP	WEEHAWKEN TOWNSHIP			DESIGN			
TYPE	DECK GIRDER	LENGTH	111 ft	WIDTH	69 ft	MATERIAL	Steel
# SPANS	1						
CONSTRUCTION DT	1938	ALTERATION DT			SOURCE	NJDOT	
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries an elevated portion of the divided 6-lane highway approach to Lincoln Tunnel, over a busy city street. It is part of a 4-structure overpass that also carries an access ramp to US 495 and a local-traffic service road over Park Ave. The 3-level structure is located in a predominantly early-20th century residential area of row houses. This bridge is flanked by spans 0917163 (north) and 0917162 (south).

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The bridge is composed of interior built-up girders that bear on engaged columns and rolled stringers with stiffeners on the outside. All are connected by floor beams, and the rolled stringers bear on steel columns carried by the flanking girders of parallel spans. A plain metal railing is used as a protective barrier. The well-preserved bridge is an original element in the technologically innovative and historically significant roadway developed through a congested area in the late 1930s.

INFORMATION Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, (June, 1937), pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The deck girder bridge is the top level of a 5-component, interconnected span. This section is composed of a built-up deck girders with floor beams on the inside (north) and rolled stringers with stiffeners on the outside. The stringer rolled section column supports bear on parallel girders. The roadway is enclosed by a metal railing that matches that used all along the roadway. The structure appears unaltered.

Historical and Technological Significance: The deck girder bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 201:32-33, 37-3 (06/07/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	3800026	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	2.7		
NAME & FEATURE INTERSECTED	NJ 495 AND SOUTH RAMP OF NJ 495 OVER VACANT LAND		FACILITY	NJ 495					
TOWNSHIP	WEEHAWKEN TOWNSHIP								
TYPE	T BEAM	DESIGN						MATERIAL	Reinforced Concrete
# SPANS	13	LENGTH	161 ft	WIDTH	69 ft				
CONSTRUCTION DT	1937	ALTERATION DT						SOURCE	NJDOT
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY					BUILDER			

SETTING / CONTEXT The viaduct carries NJ 495, the divided 6-lane highway approach to the Lincoln Tunnel, between JFK Blvd. East (3800027) and Park Ave. (3800024). It is an element in a limited-access highway that passes through a residential area dominated by 1920s and post-1950s detached townhouses and apartment buildings. Weehawken Town Hall is to the south on the east side of the Palisades.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The T-beam structure maintains the elevation of NJ 495 between other bridges over city streets. It is finished with arched fascia beams to repeat the detailing of similar spans on the route. The center of the viaduct is carried on bedrock. While not individually significant, it is a contributing element to the historically and technologically significant 1937 road that linked a major Hudson River crossing with the west side of the Palisades.

INFORMATION

Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, (June, 1937), pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The 6-span T-beam viaduct is finished with arched fascia beams, concrete columns, every other one of which is load-bearing, and concrete parapets. The viaduct is part of a large, continuous structure that carries the limited access highway above the grade of the parallel city street. The viaduct is also used to maintain grade between two deck girder bridges over local streets, is founded on bedrock. The bridge is detailed to match other spans on the 2.8-mile long limited access route. It appears to be unaltered.

Historical and Technological Significance: The T-beam viaduct is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 201:2,3,7 (06/07/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	3800027	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	NJ 495 OVER JFK BOULEVARD EAST			FACILITY	NJ 495		
TOWNSHIP	WEEHAWKEN TOWNSHIP						
TYPE	MULTI GIRDER	DESIGN		MATERIAL	Steel		
# SPANS	5	LENGTH	375 ft	WIDTH	78.5 ft		
CONSTRUCTION DT	1937	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER	UNKNOWN		

SETTING / CONTEXT The bridge carries NJ 495, the divided six-lane approach highway to the Lincoln Tunnel, over a busy city street and service road in Weehawken. It is located in an urban residential area of 1920s through post-1950 detached town houses and apartment buildings.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Comments 11/17/99, Letter 03/12/01.

SUMMARY The multi-span curved bridge is composed of varying length built-up deck plate girders supported on concrete columns and abutments, some with stone facing that matches the masonry used along the historic approach to the 1937 Lincoln Tunnel. Most girders are haunched. The roadway is enclosed by a metal railing. The bridge is an impressive and technologically significant application of deck plate girder technology to a complex engineering problem. It is individually eligible for listing in the National Register of Historic Places and would be a contributing element of the potential 495/ Lincoln Tunnel Approach Historic District under Criteria A and C.

INFORMATION

Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The 5-span built-up deck girder bridge is part of the continuous elevated structure that serves as the approach to the Helix. It is the uphill or western end of the Helix. The flared multi girder bridge is made up of haunched girders with an aesthetic geometric arrangement of the stiffeners on the outer face and plain built-up girders on the interior. The floor beams are also built up. The girders vary in length, owing to the flared shape of the span, and are supported on concrete columns, some of which are stone faced. The bridge appears to be unaltered.

Historical and Technological Significance: The deck girder bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 201:6,8-12 (06/07/91) REVISED BY (DATE): QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	3800028	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	NORTH RAMP OF NJ 495 OVER NORTH MARGINAL STREET		FACILITY	NJ 495 NORTH RAMP			
TOWNSHIP	WEEHAWKEN TOWNSHIP						
TYPE	DECK GIRDER	DESIGN		MATERIAL	Steel		
# SPANS	2	LENGTH	69 ft	WIDTH	22 ft		
CONSTRUCTION DT	1937	ALTERATION DT		SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge carries an exit ramp from NJ 495, the divided six-lane highway approach to the Lincoln Tunnel, over the north service road for NJ 495. It is contiguous to 3800027, and it branches off the north side of that structure. The ramp is located in a densely developed residential area of largely of 1920s detached houses with infill post-1950 houses.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No

CONSULT STATUS Not Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.

CONSULT DOCUMENTS SHPO Letter 6/30/95, Comments 11/17/99.

SUMMARY The skewed 2-span haunched built-up deck girder bridge with built-up floor beams of varying lengths is supported on concrete columns. It is a ramp leading from an elevated span of similar construction to a surface road. The concrete columns are faced in the same Moderne-style masonry as other spans on the historic 1938 approach to the Lincoln Tunnel. The span is not technologically significant, but it is a contributing element on a historically and technologically noteworthy route.

INFORMATION

Bibliography:

Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
Port of New York Authority. Annual Report. 1956.

Physical Description: The 2-span built-up deck plate girder bridge is part of the continuous elevated structure that serves as the approach to the Helix. It is the uphill or western end of the Helix, and it is best described as the north elevation of 3800027, the structure almost parallel to it on the south. The flared bridge is made up of haunched girders with an aesthetic geometric arrangement of the stiffeners on the outer face and plain built-up girders on the interior. The floor beams are also built up. The girders vary in length, owing to the flared shape of the span, and are supported on concrete columns, some of which are stone faced. The bridge appears to be unaltered.

Historical and Technological Significance: The deck girder bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 201:4,5,13 (06/07/91)

REVISED BY (DATE):

QUAD: Weehawken



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	3800030	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	NJ 495 OVER JFK BOULEVARD EAST & EAST RAMP			FACILITY	NJ 495		
TOWNSHIP	WEEHAWKEN TOWNSHIP						
TYPE	MULTI GIRDER	DESIGN		MATERIAL	Steel		
# SPANS	2	LENGTH	179 ft	WIDTH	89 ft		
CONSTRUCTION DT	1936	ALTERATION DT	1956	SOURCE	NJDOT		
DESIGNER/PATENT	PORT OF NEW YORK AUTHORITY			BUILDER			

SETTING / CONTEXT The bridge is part of a long structure that carries NJ 495, the divided 6-lane approach to the Lincoln Tunnel, over a busy avenue. It is part of the "helix" and serves as the bottom section of that viaduct, carrying the road up from the tunnel to Bergen Hill. It is located next to the tunnel's toll plaza. It is part of the structure that includes 3800031 and concrete girder approach spans.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No
CONSULT STATUS Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.
CONSULT DOCUMENTS SHPO Comments 11/17/99, Letter 03/12/01.

SUMMARY The 2-span bridge was originally composed of a series of 3 built-up haunched deck girders supported on stone-faced concrete columns. It was widened by enlarging the abutments/pier in the same style and adding an additional built up girder. Care was taken to match original detailing. The bridge is eligible as part of the engineering technology which functioned to collect traffic and funnel it into the Lincoln Tunnel. An especially notable feature is the helix which carries the highway from the plaza level up to the cut through Bergen Hill. The structure is individually eligible for listing in the National Register of Historic Places and would be a contributing element of the potential 495/ Lincoln Tunnel Approach Historic District under Criteria A and C.

INFORMATION Bibliography:
 Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
 Port Authority of New York. Annual Report. 1956.

Physical Description: The structure is essentially the foot section or west/uphill end of the Helix viaduct that carries NJ 495 up from the Lincoln Tunnel plaza to the cut through Bergen Hill (3800031). This structure consists of two spans, each with four or five deck plate girders. The outer girders are haunched. The pier and abutments are of reinforced concrete partially faced with stone, with some geometric ornament in the areas not faced. These, plus the geometric decorative railings, and the pattern of the web stiffeners are consistent with the Moderne style found on almost all the original structures on the approach.

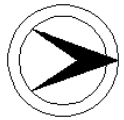
In connection with the addition of the third tube, the Port Authority added an additional westbound lane to the loop viaduct on the outside in 1956-57 (Port Authority, 1956, 22-23).. On this portion of the viaduct, great care was taken to preserve the original aesthetic appearance of the bridge. The piers and abutments were extended, using the same stone facing, - and the original outside deck girders, with their curved bottom webs, were moved outward. A new, plain girder was installed where the .original girder had been. Thus the original appearance of the bridge was maintained. In other respects the bridge has not been altered.

Historical and Technological Significance: The multi girder bridge is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The structure is not individually distinguished, but it is a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of



NEW JERSEY HISTORIC BRIDGE DATA

preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.

PHOTO: 202:7-11,13-14 (06/07/91)

REVISED BY (DATE):

QUAD: Weehawken

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF ENVIRONMENTAL SERVICES**



NEW JERSEY HISTORIC BRIDGE DATA

STRUCTURE #	3800031	CO	HUDSON	OWNER	PRIVATE	MILEPOINT	0.0
NAME & FEATURE INTERSECTED	NJ 495 VIADUCT OVER BALDWIN AVENUE AND CONRAIL		FACILITY	NJ 495			
TOWNSHIP	WEEHAWKEN TOWNSHIP						
TYPE	DECK TRUSS	DESIGN	WARREN	MATERIAL	Steel		
# SPANS	19	LENGTH	1278 ft	WIDTH	81 ft		
CONSTRUCTION DT	1937	ALTERATION DT	1957	SOURCE	NJDOT		
DESIGNER/PATENT	PORT AUTHORITY OF NEW YORK			BUILDER	AMERICAN BRIDGE COMPANY		

SETTING / CONTEXT The bridge is part of the helix that brings NJ 495, the six-lane highway approach to the Lincoln Tunnel, from the high level at which it crosses Bergen Hill down close to the level of the tunnel plaza. In so doing it crosses Baldwin Ave. and a rail line. Beneath the bridge is a large NJT bus parking lot, with new mixed use development to the southeast. The Lincoln Tunnel toll plaza is to the west.

1995 SURVEY RECOMMENDATION Eligible **HISTORIC BRIDGE MANAGEMENT PLAN (EVALUATED)** No

CONSULT STATUS Individually Eligible. Rt 3 (I-495) Highway Approach to Lincoln Tunnel Historic District, Eligible. Contributing.

CONSULT DOCUMENTS SHPO Comments 11/17/99, Letter 06/30/95.

SUMMARY The curved viaduct known as the helix is composed of a series of technologically significant concrete girders and 4 longer spans made up of deep Warren deck trusses on the outside matched with haunched deck girders on the inside. All are supported on concrete columns. The viaduct was widened in 1957. It is significant as a complex engineering structure carrying NJ 3, now NJ 495, or the Lincoln Tunnel approach road, up Bergen Hill. The road and tunnel were built by the Port of New York Authority.

INFORMATION

Bibliography:
Ammann, O.H. "Planning the Lincoln Tunnel Under the Hudson," Civil Engineering, 7, June, 1937, pp. 387-391.
Port Authority of New York. Annual Report. 1956.

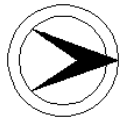
Physical Description: Four of 19 spans of the impressive, 1278'-long, helix-shaped bridge are composed of Warren deck trusses on the outer side and haunched deck girders on the shorter, inner side. The arrangement addresses the difference in length of the two sides of the spans which are located in the most curved portion of the helix-shaped bridge. These rest on concrete columns. The six approach spans at the lower end and nine at the higher end of the viaduct are concrete girders on concrete columns. The upper end of the viaduct bears on a rock abutment. Only a few aesthetic touches have been applied to the structure: the deck girders are detailed with a geometric pattern to the stiffeners and a secondary angle on the outside of the lower web. The columns are scored. In connection with the addition of the third tube, the Port Authority of New York, who has jurisdiction for the span, added an additional westbound lane on the outside face in 1956-57 (Port Authority, 1956, 22-23). New steel pipe columns support the new lane. The bridge spans from the portal of portal of the Lincoln Tunnel to the crest of Bergen Hill where it connects with 3800030.

Historical and Technological Significance: The long, curving viaduct known as the Helix is an original element of an approximately 2.8-mile long major transportation artery built 1938-1939 to serve as the main approach to the recently completed Lincoln Tunnel (first tube). The road is technologically and historically significant as a major engineering solution to building a highway that was both limited access and local through a congested area with significant geological considerations. The problem was solved in an innovative and aesthetic manner that retains its integrity of design and setting. It was designated Route 3 when built, and it became the heaviest-used single commuter line into the city, by virtue of serving the vast majority of the bus lines into New York City from the west. The Helix is individually distinguished for its technological significance, and it is also a contributing resource to the potential historic route and thus has been evaluated as significant (Criterion C). Twenty-one structures were identified as being contributing resources along the right-of-way that stretches from US 1 & 9 to the Lincoln Tunnel.

The Palisades (called Bergen Hill locally) forms a ridge parallel to and just west of the Hudson River for several miles. The rock ridge is a barrier that must be crossed in some fashion by every transportation artery approaching New York City from the west in Bergen and Hudson counties. The oldest crossing of Bergen Hill is that now occupied by the PATH system and built by a predecessor of the Pennsylvania RR 1830-1834. The approach to the Lincoln Tunnel was the last major crossing of the Palisades (unless one counts the upgrading of the George Washington Bridge approaches in the 1960s). The Port of New York Authority built both the tunnel and the Route 3 New Jersey approach to the tunnel in close cooperation with state, county, and local officials. O.H. Ammann was the Director of Engineering on the project, and J.C. Evans served as Chief Engineer.

To get past Bergen Hill an open cut was decided upon, partly because it would be cheaper than a tunnel (which would require expensive equipment to remove exhaust gases), and also because local officials wanted the approach highway to be usable also as an arterial route across the ridge for local traffic. This decision required structures to carry the approach highway from the low meadows west of Bergen Hill up to the level of the cut through the Hill, and then back down to the tunnel mouth east of Bergen Hill. Major bridges were required for both of these tasks (Ammann, 391). In addition numerous bridges had to be built to take pre-existing local streets over the cut, and for the crossing of Hudson Boulevard (now JFK Boulevard) a very special type of grade separation structure was designed. The cut itself was, however, quite conventional, and most of the bridges were also conventional, if highly refined in their details (cut stone coverings for parts of their abutments, haunched fascia deck girders with patterned stiffeners, Art Moderne railings, and the like). When viewed as a whole, the entire roadway is a remarkable engineering accomplishment with visual cohesiveness achieved by repetition of bridge type and uniform Moderne detailing along the length of the project.

Boundary Description and Justification: The structure is one element of road development that is historically and technologically noteworthy. Because of the commonality of design, type, setting, and history that the structures on the route share and the state of preservation of the resource, the right-of-way of NJ 495 from the intersection with US 1 & 9 and the Lincoln Tunnel is evaluated as a potential historic district. This structure is along that right-of-way, so it is a contributing resource. The significant boundary is limited to the actual right-of-way between the aforementioned points.



NEW JERSEY HISTORIC BRIDGE DATA

PHOTO: 202:38-44,1-6 (06/07/91)

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