BAYONNE BRIDGE

OVER THE KILL VAN KULL

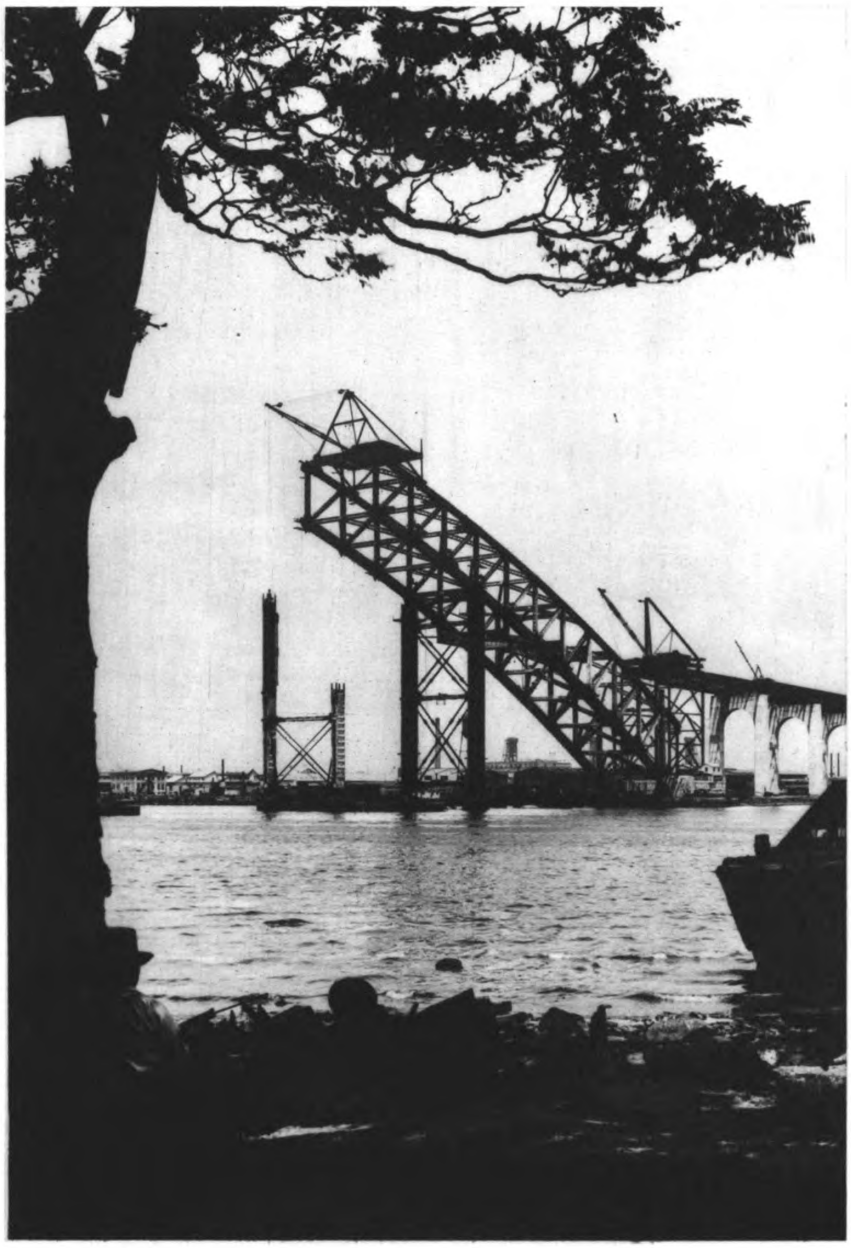
BETWEEN

PORT RICHMOND, STATEN ISLAND, NEW YORK

AND

BAYONNE, NEW JERSEY

DEDICATION NOVEMBER 14TH, 1931



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PROGRAM

PRESIDING

HON. FRANK C. FERGUSON, Vice-Chairman
The Port of New York Authority

BAYONNE PLAZA

SPEAKERS

HON. MORRIS S. TREMAINE
Comptroller of the State of New York

HON. LUCIUS F. DONOHOE
Mayor of the City of Bayonne

MR. O. H. AMMANN
Chief Engineer,
The Port of New York Authority

PORT RICHMOND PLAZA

SPEAKERS

HON. MORGAN F. LARSON
Governor of the State of New Jersey

HON. ARTHUR J. W. HILLY
Corporation Counsel of the City of New York

HON. JOHN F. LYNCH
President of the Borough of Richmond

ALTHOUGH as early as 1646 grants of land were made at Constable's Hook and in 1654 "between Gemoenepaen and Kil van Kol" and inhabited by the Dutch in 1655, it was apparently not until 1750 that a public ferry was established between Bergen Point and Staten Island. The first ferry was a raft, and its successor was a small open scow propelled by oars. Passengers were also ferried across in skiffs. Later a horse boat (a side-wheel ferry propelled by horses on a treadmill) was in operation. This boat was in turn replaced by the steam ferry boat.

The idea of through service to New York from Philadelphia and the South was first realized in a route via Staten Island, across the Kill van Kull by ferry, via a road from Bergen Point to Jersey City, and thence by ferry to New York—"a short, safe, easy and convenient Way for all Travelers passing to the City of New York from any of the Southern Governments," according to a notice that appeared in the New York "Mercury" under date of July 2, 1764. The stages operating between New York and Philadelphia were covered wagons without springs and were modestly called "Flying Machines," although it required three days to make the trip.

These interesting facts regarding the use of highways in connection with the ferries over the Hudson River and across the Kill van Kull are given a new meaning by the through route made possible by the Holland Tunnel, taking the place of the ferry across the Hudson River, the Bayonne Bridge connecting Bayonne with Staten Island, and the Staten Island Bridges leading to New Jersey, and then connecting with the main traffic arteries to the south and west. History

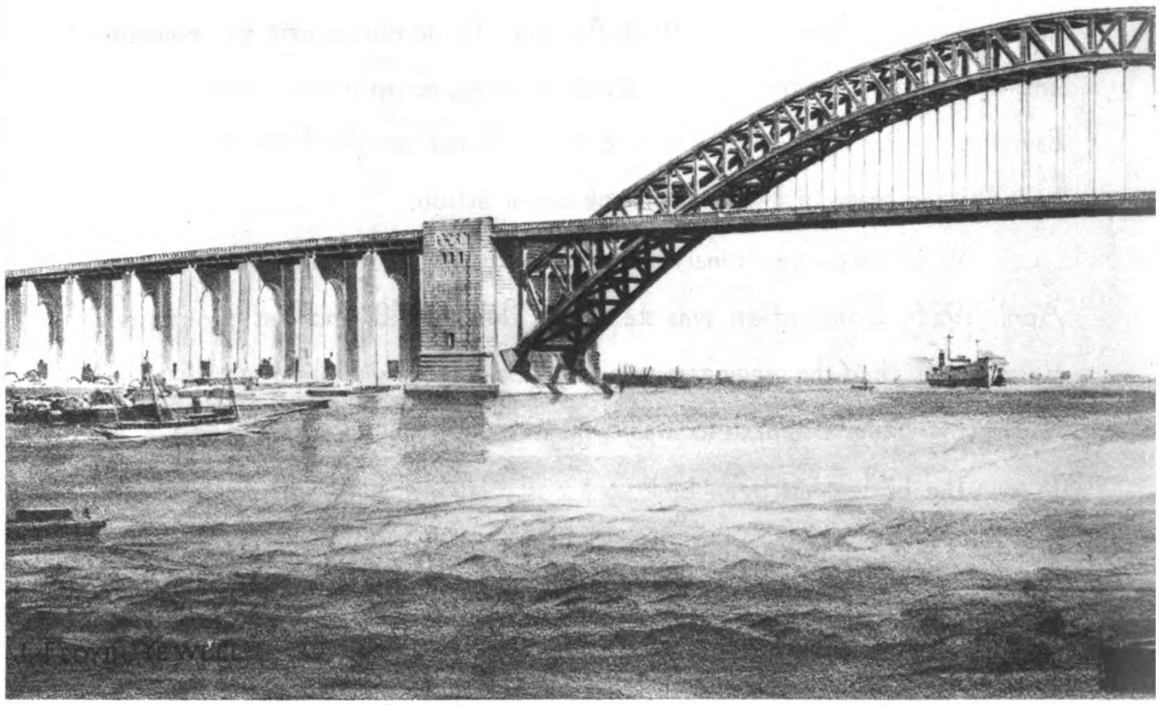
has thus in fact repeated itself in this era of modern transportation facilities—vehicular bridges and tunnels replacing the ferries, and highways of the most improved type taking the place of the old dirt roads, with the fast automobile superseding the ancient "Flying Machine."

The Holland Tunnel has been in operation since 1927; the Goethals Bridge and Outerbridge Crossing, since 1928. The Bayonne Bridge, now being opened to traffic, completes the route.

In 1925 the Legislature of the State of New Jersey authorized and empowered The Port of New York Authority to construct, operate, maintain and own a bridge, with the necessary approaches, across the Kill van Kull from Bayonne on the New Jersey side to Staten Island on the New York side. In 1926, the State of New York took similar action.

Work on the preliminary engineering studies and surveys was begun in April, 1926. Construction was started in July, 1928, and has progressed more rapidly than the engineers originally estimated, with the result that the structure is being opened to traffic many months ahead of schedule.

The bridge has been built at a cost well within the original estimate of $16,000,000. Toward this cost, $4,000,000 has been advanced by the two states of New York and New Jersey—$2,000,000 by each state—and $12,000,000 was raised by the sale of Port Authority bonds. The retirement of these bonds and the repayment of the amounts advanced by the states, with interest, will be provided for by tolls.



The bridge proper is a single steel arch—the longest in the world—flanked on each side by approaches consisting of steel plate girder spans supported on concrete piers. The Port Richmond approach is approximately 2900 feet in length, the main span 1675 feet, and the Bayonne approach approximately 3700 feet, making the total length of the structure, from plaza to plaza, a mile and two-thirds. The main span is nearly 700 feet longer than that of the famous Hell Gate Arch and slightly longer than the Sydney Harbor Bridge under construction at Sydney, Australia.

As the Kill van Kull is an important waterway within the Port of New York District, being the main gateway to Newark Bay and the Arthur Kill and carrying annually a greater tonnage than passes through the Suez Canal, it was necessary that the bridge spanning it should have adequate clearances for shipping. The arch abutments are located well back of the pierhead lines established by the United States government, leaving the entire waterway free of pier obstructions. At the center, the span has a clearance of 150 feet above mean high water and there is at least 135 feet at any point within a channel 1000 feet wide.

The bridge is being opened to traffic with a four-lane roadway and one sidewalk, but is so designed that three additional vehicular lanes, or two rapid transit tracks, can be provided in the future.

PRINCIPAL DATA

Length of arch span (center to center of bearings)	1675 feet
Width of arch (center to center of trusses)	74 feet
Channel Clearance at midspan	150 feet
Rise, lower chord (center of bearing to crown)	274 feet
Height of upper chord above water, at crown	325 feet

Steelwork

Arch span	17,200 tons	
Approaches	9,200 tons	
Total		26,400 tons

Arch abutments founded on bed rock, at depth of 10 to 25 feet below water:	
Concrete and granite	34,000 cu. yds.
Approach piers, reinforced concrete, 20 to 110 feet high	29,000 cu. yds.

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Borings.

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