John Montgomery Kyle, Jr.

1904-1970

By Thomas C. Kavanagh

John M. Kyle, Jr., Chief Engineer of the Port of New York Authority (PONYA), died on September 30, 1970. He served that agency for almost a quarter of a century and was the latest in a line of distinguished engineers-Gen. George Goethals, Othmar Ammann, and John C. Evans-in the Authority's highest engineering post.

As Port Authority Chief Engineer, Mr. Kyle established his own unique and worldwide reputation. He participated during his years of service in the design and construction of every major project that was initiated and carried forth in those years by this large-scale public corporate agency, which was created by the states of New York and New Jersey to purchase, construct, lease, operate, and otherwise administer terminal and transportation facilities and to promote commerce in the Port District. Among the more recent projects of PONYA, for which Mr. Kyle had direct responsibility, was the design and construction of the Third Tube of the Lincoln Tunnel, the new LaGuardia Airport terminal complex and its runway extensions over water, the second deck of the George Washington Bridge Bus Terminal, and the foundations for the World Trade Center.

As Chief Engineer of PONYA since 1947, Mr. Kyle was responsible for the design and construction of all new facilities, as well as all major improvements to existing facilities. These included the New York International Airport, Newark; LaGuardia and Teterboro

airports; the Midtown Port Authority Bus Terminal; the New York and New Jersey Union Motor Truck terminals; Port Newark; Port Elizabeth; Hoboken piers; Brooklyn Port Authority piers; the land tunnel spanning Manhattan at 179th Street; and the rehabilitation and partial reconstruction of the Hudson & Manhattan Railroad (now known as PATH) connecting New York and New Jersey. The broad scope of Mr. Kyle's activities encompassed more than 1,500 square miles of the teeming New York City metropolitan area, with some 13 million inhabitants.

It is difficult to grasp the enormous breadth of activity and scope of responsibility carried by John M. Kyle during his service with the Port Authority, as it covered close to $2 billion worth of public facilities: four major airports; two underwater highway tunnels and one of the world's great suspension bridges; piers, docks, and marine terminals in the country's biggest seaport; bus and truck terminals; the world's tallest buildings; a rail rapid transit line; and a host of smaller structures, with new construction contracts exceeding $100 million each year.

Austin J. Tobin, Executive Director of PONYA, most concisely described the overall functions and responsibilities of John M. Kyle as follows:

> Engineering (in the Port Authority) is a staff department that carries forward the functional plans of the line departments (Aviation, Marine Terminals, Inland Terminals, Rail Transportation, Tunnels & Bridges, and World Trade), converts their dreams into reality, and transforms paper plans and cardboard models to structures of steel and concrete.
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> Its general objective is to construct a facility that will meet the needs and requirements of the people who are going to operate it, and of* the public who are going to use it, and to do so at the lowest feasible cost. The chief' engineer is responsible for the integrity of all Port Authority construction.

John M. Kyle has been aptly described as one of a new breed of civil engineers in public service, because of his ability to organize his engineering staff into an efficient team to meet the diverse demands of such a multidisciplined agency. He organized the department into five major divisions: Design, Construction, Materials, Solis & Foundations, and Research & Development. He

encouraged imagination and innovation among his staff and brought in eminent consultants to advise and assist on projects of a monumental character. Thus, on the George Washington Bridge double decking, Mr. Othmar Ammann was a consultant; on the commuter bus terminal at the New York end of the George Washington Bridge, the eminent Italian engineer Pier Luigi Nervi was called in as a consultant; and on the World Trade Center buildings many noted architects and engineers were consulted. On the foundations of the last named project, Mr. Kyle played a major role in the adoption of the new slurry-trench method of placing concrete perimeter walls with prestressed tie backs under difficult soil conditions.

John M. Kyle's technical contributions constitute a variety of diverse developments in construction and design technology:

1. The development of the sand drain and surcharge methods for consolidation of marsh land to provide foundations for buildings and roads at Port Newark and Port Elizabeth.
2. The advancement of the development of prestressed concrete in this country, where the Port Authority was one of the first to recognize the economic advantages of prestressed concrete and has used this method of construction at a number of its facilities, including the highway bridges at Kennedy International Airport, the approach viaduct construction and the avenue bridges of the New York approach of the George Washington Bridge, and, most recently, the prestressed concrete runway extensions at LaGuardia Airport.
3. The conceptual development of use of air rights above the George Washington Bridge Expressway.
4. Construction methods and procedures for subaqueous tunnels for the Lincoln Tunnel Third Tube. Mr. Kyle was an internationally recognized authority on subaqueous tunnel design and construction.
5. Conceptual and technical development of the high-temperature hot water distribution system at Kennedy International Airport combined with circulating chilled water for refriger

ation. This combined boiler plant serves the entire Central Area (Terminal City) of Kennedy International Airport.

Mr. Kyle's pioneering interest in research in engineering is also typified by his authorization, as part of the design of the World Trade Center buildings, of extensive wind tunnel tests on models, which in turn have helped move forward the boundaries of the engineering profession's knowledge of wind effects on buildings.

John M. Kyle was born on December 3, 1904, in New York City. In 1925 he graduated from Stevens Institute of Technology with a Mechanical Engineering degree; he also did graduate study in architecture at Columbia University and in airport engineering at New York University.

From 1932 to 1943, Mr. Kyle was with the George J. Atwell Foundation Corporation, as Chief Engineer. His project operations with that firm included the approaches to the Lincoln Tunnel and to the Queens Midtown Tunnel, portions of the New York Central West Side Improvement, the Hendrick Hudson Parkway, and the foundations for Radio City.

During the war period, from 1943 to 1946, Mr. Kyle served as a major in the Corps of Engineers. In this service he participated in the training of Airborne Aviation Engineer units and, as Staff Officer in Headquarters AAF, in the survey and field evaluation of major Air Force facilities in Europe, Africa, Asia, and the Pacific Islands. He was awarded an Army Commendation for his service.

Following the war, Mr. Kyle joined the Port of New York Authority, where he served as Assistant to the Chief Engineer from 1946 to 1947, following which he was appointed to the post of Chief Engineer.

John M. Kyle was an active participant in professional society activities and in furthering technical education. He was a Member of the National Academy of Engineering and an Honorary Member of the American Society of Civil Engineers. Other memberships included the International Society of Soil Mechanics & Foundation Engineering, Association Internationale Permanente Des Congres De La Route, National Society of Professional Engineers, American Society for Testing and Materials, and the

American Association of Port Authorities. He was also a Civil Engineering Member of the Inspection Committee of Engineers' Council for Professional Development and a Director of the Society of American Military Engineers, and a Member of the Board of Governors of the New York Building Congress. At Princeton University he served as a Member of the Advisory Council of the Department of Civil Engineering. He was also a member of the Moles.

As a member of the National Academy of Engineering, Mr. Kyle served on the Aeronautics and Space Engineering Board, the Ad Hoc Committee on Airport and Support Facilities, and the Ad Hoc Study Advisory Committee on Aeronautics.

Mr. Kyle received many awards in his professional career, among which were the following:

1. James Laurie Prize-American Society of Civil Engineers, 1952.
2. Metropolitan Civil Engineer of the Year-American Society of Civil Engineers, 1960.
3. Distinguished Engineer in Public Service-New York State Society of Professional Engineers, 1960.
4. Man-of-the-Year-American Public Works Association, 1963.
5. Honor Member of Chi Epsilon-National Civil Engineering Fraternity.
6. Distinguished Service Medal-The Port of New York Authority, 1957.
7. Honorary Member-Brooklyn Engineers Club.
8. Honorary Member-American Society of Civil Engineers.
9. Included in *Engineering News Record* list of Men Who Made Marks in 1967.
10. Howard S. Cullman Distinguished Service Medal (awarded posthumously by the Port of New York Authority, 1970).

In his personal life, Mr. Kyle served as an Elder of the Marble Collegiate Church and as a Director of the American Foundation of Religion and Psychiatry. He was survived by his widow, the former Virginia Tuxill (who passed away a few days after his

death); two sons, John III and Charles T.; and a daughter, Sarah Jane.

John M. Kyle was an engineer of outstanding ability. He will long be remembered by his fellow engineers and many friends for his brilliant engineering and administrative skills, for his dedication and integrity in his professional ideals, and for his warm personal interest in his associates and in young engineers.