



*Louis H. Kriger*

## LOUIS W. RIGGS

1922–2002

Elected in 1987

*“For innovative leadership and design of bridges and rapid transit structures in the United States and foreign countries.”*

BY JAMES LAMMIE

**L**OUIS W. RIGGS, retired chairman of Tudor Engineering Company, died on June 12, 2002, in Lafayette, California. With his passing, the engineering and construction industry lost a leader, a manager, a teacher, and a real gentleman.

Louis was born in Pearsall, Texas, on June 29, 1922. He was raised in Riverside, California. He joined the U.S. Air Force in World War II and was assigned to the 494th Squadron as a navigator, a position in which he used his early engineering and mathematics training. While on a bombing mission over Bulgaria, his plane was shot down and he was held in a prisoner of war camp there. He did not speak highly of his captors. After the USSR entered the war, Louis was released. He was decorated, returned to the United States, and assigned to March Field in Riverside where he met his future wife, Patricia. After marriage, they moved to San Francisco where he started his professional life.

Louis attended the University of California, Berkeley, graduating with a B.S. in civil engineering in 1948. He was a member of Tau Beta Pi and was elected to the civil engineering society, Chi Epsilon. He served the university in many capacities. He received the Trustee Citation Award from the university's Berkeley Foundation in 1981 and the Distinguished Engineering Alumni Award from the university's Engineering

Alumni Society in 1984 (now called the Berkeley Engineering Innovation Award). He was a frequent speaker in civil engineering courses and a loyal “Bears Backer” for many seasons.

After graduation, Louis went to work as a junior engineer for the state of California with the Division of San Francisco Bay Toll Crossings, further stimulating his interest in bridges. Then in 1951 he joined Tudor Engineering Company, at that time a small firm with an excellent reputation in structural design, particularly of bridges. Within 10 years he became a vice president and a member of the Board of Directors. In 1963 and for the next 20 years he served as president and chief executive officer of Tudor. He became chairman in 1983 and served in that position until his retirement in 1986.

During his career Louis managed many challenging projects. One of his favorites was the Tagus River Bridge piers in Lisbon, the deepest in the world at that time and made more difficult by the steeply sloping rock foundation. Louis was also one of a select group of visionary leaders who foresaw the need for a regional rapid transit system in the San Francisco area. This led to his proudest accomplishment, the BART System—the San Francisco Bay Area Rapid Transit System—America’s first modern transit system. In this joint venture—PBTB (Parsons Brinckerhoff-Tudor-Bechtel)—Louis was on the Joint Venture Board of Control, with overall design and construction responsibilities. Tudor had direct responsibility for the design of the entire system, aerial structure, with its difficult soil and foundation conditions and strong seismic design requirements. That aerial structure has since survived two major earthquakes in San Francisco. The PBTB Joint Venture moved on to guide the design of the Caracas Metro, with heavy emphasis on technology transfer to the local Venezuelan staff.

The final PBTB joint venture project was MARTA—the Metropolitan Atlanta Rapid Transit Authority—for which planning began in 1967 and, after many political and environmental issues, moved into construction in 1975. Louis was again on the joint venture board, with overall design and construction responsibilities, until 1976. At that time, new

contract terms dictated that Bechtel withdraw from the project and the joint venture was reconfigured as PB/T (Parsons Brinckerhoff/Tudor). Louis played a key role in all projects, particularly structural engineering, until his retirement. Along the way he continued to grow Tudor and moved the company into hydropower, building designs, such as the Oakland bulk mail facility for the U.S. Postal Service, and many bridges, such as the Dry Creek/Warm Springs Bridge in California. These projects do not represent all of Louis Riggs's contributions to the design industry but do serve to illustrate the scope and scale of his many accomplishments.

Louis also contributed to the engineering industry and his profession through lectures, with his many papers that featured innovations and improved practices, on his current projects and through his active participation in many professional societies and organizations. He was a long-term member of the American Public Transit Association and the American Public Works Association. He was elected a fellow of the American Consulting Engineers Council and served as vice president from 1979 to 1981. For the Consulting Engineers Association of California, he was director from 1964 to 1974 and served as president in 1973. He was also a fellow of the American Society of Civil Engineers (ASCE). He was very active in the Society of American Military Engineers as a director and vice president of the San Francisco post and was elected president of the national society in 1981. Finally, he was a member of the Building Research Advisory Board of the National Research Council from 1975 to 1981 and then chairman and director of the follow-on Buildings Future Council.

Louis was also recognized for his accomplishments with the Greensfelder Construction Prize in 1967 by the ASCE for his paper on the Tagus River Bridge and with an Honor Award from the Building Industry Conference Board in 1974. He received the Golden Beaver Award for Engineering in 1979. (The Beavers are the organization of the western U.S. heavy construction contractors.) The recognition that Louis was proudest of was his election to the National Academy of Engineering in 1987.

Louis is survived by his loving wife of over 55 years, Patricia; his daughter, Katherine Stimson, and her husband, John; and his son, James Riggs. He is also survived by his brother Leroy Riggs and wife Marilyn. In addition to his legacy as an outstanding and innovative structural engineer, Louis was known as a kind, loving, intelligent human being who never stopped teaching others and supporting his family.

