

T.Y. Lin International Completes Unprecedented Roll-in/Roll-out of Bay Bridge Yerba Buena Island Detour in Record Time

SAN FRANCISCO, CA –T.Y. Lin International / Moffatt & Nichol (TYLI/M&N) Joint Venture made history on Tuesday, September 8, with the completion of construction on the East Tie-In (ETI) portion of the Yerba Buena Island (YBI) detour, a steel truss temporarily supported by 150-foot steel towers that serves as a transition section connecting the eastern span of the San Francisco-Oakland Bay Bridge to the YBI Tunnel. TYLI/M&N served as the designer and construction engineer on this historic project.

Installing the 3,600-ton double-deck steel truss was performed 150 feet above ground and entailed a sequence in which workers removed an existing section of the Bay Bridge using a skid bent system that rolled the old 300-foot long truss span out of the way and rolled the replacement span in position, re-directing traffic onto the detour structure. The primary challenge of this critical transition was to minimize disruption to the 280,000 vehicles that cross the bridge daily by installing the tie-in structure within an amazing timeframe of four days over the Labor Day weekend. TYLI/M&N engineers designed the new roll-in truss such that after the roll-in, it matched the deck elevations of abutting structures within an inch. Their system contended with a narrow margin of error for responding to changes in field conditions.

“This is a significant milestone for fast-track bridge engineering that could only be achieved through tremendous team work between Caltrans, the design JV, and the Contractor, C.C. Myers, said Alvaro J. Piedrahita, TYLI President. “The successful execution of this project and the knowledge that was gained from it will serve as a model for future projects that require bridge repair and replacement with minimal disruption to heavily used traffic arteries.”

The YBI detour is part of the South-South Detour (SSD), a project within the suite of San Francisco-Oakland Bay Bridge East Span seismic safety projects. With the completion of the bypass structure, motorists are now able to travel freely while construction takes place for the permanent YBI transition structure connecting the existing double deck configuration of the YBI tunnel to the new self-anchored suspension (SAS) bridge now under construction. TYLI/M&N is also the designer for the signature SAS span.

Founded in 1954, T.Y. Lin International is an internationally recognized, multi-disciplined transportation planning and engineering firm committed to providing innovative, cost-effective, constructible designs for the global transportation infrastructure market. With more than 1,500 employees working in offices throughout the United States and Asia, the firm is able to provide support on projects of varying size and complexity.

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