



## PROJECT PROFILE

# TWA Flight 800

Aircraft Reconstruction | Long Island, NY



### CLIENT

National Transportation Safety Board

### BACKGROUND

WJE was retained by the National Transportation Safety Board (NTSB) to carry out the reconstruction of a 94-foot segment of the TWA Flight 800 Boeing 747 aircraft that crashed off of Long Island, New York on July 17, 1996.

The NTSB objective was to reassemble the recovered pieces of the plane's fuselage, as well as the main fuel cell, keel beam, cargo areas, and pressure deck, in a manner that permitted viewing of the reassembled surfaces and installation of the passenger seating in the reconstruction. In addition, it was essential that the reassembled aircraft structure could be rolled out of the hangar after completion. Additionally challenging, the reconstruction had to be completed under a very rigid schedule of just over four months.



### SOLUTION

WJE's first objective for the reconstruction was to design, fabricate, deliver, and erect a skeletal framework capable of supporting the recovered pieces of the plane's fuselage and related elements. The framework design had to satisfy several criteria: minimize alterations to recovered pieces of the aircraft; minimize viewing obstructions; accommodate substantial dimensional distortions; and allow installation of recovered cabin components. Then, a team of two WJE engineers and two technicians rigged, positioned, and attached the pieces of the damaged aircraft on the truss to reconstruct the airliner to its approximate original geometry. Finally, the WJE team designed a system to permit the reconstructed segment to be moved.



WJE designed a support system and outlined procedures that met the project objectives in a timely and cost-effective manner. The entire project was accomplished within six weeks of notice to proceed.