

AirTrain JFK



THE NEW YORK COUNCIL OF THE SOCIETY OF AMERICAN REGISTERED ARCHITECTS RECOGNIZED STV'S DESIGN OF THE SYSTEM'S 10 STATIONS WITH A DESIGN AWARD FOR EXCELLENCE, AND THE CONCRETE INDUSTRY BOARD RECOGNIZED THE PROJECT WITH ITS 2001 ROGER H. CORBETTA AWARD.

LOCATION
QUEENS, NY

CLIENT
PORT AUTHORITY OF NEW
YORK & NEW JERSEY
(PANYNJ)

CONSTRUCTION COST
\$1.3 BILLION

SIZE
8.4 MILES OF GUIDEWAY
10 STATIONS

To link remote parking, car rental services, and commuter rail, subway, and bus systems that service the New York metropolitan area, the Port Authority of New York and New Jersey (PANYNJ) commissioned the design-build of a \$1.3 billion light rail transit (LRT) system that serves the central terminal area of John F. Kennedy International Airport.

As the lead designer under a design-build-operate-maintain (DBOM) contract, STV provided complete architectural and engineering design, environmental services, and construction supervision for AirTrain JFK. The LRT airport access system, which is fully automated, includes an 8.4-mile guideway, 10 award-winning stations, and a state-of-the-art operations, maintenance, and storage facility (OMSF).

STV developed a cutting-edge, performance-based design approach to meet the client's stringent design criteria, including provisions to minimize

structural damage caused by an earthquake. This was the first time this criterion was mandated for a rail system on the East Coast. The elevated guideway structure consists of precast segmental concrete box sections that accommodate the track, third rail, safety walkways, and electrical and communications ductbanks. Glass-enclosed moving walkways link airport facilities to the climate-controlled stations. STV developed an innovative architectural "kit of parts," which were combined in various configurations according to site conditions and the functional needs of each station. The firm also provided HVAC design, as well as an efficient and effective plumbing and fire protection system for the 10 stations and the OMSF.

Extensive site engineering included approximately 4,000 utility relocations on airport property alone, and STV's design facilitated the utility relocations without a single hit.