

Dulles Airport Aerotrain Terminals

Washington, DC



The Aerotrain at Washington Dulles Airport was initiated in October 2002 and the project opened in 2010. This train transports people from the Main Terminal Building and the A, B, and C Concourses. Prior to the construction, persons travelled from the Main Terminal to the Concourses in Mobile Lounges, large bus-like vehicles.

The system was initiated in 2003 and Sumitomo Corporation of America and Mitsubishi Heavy Industries, designed, engineered, constructed, and delivered the Aerotrain cars and system to Washington Dulles International Airport. During the construction process, it was required that an uninterrupted flow of passengers, luggage and Mobile Lounges between the Terminal and airline gates in the Midfield Concourses be maintained.

The project consists of three tunnels. Approximately 7,700 feet were formed using a cut and cover method while tunneling was used for 3,650 feet. Boring was conducted on approximately 4,300 ft of the project.

The general contractor for the Main Terminal Train Station was Turner Construction Company. Atkinson/Clark/Shea was the general contractor for the East Station, Concourse A and B, the East Tunnels, and Clark/Shea for the West Tunnels. Facchina Construction Company, Inc. was the general contractor for Concourse C.

The three Terminals of the project were designed by: Skidmore, Owings and Merrill (Main Terminal Train Station); Hellmuth Obata & Kassabaum (Concourse A and B) and Kohn Pederson Fox Associates, P.C. (Concourse C). HNTB Corporation was the architect for the Vehicle Maintenance Facility and the tunnels.

The main terminal of the project required excavation of 220,000 cubic yards of soil and this was replaced with 5,300 ton of reinforcing steel and 47,000 cubic yards of concrete. The Tier 1 West Station used approximately 20,000 cubic yards of concrete was used with 180 ton of rebar while the Tier 1 East/Concourse A/B Train Station used 17,000 cubic yards of concrete with 1,275 ton of reinforcing steel. The Tier 2/Concourse C East Train Station used 34,000 cubic yards of concrete with 4,200 ton of reinforcing bar and the connector tunnel used 100,000 cubic yards of concrete with 630 ton of reinforcing bar.

Team

Owner:

Metropolitan Washington Airports Authority

Architect:

Skidmore, Owings and Merrill
Hellmuth, Obata & Kassabaum
Kohn Pederson Fox Associates, P.C.
HNTB Corporation

Developer:

Sumitomo Corporation of America
Mitsubishi Heavy Industries

General Contractor:

Turner Construction Company
Atkinson/Clark/Shea
Facchina Construction Company, Inc.
Atkinson/Clark/Shea
Clark/Shea

Design Criteria:

– Uninterrupted flow of passengers, luggage and mobile lounges between the Terminal and airline gates in the Midfield Concourses be maintained during construction.

Total Project Cost: \$1.4 billion

Epoxy-coated Reinforcing Steel: 10,000 ton

Photography:

metwashairports.com