



SINGAPORE CHANGI AIRPORT

Singapore

TERMINAL 1 AUTOMATED CHECKED BAGGAGE SCREENING

Civil Airports Authority of Singapore | 2004

The Civil Aviation Authority of Singapore retained BNP for their 4th baggage system project at Changi Airport to design a new checked baggage screening system for Terminal 1. Terminal 1 handles all carriers except for Singapore's national carrier. The original BHS design was a point-to-point system with 14 check-in islands and seven make-up carousels, with each island feeding only one carousel. BNP produced a unique, cost effective and simple design that allows approximately 90% of all baggage to be handled on the system in its original manual point-to-point form as it was handled prior to the implementation of checked baggage screening system. The system cost was very low considering the 20 million passengers per annum capacity of the terminal.

The system had to be designed so that it could be installed while the entire terminal remained operational. BNP planned more than 20 individual construction stages to ensure the terminal remained fully operational during the entire construction process.

The system screens both originating and transfer baggage using 16 Advanced Technology Standard and Multi-view X-ray machines and three CT based EDS machines.

The system has a unique feature in that all conveyors are color coded depending on what the screening status of baggage is handled as can be seen in the above picture. Green conveyors handle only clear bags, orange conveyors handle bags that could be clear or unclear and red conveyors handle only unclear baggage. This simple but effective characteristic allows staff to quickly determine what bags can be removed from the system in the rare event of a system failure.



ASSOCIATES, INC.

BNP PROJECT TEAM

Damien Breier

TOTAL CONSTRUCTION AMOUNT

\$60 Million

BHS CONSTRUCTION AMOUNT

\$12 Million

REFERENCE

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SCOPE OF SERVICES

Conceptual Design

Design Development

Contract Documents

Bidding and Procurement

Construction Monitoring

Start-up Assistance