



SINGAPORE CHANGI AIRPORT

Singapore

TRANSFER BAGGAGE HANDLING SYSTEM

Changi Airport Group | 2005 - 2009

The transfer baggage systems in Terminals 1, 2 and 3 at Singapore's Changi Airport were originally designed to screen transfer bags from selected flights instead of transfer bags from all flights. BNP was retained by Changi Airport Group (CAG) to design the modifications to the existing transfer baggage systems at Terminals 1, 2 and 3 to integrate 5 level 100% Hold Baggage Screening into the system. The assignment also included design of a "hot bag" transfer system in each terminal where transfer bags with short connection times are processed quickly (including screening) before being sent to their connecting flights.

The transfer baggage system and "hot bag" transfer system will efficiently and economically handle and screen all transfer bags at Changi Airport. Because the design was done on existing systems, the modifications must continue to meet the well established service standards at Changi while minimizing any increase to the overall operation and maintenance cost of the BHS. At the same time, the designs have to minimize any adverse effect on the bag throughput, maintenance access and operational safety of the BHS.

To ensure that the modifications will provide sufficient capacity to screen the projected transfer bag volume within the bag in-system time stipulated, real-time simulation was performed on the baggage systems for all three terminals. The simulations also serve to validate the performance level of the baggage systems.

As part of the design tasks, BNP engineered a detailed multi-step modification process to ensure that all 3 terminals remain at or near to 100% capacity during the modifications of the existing systems. Through creative designs and detailed planning, the airport will maintain its extremely high standards for processing baggage during this major upgrade of all the baggage systems at the airport.

BNP rendered its services for conceptual design, simulation, design development, tender drawings and specifications for the transfer baggage systems and "hot bag" transfer systems to allow CAG to procure the systems through competitive tender.



ASSOCIATES, INC.

BNP PROJECT TEAM

Benedict Oon, Project Director

TOTAL CONSTRUCTION AMOUNT

\$37 Million

SCOPE OF SERVICES

Conceptual Design
Design Development
Simulation
Contract Documents