



XI'AN XIANYANG INTERNATIONAL AIRPORT

Xi'An, China

New Terminal 5 Baggage Handling System

China West Airport Group | 2020 – 2025 (Projected)

A 700,000m² new Terminal 5 with a capacity of 50 million annual passengers in 2030 is planned by China West Airport Group to meet the rising demand. A Ground Transportation Center (GTC) will be built together with the terminal to provide services for passengers that connect to subway, highway, and railway.

BNP was employed to carry out the concept design and detailed design of the BHS for the new terminal including all new BHS systems and facilities, GTC baggage system connections, and interconnecting system with future satellite.

The new BHS is a fully automated ICS-based system. Domestic and international bags are transported on different belt conveyor lines to the top loaders in accordance with Chinese customs regulations. Once bags are loaded onto carriers, they can share the routes. Check-in islands are provided in the GTC building where passengers from car park and public transportation can check their bags conveniently. Hotel check-in facility and city check-in unloading area are also included in the design. The system runs from check-in level at +14.5m to basement at -11.5m, which houses a 3000-position Early Bag Storage system. BNP designed the main sortation system below apron so operations in the apron-level bagroom enjoys a better environment.

BNP provided a design that allows for redundant capacity such that each individual subsystem can handle 75% peak bag flow under single failure. In addition, direct feeding conveyor lines are provided to connect each check-in island to a make-up carousel for off-peak operation and catastrophic system failure.

BNP rendered its services for concept design, design development, simulation, tender drawings, and specifications for the new BHS to allow China West Airport Group to procure the systems through competitive tender. During the construction stage of the project, BNP will provide experienced staff to support China West Airport Group for the delivery of the operational BHS.



ASSOCIATES, INC.

BNP PROJECT TEAM

Damien Breier, Principal
Ben Oon, Project Director
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BHS CONSTRUCTION AMOUNT

CNY ¥ 820+ Million

REFERENCE

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SCOPE OF SERVICES

Concept Design
Design Development
Simulation
Contract Documents
Tender Review
Construction Stage Support