



NAVI MUMBAI INTERNATIONAL AIRPORT

Mumbai, India

Terminal 1

GVK Navi Mumbai International Airport

As part of the design team led by Zaha Hadid Architects, BNP Associates (BNP) has been appointed as the specialist consultant for the NMIA Terminal 1 Baggage Handling System (BHS) consultancy support services. The objectives of the consultancy support services are to advise, coordinate and develop the necessary BHS design and requirements to a level of detail sufficient to support the detailed design of the NMIA BHS.

Terminal 1 planned to handle 20 million annual passengers (MAP) and will serve predominately domestic passengers. The Terminal 1 will also have the capability to handle international passengers in initial phases. It is intended that the structure and shell of Terminal 1 will be built for the 20 MAP footprint and foorspace requirements but will be fitted out in two phases with the initial phase capable of handling 10 MAP and the second capable of handling the full 20 MAP.

The outbound baggage system consists of three check-in islands. The west island will be considered to have 24 SBD positions. The Middle check-in island will each have 22 standard check-in positions. The East check-in island will each have 32 standard check-in positions. Two mainlines will feed 4 ECAC Std. 3 CT machines configured in a 3 Level Screening operation with 2 levels of On Screen Resolution (OSR) review that will comply with BCAS, ECAC, and TSA industry standards.

The sortation subsystems are the pivotal component of the design. All outbound bags must go through the sortation subsystems to get to their assigned make-up carousel. There are 9 numbers of make-up carousals with capacity for staging 14 carts each located on the apron level. The system design includes belt sorting lines with diverters and consists of 2 mainlines for redundancy and a recirculation subsystem to reroute bags that have missed their divert back to the MES or sortation mainlines for another attempt. All sorting destinations have 2 discharges from each sorter.

There are five 90-meter long claim devices for domestic arrival operations, 3 for International arrival operations, and 1 for swing operations. Terminating baggage is unloaded at the terminating input conveyors. For international arrivals the baggage is transported to an automated in-line customs screening machine for customs screening per BCAS requirements.

There is also a simple, low cost early baggage storage system which consists of a series of manual shelves that can store a total capacity of approximately 300 bags. An inventory control system will be provided to keep track of the bags and prompt the operator when to remove the bag from the shelf and send them to the make-up units. This semi-automated early baggage storage area is very cost and space efficient and easily expandable in small increments as the need for more capacity arises.



ASSOCIATES, INC.

BNP PROJECT TEAM

John Whitehead, Project Director
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BHS CONSTRUCTION AMOUNT

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REFERENCE

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SCOPE OF SERVICES

Conceptual Design
Design Development
Detailed Design