

## CHARLOTTE DOUGLAS INTERNATIONAL AIRPORT BAGGAGE SYSTEM REPLACEMENT INCLUDING INLINE CHECKED BAG SCREENING

**OWNER:**

CHARLOTTE DOUGLAS  
INTERNATIONAL AIRPORT

**BNP PROJECT TEAM:**

JOHN HEARD  
MAGDA BASIAK

**LOCATION:**

CHARLOTTE DOUGLAS  
INTERNATIONAL AIRPORT  
CHARLOTTE, NC

**CONTRACT PERIOD**

05/10 - 12/15

**ENTIRE PROJECT AMOUNT**

US \$46MILLION

**BHS CONSTRUCTION AMOUNT**

US \$30 MILLION

**REFERENCE:**

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**SCOPE OF SERVICES:**

CONCEPTUAL DESIGN  
DESIGN DEVELOPMENT  
CONTRACT DOCUMENTS  
BIDDING AND PROCUREMENT  
CONSTRUCTION MONITORING

**RELEVANCE:**

AUTOMATED BAGGAGE HANDLING  
SYSTEM UTILIZING 10-DIGIT IATA  
BAG TAGS AND INTEGRATED  
CHECKED BAGGAGE SCREENING

BNP Associates, Inc. was retained by the airport, to provide the design and construction administration services for the inbound, outbound and inline checked baggage inspection systems (CBIS). The design consists of two (2) screening matrices of four (4 (west matrix)) and five (5 (east matrix)) EDS machines each (CTX 9800's) feed by the existing ticket counters, curbside and FIS recheck mainlines. Each EDS matrix diverts bags to either a clear bag line or to the Centralized Baggage Reconciliation Area (CBRA) for further screening based on the results of the CTX 9800 bag scan. Out-of-gauge bags are diverted around the EDS devices onto an OOG line for transport directly into the CBRA. Reinsert functionality has been provided from the CBRA in each matrix to allow unknown bags to be rescanned by the EDS machine. The Clear Bag main-lines feed four (4) slope plate make-up devices. ATRs and manual encode stations sort baggage to the appropriate make-ups. Crossover subsystems have been provided to provide both redundancy in the event either a matrix fails and load balancing between the screening matrixes and the associated ticket counter or sortation mainlines

A new BHS control room has been provided that supports the main PLC and host computer facilities for the baggage handling system. It also supports any computers required by Terminal users to provide the 10-digit interface with the baggage system. The monitoring system for the entire system is graphic based, and displays all major elements of the system on a real time basis. Statistical reports are also generated in this location and allow for the management and supervision of the baggage system.

The domestic arrivals baggage system of the project consisted of providing two (2) additional incline plate claim units with associated feed and load conveyors.

BNP's design incorporated the latest TSA Planning Guidelines & Design Standards making the CLT baggage handling system design fully compliant to TSA's current protocol for 100% inline certified EDS checked baggage screening.

