ATSA 100% Baggage Screening Compliance:
Flow Control Using Baggage Totes

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On November 19, 2001, the United States Congress passed the Aviation Transportation Security Act (ATSA), resulting in the creation of the Transportation Security Administration (TSA) and ultimately requiring 100% checked baggage screening at all commercial airports by December 31, 2002.

CP Products became a part of the implementation of this important Federal Mandate by manufacturing a new baggage tote (or tub) that is specially designed to navigate the complicated 100% Baggage Screening System at John Wayne Airport, CP's Orange County, California neighbor. This first-of-a-kind custom tote is just as revolutionary as the totally transparent baggage screening system put into place at John Wayne Airport in just five and one-half months to meet the mandate. *Not only did John Wayne Airport meet the mandate in record time, but it became the only major airport in the nation to come into ATSA compliance with a fully in-line system!*

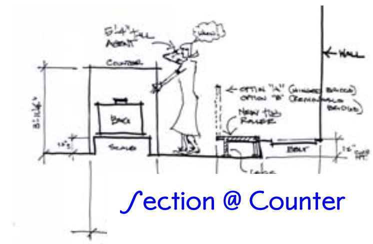
As the new system came on line and began constant operation, it was evident that some fine-tuning would be required to forestall baggage jambs and lost scanner images, to increase system up-time and maintain baggage throughput. Airport project management, provided for the entire project by JHTM & Associates a Costa Mesa-based program management firm, found that new merges, added power turns, vertical sorters and diverters can shred lose straps, handles, locks and other floppy appendages. Further it was found that tagalong bag tags and ID labels would create image problems in the automated, electronic scanners which were supplied by the TSA and manufactured by L3 Communications. Several mechanical and program changes were applied to reduce the potential for jambs, damaged bags, and corrupted images while not sacrificing effective automated screening. These included experimenting with belt speeds and adding mechanical devices such as counter backbelt portals to limit bag height, as well as diverters and mechanical straighteners to position bags to center in the scanning envelope. The last refinement to the system resulted from a recommendation by the conveying system designer, as well as an order by the Deputy Airport Director-Facilities, that all bags entering the system must be placed in tubs.

To implement this order the JHTM Project Manager purchased nearly 4,500 totes from CP Products. These new totes were specifically designed to navigate the system and provide a footprint to take full advantage of the scanning envelope. Considering that totes would be made of plastic, CP Products searched for a consistent resin base to ensure this solution didn't create downstream problems with false positive readings or image processing issues with the automated scanners.

Finally, ongoing coordination with the airlines was needed as ticket agents can literally make or break the new system. The back-of-house tub success and the ensuing 100% usage on all checked luggage, required JHTM's Project Manager to work closely with airline managers and counter supervisors to help the ticket agents with the ergonomics of handling the new tubs and bags. The result is a stationary roller bed with a hinged gate designed to span from the counter bagwell to the backbelt. With this system, the agent places the tub on the scale, the passenger places the bag(s) in the tub and the agent simply pulls it to the backbelt. A plastic fixture fastened at a strategic point on the backbelt curb assists the tub in making its turn down the flow of the belt without any other agent involvement.

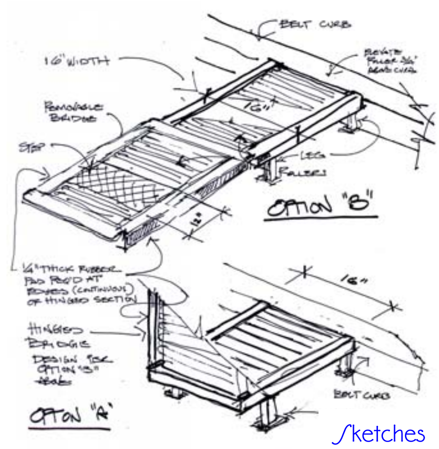
As with the entire in-line screening project, the totes are part of an overall solution that provides convenience for the traveling public at John Wayne Airport, as well as cost efficiency for the airport. Due to the increased daily costs associated with baggage handling, delivery of the totes was time-critical. Working with CP Products, the airport received initial delivery in less than four weeks after concept approval. These totes provide an ergonomically friendly low profile; they are 5" in height, and present a consistent footprint that successfully navigates the entire system without outside intervention. The only checked baggage can not be placed in the totes are oversized items such as golf clubs, surfboards and baby seats which require manual inspection. The in-line screening totes have paid for themselves several times over in eliminating luggage damage, saved labor while ensuring screened baggage gets to the airplane in time for loading.

Conveyor Bridge Concepts



Section @ Counter

Concepts/Options



Sketches by RDE

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100% Baggage Screening Compliance at John Wayne Airport