

Singapore Changi International Airport Terminal 4 New Construction Project Team (Takenaka Corporation)

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Members: 50 people (Takenaka Corporation 50 people)

This was a new construction project for Terminal 4 at Singapore Changi International Airport, one of the leading hub airports in Asia. The terminal, which accommodates 16 million passengers annually, is equipped with a state-of-the-art facial recognition system as an airport security system; and ticketing, luggage handling, immigration, and check-in have been interconnected and automated.

During construction Takenaka worked to improve productivity in a unified manner with stakeholders spanning many countries such as the client (Changi Airport Group (CAG)), consultants, partner companies, and companies directly engaged by the client, e.g., airport specialty equipment, etc. In particular, we effectively positioned experienced staff in the design and engineering departments, and we demonstrated our maximum capabilities as a general contractor, e.g., modeling clash detection, including the airport specialty equipment, by utilizing BIM from the design stage, in order to greatly reduce rework at the site. As a result, the project was successfully completed in a short period of 37 months.

During the peak period, more than 1,000 employees, mainly consisting of Singaporeans and permanent residents, and 4,000 workers were engaged in this project, and we achieved a total of 29 million working hours without any major accidents. In addition, more than 95 percent of the subcontracts and more than 90 percent of the subcontract amounts were ordered to local companies in Singapore, which also contributed to local economy and job creation.

Terminal 4 opened on October 31, 2017 with the commencement of service for ordinary passengers, and it is being used by more than 10 airlines including Cathay Pacific and AirAsia. According to a CAG press release, 1.3 million people used Terminal 4 in the second half of 2017, and 8.3 million used it in 2018 while the annual number of passengers at Changi International Airport in 2018 reached a record high of 65.6 million.

Through the success of this project, we were able to demonstrate our engineering project management in airport construction to Singapore and CAG as a representative of Japanese contractors, and we were able to put ourselves in a good position for participating in bids for the upcoming construction of Terminal 5, which is expected after 2020.

From the above-mentioned excellent achievements and future developments, this project has merited commendation in the field of international contributions.



Construction photo (main terminal building in the center, control tower on the left)



Utilization of BIM



Commemorative Opening Ceremony with the Minister for National Development, CAG executives, and Takenaka's Honorary Chairman



Interior view of departure hall