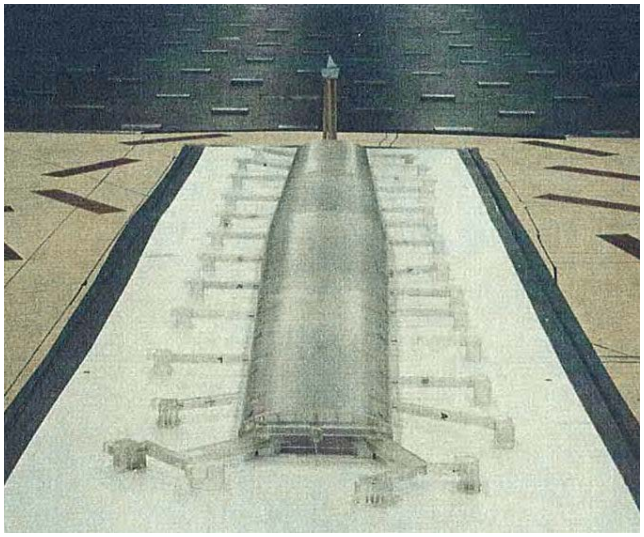
Dubai Sheikh Rashid Concourse 1, Dubai, UAE

Wind Engineering Study



Client	Structural Engineer	Owner
Bechtel Corporation, San Francisco	Bechtel Corporation, San Francisco	Dubai Government
Height/Length	**Year Tested**	**Model Scale**
28 m / 800 m	1996	1:400

The Project

The concourse is a multi function facility which has 27 boarding gates and five levels containing a hotel, business centre, health club, dining and entertainment facilities, medical center, post office, prayer room and shopping.

The Wind Tunnel Studies

The wind engineering studies for the concourse included a study of the wind-induced local cladding pressure loads and frame structural loads.

A study of wind-induced cladding pressures was carried out for 505 measurement locations including selected passenger bridges.

The instantaneous acting pressures were analyzed to determine horizontal and vertical forces and overturning moments for 15 selected frame locations along the concourse.

The local design pressures and supporting frame loads were calculated using the Dubai design wind speed from the UBC (1997) as well as a wind climate model developed using meteorological data for Dubai.

The Boundary Layer Wind Tunnel Laboratory

Western

The Boundary Layer Wind Tunnel Laboratory
The University of Western Ontario
Faculty of Engineering, London, Ontario
Canada, N6A 5B9 Tel: (519) 661-3338 Fax: (519) 661-3339
Internet: www.blwtl.uwo.ca E-mail: info@blwtl.uwo.ca

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