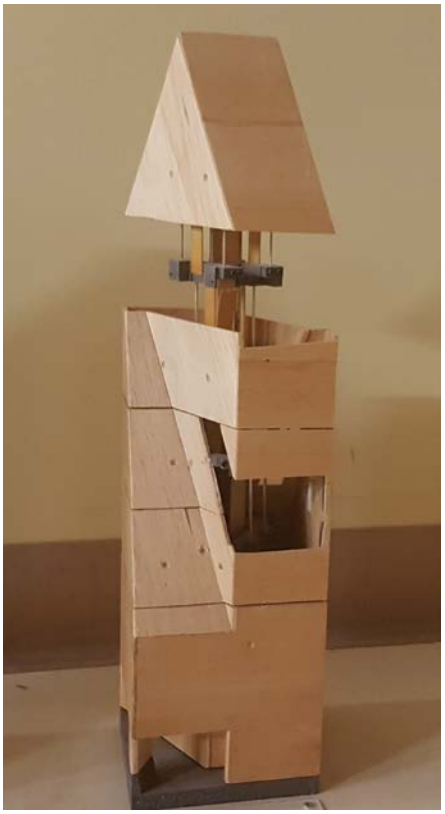
Fountain Place, Dallas, Texas, USA

Wind Engineering Study



Client	*Structural Engineer*	*Architect*
Chriswell Development Corporation	CBM Structural Engineers	I.M. Pei & Partners & WZHM Architects
Height	*Year Tested*	*Model Scale*
Building Height – 220m or 720 ft Floors – 62	1983 1984	1:500

The Project

Fountain Place is a 60-storey late-modernist skyscraper in downtown Dallas, Texas, USA. It is the fifth-tallest building in Dallas, and the 15th-tallest building in Texas. A new 45-storey sibling high-rise apartment tower, AMLI Fountain Place, is under construction to its northwest on an adjacent lot with a completion date in 2020.

Fountain Place is located on the block bounded by Munger Avenue and Ross, Field and Freeman Streets. The project originally comprised two twin towers (Towers A and B), 744 ft. in height and a twenty-five storey tower (Tower C) atop a six storey low-rise structure. The building includes office, hotel, and retail space.

The Wind Tunnel Studies

The wind engineering studies for the Fountain Place Project were undertaken in 3 parts: • Part 1 included a study of the wind-induced local exterior pressures and suctions over the tower façade. • Part 2 involved an assessment of the pedestrian level wind environment with focus on pedestrian comfort and safety at ground level. • Part 3 provided estimates of the overall structural loads of the tower. This was achieved using a scaled multi-degree-of-freedom equivalent aeroelastic model tested under modelled boundary layer wind conditions.

All tests were conducted in the 1st generation boundary layer wind tunnel at The University of Western Ontario.

The Boundary Layer Wind Tunnel Laboratory

Western

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