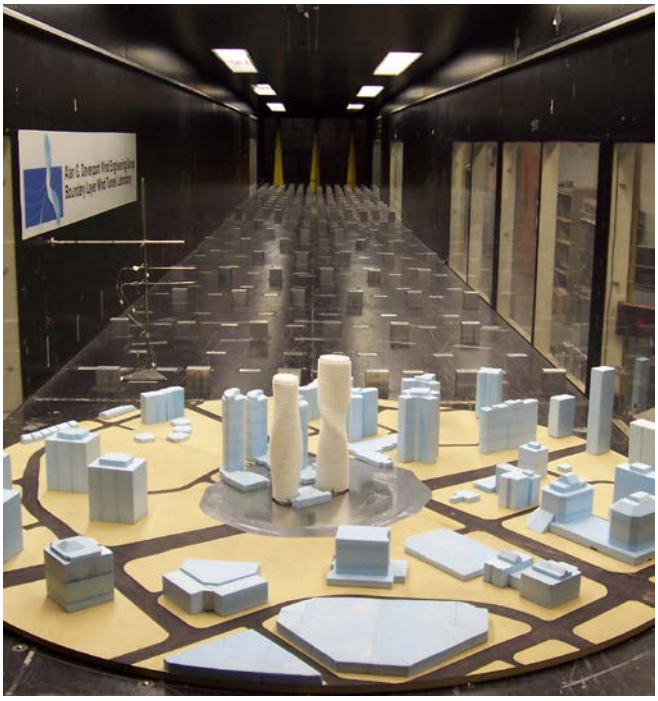
Absolute 4 & 5, Mississauga, ON, Canada

Wind Engineering Study



Client	Structural Engineer	Architect
Theakston Environmental	Sigmund Soudack and Associates Inc.	Burka Varacalli Architects
Height	**Year Tested**	**Model Scale**
Absolute 4 - 175.7 m Absolute 5 - 156.6 m	2006	1:400

The Project

The Absolute 4 and 5 towers in Mississauga, Ontario, Canada are located at the northeast corner of Hurontario Street and Burnhamthorpe Road East. The towers are also referred to as Absolute World Tower 1 and 2.

Absolute 4 is a 56-storey condominium tower and Absolute 5 is a 50-storey condominium. A lowrise surrounds Absolute 5. Each floor of each tower has an elliptical plan with a major axis dimension of 37 m. The ellipses rotate with height about their centre, resulting in a twisting tower shape. The two towers twist in opposite directions.

The Wind Tunnel Studies

The wind engineering studies for the Absolute 4 and 5 towers included studies of the wind-induced structural loads and responses and the local cladding pressure loads.

Overall structural loads and responses were determined for the towers using the force balance technique.

The study of wind-induced cladding pressures was carried out with 385 pressure taps on Absolute 4, and 410 taps distributed over Absolute 5 and the surrounding lowrise.

The Boundary Layer Wind Tunnel Laboratory

Western

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