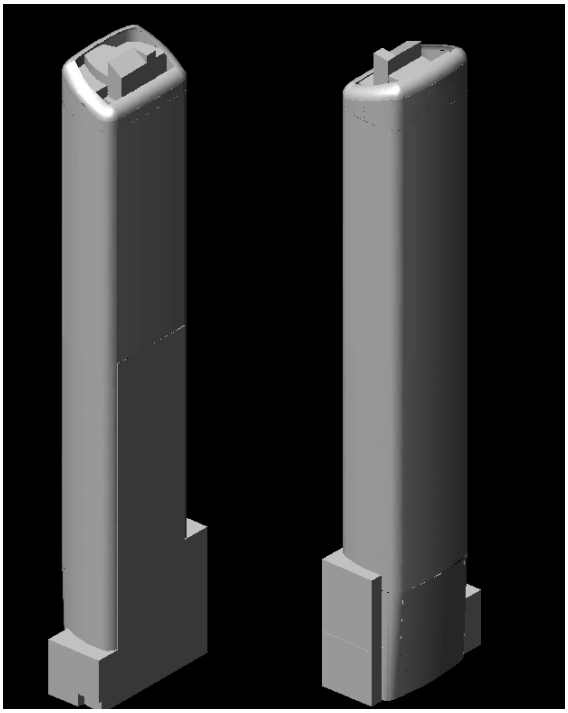
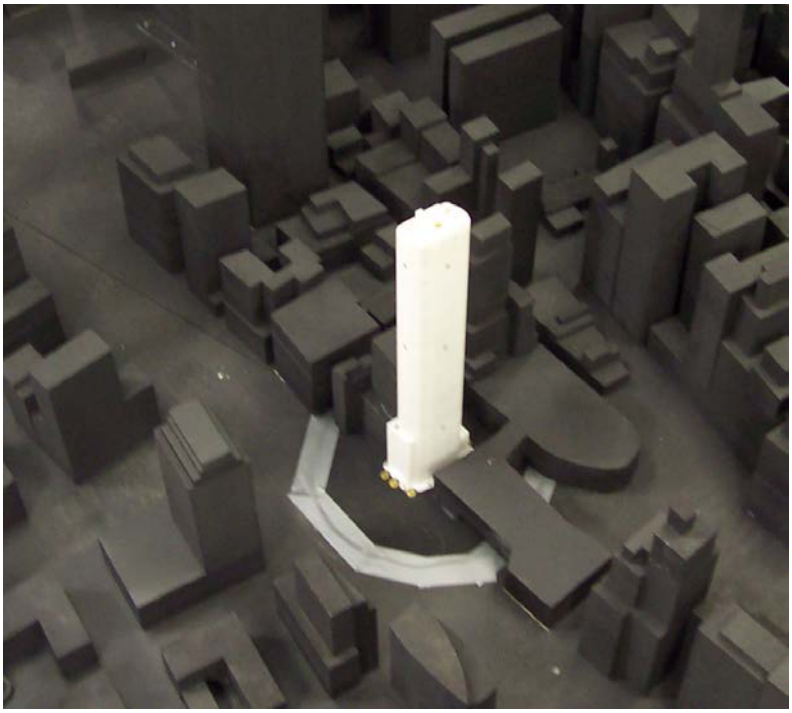
50 West Street, New York, NY, USA

Wind Engineering Study





Client	Structural Engineer	Architect
Time Equities Inc.	DeSimone Consulting Engineers	Murphy/Jahn Architects
Height	**Year Tested**	**Model Scale**
Residential Tower – 730 feet	2007	1:400

The Project

The 50 West Street development in New York City is a 66-storey residential tower and hotel with a roof top garden and observatory level surrounded by a tall curved sloping glass parapet. The 500,000 square-foot glass-clad tower will house retail at ground level and a landscaped plaza on its south side.

The site is located south of the World Trade Centres in lower Manhattan and is bounded by Washington, West, and Joseph P. Ward streets.

The Wind Tunnel Studies

The wind engineering studies for 50 West Street included a study of the wind-induced structural loads and responses, local cladding pressure loads and pedestrian level winds.

The study of overall structural loads and responses was determined for the residential tower using the force balance technique.

A study of wind-induced cladding pressures was carried out for 359 measurement locations distributed over the tower.

The pedestrian level wind study examined wind speed and direction at 13 locations of interest, including the roof top garden and observatory.

The Boundary Layer Wind Tunnel Laboratory

Western

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