

THE NICOLL HIGHWAY COLLAPSE IN SINGAPORE: *A Technical Perspective*

On 20 April 2004 at around 3:30 pm, a construction disaster struck Singapore. A section of the 20m wide cut-and-cover tunnel that was under-construction collapsed. The excavation was about 30 m deep at the time of collapse. The tragedy left 4 workers killed and 3 injured. It rendered the highway impassable for many months and a long delay in the construction of the new rapid transit line. This talk covers the events leading up to failure, the potential causes of failure and the lessons learnt with emphasis on the design, construction, monitoring and execution of the observational method.



ABOUT THE SPEAKER:

WONG Kai Sin, Associate Professor, graduated in 1972 with a BS degree from the University of Illinois. He received his MS and PhD degrees from the University of California at Berkeley in 1975 and 1978 respectively. He practiced geotechnical engineering in California before joining NTU in 1984. He is currently a technical advisor to the Land Transport Authority of Singapore and several international consultancy and construction companies. His major areas of interest are deep

excavations, deep foundations, slope stability, soil improvement, land reclamation and soil-structure interaction problems. He was involved in the design and construction of many temporary works for deep excavations in Singapore. The more notable ones are the art centre -- Esplanade by the Bay, Marina Barrage and Business Financial Centre Complex. He was also on the Independent Investigation Panel for the Land Transport Authority on the Nicoll Highway collapse.

AUCKLAND School of Engineering, Auckland University.

TUESDAY 24th November Refreshments from 5.30pm, for 6pm start

Contact: Auckland Branch Co-ordinators, Ross Kendrick, email: ross.kendrick@aecom.com or Pierre Malan, email: pmalan@tonkin.co.nz

WELLINGTON Opus offices, corner of Willis and Boulcott Streets.

THURSDAY 26th November. Refreshments from 5:30pm at the Opus Architecture Meeting Room, midway up Escalator off the Majestic Centre foyer.

Contact: Wellington Branch Co-ordinator, David Stewart, email: david.stewart@opus.co.nz

CHRISTCHURCH School of Engineering, University of Canterbury.

MONDAY 30th November Refreshments from 5.30pm in the ground floor Staff Common Room, 6.00 – 7.00pm: Presentation in E6 lecture room.

Contact: Canterbury Branch Co-ordinator, Nick Harwood, email: Nick_Harwood@coffey.com

The Branch Presentations are accompanied by a 1 day NZGS Short Course in each venue – please check the website for more details.

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