



## Vancouver Geotechnical Society

A Local Section of the Canadian Geotechnical Society

Visit : [www.v-g-s.ca](http://www.v-g-s.ca)

### 2010-2011 Executive Committee:

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Web Manager	- Carl Kelman, Levelton	604-278-1411
CGS Director	- Uthaya Uthayakumar, exp.	604-709-4639

## NOTICE OF UPCOMING ANNUAL GENERAL MEETING & DINNER PRESENTATION THURSDAY, SEPTEMBER 15, 2011

### **SUBJECT:**

(1) Annual General Meeting & Election of Executive Members

(2) Technical Presentation: Investigation and Retrofit of the Roger Pierlet Bridge damaged by Failure of Adjacent Soil Stockpile

### **SPEAKER:**

**Dr. Alex Sy, P.Eng.**  
**Vice President Technical, Klohn Crippen Berger Ltd.**

Alex received his Bachelor of Civil Engineering from the University of Queensland in Brisbane, Australia in 1975. He migrated to Canada in 1977 and joined Klohn Leonoff Ltd., predecessor of Klohn Crippen Berger Ltd. He took a leave from work to complete an M.Eng. in Geotechnical Engineering at UBC in 1985. Later, he took another stint off work to complete a Ph.D. in Geotechnical Engineering at UBC in 1993.

Alex has more than 35 years of diverse experience in geotechnical and earthquake engineering throughout Canada, the US and overseas. His experience includes site investigations and characterization, seismic hazard and liquefaction assessments, soft ground engineering, ground improvement, and foundation design for heavy civil and industrial facilities, transportation projects, including bridges and ports, and earth and mine tailings dams. He has also provided forensic engineering and expert witness services for infrastructure failures involving dykes, pipelines, highways, bridges and buildings.

Alex is an Adjunct Professor in the Civil Engineering Department of the University of British Columbia. He has authored more than 40 technical papers in journals and conference publications.

### **CONTENT:**

The Roger Pierlet Railway Overpass in Cloverdale, built in 1975, was damaged in November 2004 by foundation soil movement caused by failure of a large soil stockpile placed adjacent to the bridge. The concrete bridge is supported on very long precast concrete piles driven through soft marine clay to toe bearing in very dense till-like soils. The soil failure displaced the pile-supported bridge piers by as much as 425 mm horizontally. Substantial cracking of pier columns, foundation tie beams, and piles resulted. Shortly after the damage was discovered, temporary support towers were erected to provide support for the bridge decks and to allow traffic to safely continue on the bridge. Permanent retrofit of the bridge included strengthening of columns and beam/column joints, extension of existing pile caps, and addition of steel pipe piles to replace the damaged concrete piles. This presentation will describe details of the damage, subsequent ground investigations, and the temporary and permanent retrofits of the bridge and its foundations

### **DETAILS**

**Executive Inn**, 4201 Lougheed Highway, Burnaby, BC V5C 3Y6 (Phone: 604-298-2010)

**Social Hour:** 5:30 to 6:30 pm (drinks available at the hotel bar)

**Annual General Meeting:** 6:30 to 7:00 pm (Last year report + Elections)

**Technical Presentation:** 7:00 to 8:00 pm

**Dinner:** 8:15 pm (\$10 will be charged for dinner to cover a small portion of the cost.)

**RSVP:** Dinner reservation to [ali.amini@shaw.ca](mailto:ali.amini@shaw.ca) by Monday, September 12, 2011.