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February Seminar

CONSTRUCTION ENGINEERING FOR THE SAN FRANCISCO OAKLAND BAY BRIDGE REPLACEMENT

- Date:** February 22, 2012
Venue: Theatre C300, UBC Robson Square, 800 Robson Street, Vancouver
Time: Refreshments 6:00 p.m. Presentation 6:30 p.m.
Presenter: Bruce Hamersley, P.Eng., Klohn Crippen Berger Ltd.
Cost: Free for SEABC Members. \$75 + HST for non-members
Pre-registration is required: www.seabc.ca/oakland

The signature span of the new San Francisco Oakland Bay Bridge will be the Self-Anchored Suspension span (SAS), the longest “self-anchored” suspension bridge in the world.

A “self-anchored” bridge requires the horizontal component of the suspension cable force to be resisted by compression in the deck, so the deck must be supported in position by falsework until the cable is in place. The single main tower comprises four individual steel legs constructed in four lifts, requiring a separate, 163m tall, temporary steel erection tower to lift the components into place.



Structural and geotechnical design for the \$350M temporary works, which included approximately 25,000 tonnes of structural steel, was undertaken by Klohn Crippen Berger Ltd here in Vancouver. The presentation will provide an overview of the interesting engineering challenges encountered by the designers.

Bruce Hamersley is Manager of Bridge Engineering for Klohn Crippen Berger Ltd. A 1985 UBC Civil Engineering Graduate, he has 25 years of wide ranging structural engineering experience in bridge, marine, industrial building design, and construction engineering. He has led the designs for numerous new bridges, bridge rehabilitations, and seismic retrofits throughout BC, including the seismic retrofit of the Lions Gate Bridge North Approach. Bruce has particular expertise in seismic design and soil-structure interaction, which were critical technical components of the Bay Bridge construction engineering. He has been the Project Manager for the Bay Bridge construction engineering from the original project bid in 2003, working for the contractor, American Bridge/Fluor JV.

