Announcing

AEG San Francisco Section Meeting

GLOBAL AND STRUCTURAL STABILITY ASSESSMENT OF FORT MASON TUNNEL

Zia Zafir, PhD, CE, GE
Principal Seismic Engineer
Kleinfelder, Inc., Sacramento

Restaurant: Spenger's Fresh Fish Grotto,
1919 Fourth Street, Berkeley
(Phone 510.845.7771 for directions only—not a reservation line)

Date and Time: Tuesday, September 12, 2006
6:00 pm—Social Hour and Sign-in
7:00 pm—Dinner (Chicken, Fish or Vegetarian)
8:00 pm—Presentation

Cost: $40 AEG Members, $45 Non-mem, $15 Students, +$5 for late RSVP

Reservations: To RSVP fax or e-mail Sachiko Tanikawa (fax # 510.268.5099, email: treasurer@aegsf.org) with the following information:

(1) Name (2) Phone number (3) Meal Choice

Driving Directions: From the 80 Freeway, exit at University Avenue. Continue north on the off-ramp and turn right (east) onto Hearst Avenue. Cross the railroad tracks and turn right (south) onto Fourth Street. Spenger's is on the east side of Fourth Street.

Parking: You may park in the lot in front of the restaurant (sometimes it's free).

Please Note: Please make reservations by FRIDAY, September 8, if possible; availability cannot be guaranteed after Friday. **Walk-ins are not guaranteed!** For financial reasons no-shows and last minute cancellations will be charged.

See over for abstract and speaker biography.

AEG Meeting—April 11, 2006

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The Fort Mason tunnel runs east-west beneath historic Fort Mason, which is located on the bay just west of Fisherman's Wharf in San Francisco, CA. Spanning the Fort Mason grounds, the tunnel is approximately 1500 ft long. The tunnel, built in 1914, runs less than 60 ft beneath a number of buildings within the Fort Mason complex, several of which are historic structures. The western portion of the tunnel is constructed in sand, the eastern portion is constructed in rock and the central portion is constructed in clay. Construction of the tunnel in rock was performed by blasting; whereas, the cut and cover method was used for construction in the sands and clays. The project includes the entire tunnel structure, both portals and portal approaches, and all nearby surface and subsurface structures and utility lines within the Fort Mason grounds. The project objective is to *quantitatively* address whether or not the Fort Mason Tunnel is structurally feasible for a passenger rail line. Our scope of work, divided into three phases, includes developing performance design criteria, preliminary investigation and analyses, structural stability assessment, and construction cost and schedule estimates. Primary concerns for the tunnel are potential of liquefaction during a major seismic event, existence of significant crack in the crown within the cut and cover section, and water inflow.

Speaker Biography: Dr. Zia Zafir is a Principal Engineer in the Sacramento, CA offices of Kleinfelder. Dr. Zafir has more than 22 years of experience in the field of geotechnical and earthquake engineering and research. Dr. Zafir has obtained his bachelors from University of Engineering, Taxila, Pakistan, his masters from Iowa State University, and Ph.D. from University of Nevada, Reno. Dr. Zafir is a licensed professional and geotechnical engineer in the state of California.