



2009 – 2010

*February's Joint MGS and
MN Section of ASCE Meeting*

Tunneling Into and Under Manhattan

Dr. Edward J. Cording, P.E.,

Professor Emeritus of Civil and Environmental Engineering at
University of Illinois at Urbana-Champaign

Tunneling into and under Manhattan is on a scale unseen since early in the last century. Into Manhattan, two rail tunnels will be driven under the Hudson River using pressurized face shields that allow work in free air, doubling the capacity from New Jersey to Penn Station, which is presently served by two tunnels driven 100 years ago using compressed air.

Under Manhattan, four major transit lines, with six 50 to 100-ft-wide station caverns are being constructed. The metamorphic rock has a North-South trending foliation that influences stability, as illustrated with examples from early and recent work in Manhattan. Efforts are made to provide sufficient rock cover to minimize the risk of intersecting soil and to allow construction of a stable rock arch above the caverns. Invariably, exploration to locate fault zones and low cover areas is aided by the Viele map, produced in 1865, showing streams and valleys existing before Manhattan had been filled in.

Date: Thursday, February 25, 2010

Location: Continuing Education and Conference Center
1890 Buford Avenue
St. Paul Campus of the University of Minnesota
(pay parking is available in lots S104 and S108 or the Gortner Avenue Ramp)

Time: 6:00 Social Hour, Sponsored by Hayward Baker, Inc.

7:00 Dinner – Buffet Style

8:00 Presentation – Dr. Edward J. Cording, P.E.

(One professional development hour toward continuing education requirements for Professional Engineers is available).

Cost: \$25.00 per person and \$5.00 Full-time students, payable to MGS at the door.

Reservations: Requested by 12 Noon, Monday, February 22, 2010
(STRICTLY ENFORCED)

Please register via the website at <http://www.mngeotechnicalsociety.com/eventsmpls.asp>

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