

演講通告

題目：

Lessons Learned from a Litigation between a Co-op and a Developer

講員：任永琴 博士

美國麻省理工學院大地工程博士 / 講師

內容：

This litigation involves a 5 story building (the Co-op) located adjacent to a site (developer) under construction. During construction (September of 2004), the building tilted suddenly and was subsequently condemned by the local Department of Buildings (DOB). The talk will describe events occurred at the site and factors that contributed to the sudden tilt of the building.

演講日期： 2009 年 7 月 29 日 (星期三)

演講時間： 上午 10 時 (演講約一小時，回答問題約半小時)

地點：台灣大學土木工程系 220 室

主辦單位：台大土木大地工程組、東南亞大地工程學會 (South East Asian Geotechnical Society, SEAGS)、大地工程學會、地工技術基金會

歡迎大地工程專業之工程師、技師、研究生、教師，免費參加。

LUCY C. JEN, Ph.D., PE

615 Green Street
Cambridge, Massachusetts 02139
Phone: (617) 642-0502
e-mails: lcjen@mit.edu or lcjen@comcast.net

EDUCATION

Massachusetts Institute of Technology, Cambridge, Massachusetts

Ph.D. in Geotechnical Engineering, January, 1998

Ph.D. Thesis Topic: *The Design and Performance of Deep Excavations in Clay*

Thesis Co-advisors: Prof. Charles C. Ladd and Prof. Andrew J. Whittle

Core Coursework: Computer Methods – Dynamics (Numerical Modeling), Theoretical Soil Mechanics, Advanced Soil Mechanics, Foundation Engineering, Engineering Geology, Soil Behavior, Geotechnical Measurement and Exploration, Soil Dynamics.

Massachusetts Institute of Technology, Cambridge, Massachusetts

Master of Science in Transportation, May 1992

Master Thesis Topic: *Public Transit Fare Structures*

Thesis advisor: Prof. Nigel H.M. Wilson

Core Coursework: Network Optimization, Computer Algorithms (Linear Programming), Transit Management, Transportation Systems Analysis, Public Transportation Service and Planning, Urban Transportation Planning, Transportation Economics.

University of California, Irvine

Magna Cum Laude

Bachelor of Science in Civil Engineering, March 1990

Primary Emphasis: *Transportation and Water Resources*

Secondary Emphasis: *Structures*

Class Rank: 1st/42

Massachusetts P.E. in Civil Engineering: License # 41826

ENGINEERING CONSULTING EXPERIENCE

Self-employed Geotechnical Engineer, Cambridge, MA

Jan. 2006 – Present

Provided geotechnical engineering consulting services to engineering consulting firms and law firms

Weidlinger Associates, Cambridge, MA

May 2002-Jan.2006

Associate (Dec. 2005 to Jan 2006): Provided engineering evaluation and preliminary design for the reconstruction of a collapsed retaining wall, New York City, New York.

Senior Geotechnical Engineer (May 2003 – Dec. 2005): Provided and coordinated engineering oversight and support during the construction phase of Terminal A Redevelopment Project in Boston Logan Airport involving excavation, pile installation, shallow footing construction, and earthwork.

Reviewed and evaluated the cause and impact of deformations of a building adjacent to an excavation as well as the effectiveness of the remediation scheme implemented at the site, Boston, MA.

Performed field exploration consisting of geotechnical borings, assessed geotechnical subsurface conditions, and provided foundation recommendations for the Beacon Street Housing Project, Worcester, MA.

Provided engineering recommendations and assessment for the Electric Boat Cofferdam Repair, Groton, CT.

Provided Support of Excavation Design, Paerdegat Basin, Brooklyn, NY

Provided construction monitoring of drilled shaft installations for the Terminal E West Concourse Baggage Room, Logan Airport, Boston, MA.

Provided subsurface investigation and foundation design for the Trolley House Condominiums, South Boston, MA.

Provided Support of Excavation and Underpinning Design for the U.S. Capitol East Front Modification, Washington, DC

Performed field investigation consisting of cone penetration tests (CPT), evaluated the CPT data, and provided recommended soil properties based on field and existing laboratory data. Reviewed and checked cofferdam and support of excavation design for the Woonasquatucket River Interceptor Relief Project, Providence, RI.

Hart Crowser, Inc., Beverly, MA

July 2000 – May 2002

Associate Geotechnical Engineer: For the Housatonic River Project, Pittsfield, Massachusetts, evaluated subsurface conditions and examined slope stability to determine the optimal pre- and post- remediation designs for retaining structures and final revegetation, which will ensure that the riverbank is protected from erosion and its configuration remains essentially unchanged following remedial action. Final work product includes contract specifications, contract drawings, and a basis of design report.

Performed numerical analyses using FLAC, a finite-difference software, to examine possible impacts that an extreme seismic event could have on an existing pier, as well as the potential benefits of using pinch piles to strengthen the underlying foundation for the Terminal 5 Seismic Upgrade, Port of Seattle, Washington.

Managed and supervised site investigation at the Osgood Pond in Milford, New Hampshire, for the purpose of characterizing the environmental and geotechnical characteristics of the sediments in the Pond.

Parsons Brinckerhoff Quade & Douglas, Inc., Boston, MA

Sept. 1997 – July 2000

Senior Geotechnical Engineer: Designed and monitored field instrumentation program for MBTA's South Boston Underground Transitway project – Courthouse Station; produce monthly field instrumentation data report; evaluate excavation performance.

Reviewed and revised final Geotechnical Data Report for MWRA's North Dorchester Bay CSO Project.

Performed numerical analyses (using FLAC) for evaluating the performance of deep soil-mix for the Central Artery/Tunnel Project (C07A7).

Performed ground movement and base stability analyses for MBTA's South Boston Underground Transitway project – Courthouse Station.

Coordinated field exploration program for MWRA's Spot Pond Water Main Rehabilitation Project.

Prepared geotechnical interpretive report for MWRA's North Dorchester Bay CSO Project.

Conducted field inspection of geotechnical test borings and prepared geotechnical data and design reports for Massport Authority's New Maintenance Facilities in Chelsea and Charlestown.

Parsons Brinckerhoff Quade & Douglas, Inc., Boston MA

June – August 1993

Staff Engineer: Conducted field inspection of geotechnical test borings for a combined sewer overflow project in Fall River, Massachusetts.

Conducted field inspection of geotechnical test borings for MBTA's South Hampton bridge replacement, Boston, Massachusetts.

Woodward-Clyde Consultants, Santa Ana, CA

June – August 1992

Staff Engineer: Surveyed pipeline damage caused by the Landers (1992) earthquake.

Performed slope stability analyses for the Getty Museum project, Los Angeles, California.

Provided assistance in the development of the site exploration program for the Eastside Reservoir Project, California.

John A. Volpe National Transportation Systems Center, Cambridge, MA

June – August 1991

Student Engineer: Evaluated transportation planning software and prepared materials for a course in Transit Financing.

Woodward-Clyde Consultants, Santa Ana, CA

Oct. 1989 – June 1990

Student Engineer: Performed seepage and settlement analyses for Eastside Reservoir, California.

**TEACHING &
RESEARCH
EXPERIENCE**

Massachusetts Institute of Technology, Cambridge, MA

Sept. 2001 - Present

Lecturer: Taught undergraduate and graduate courses (CEE 1.036 – Structural and Geotechnical Engineering Design, 1.361 - Advanced Soil Mechanics, and 1.322 Soil Behavior) in the Department of Civil and Environmental Engineering.

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Northeastern University, Boston, MA

2003 – 2004, Present

Part-time Lecturer: Taught review courses in the area of Geotechnical Engineering for the Professional Engineer Exam.

Northeastern University, Boston, MA

Winter 2002 – Spring 2002

Part-time Lecturer: Taught an undergraduate course (CIV1410 - Soil Mechanics) in the Department of Civil and Environmental Engineering.

Tufts University, Medford, MA

Spring 1999 and Spring 2001

Part-time Lecturer: Taught a graduate course (CEE142 - Consolidation and Shear Strength) in the Department of Civil and Environmental Engineering.

Massachusetts Institute of Technology, Cambridge, MA

Sept. 1993 – Jan. 1998

Research Assistant: Analyzed and evaluated the behavior and performance of deep excavations in clay.

Massachusetts Institute of Technology, Cambridge, MA

Sept. 1990 – June 1992

Research Assistant: Examined and evaluated operations planning decisions that may affect line performance and service quality on the MBTA Green Line.

Massachusetts Institute of Technology, Cambridge, MA

June – August 1989

Research Assistant: Developed measures of performance for MBTA rapid transit lines.

AWARDS

1992 George Krambles Transit Foundation Scholarship [MIT, Department of Civil Engineering]
1991 Student of the Year for Region I University Transportation Center
1991 George Krambles Transit Foundation Scholarship [MIT, Department of Civil Engineering]
1990 UTC and UPS Fellowship Awards [MIT, Department of Civil Engineering]
1990 Engineer of the Year [UC Irvine, School of Engineering]
1989 MIT Summer Research Fellowship Award [MIT, Department of Civil Engineering]
1989 ASCE Los Angeles Section Hirschfeldt Scholarship Award
1989 California Council of Civil Engineers and Land Surveyors Scholarship Award
1989 Society of Women Engineers Scholarship Award [Southern California]
1987 – 1989 Outstanding Civil Engineer of the Year [UC Irvine, School of Engineering]