

Ming-Fang Chang

Senior Geotechnical Engineer at Freelance Professional Engineers

Previous

1. [Yeh and Associates, Inc.](#),
2. [Terracon Consultants, Inc.](#),
3. [Professional Service Industries, Inc.](#)

Education

1. [Purdue University](#)



Summary

As a geotechnical engineering professional with years of consulting experience in the United States and years of prior part-time consulting experience while teaching geotechnical engineering overseas, my specific technical expertise includes geotechnical site investigation and evaluation, design of foundations for buildings, roadways and bridges, soil slopes, retaining walls, embankments and ground improvement schemes, as well as temporary ground engineering works such as shoring systems, vertical shafts, pipe ramming, and groundwater control measures. Immediate past projects range from development and rehabilitation of transportation infrastructures and buildings, and design of shoring works for shaft, trench excavation and trenchless pipe constructions. Recent career experience includes geotechnical quality control, project management, proposal and report preparation, technical report review, engineering designs, work in teams, junior staff mentoring, client contact, and construction support services.

CORE COMPETENCIES

- *• Project planning & coordination
- Proposal and cost estimate
- Field exploration and laboratory testing
- Design alternatives evaluation

- Geotechnical analyses & recommendations
- Report writing, review and quality control
- Project management and client contact
- Shoring work design & construction support
- Technical guidelines and junior staff mentoring

Specialties: Geotechnical investigation for site characterization; Geotechnical analyses and designs; Geotechnical project management; Geotechnical construction support services and shoring design; Laboratory and In-situ testing; Drilled shaft and deep foundation designs; Slope stability evaluation and retaining wall design for static and seismic conditions.

Experience

Senior Geotechnical Engineer

Freelance Professional Engineers

February 2016 – Present (9 months) Bellevue, Washington

Provide professional services with relevance to geotechnical engineering on a on-call basis.

Geotechnical Quality Manager

Yeh and Associates, Inc.

October 2013 – December 2013 (3 months) Denver, Colorado

As a geotechnical quality manager, my top priority was to consistently apply my fundamental technical knowledge to help improve the geotechnical engineering practice at Yeh and Associates and to help contribute to the enhancement of Yeh and Associates' professional services. My responsibilities included

- Review of geotechnical reports for technical soundness and consistency, particularly for bridges and roadways projects.
- Preparation of technical guidelines for improving company's geotechnical practice.
- Development of reference templates for geotechnical reports for different client needs.
- Formulating technical training package for field exploration teams and junior engineers.

Senior Project Manager I Geotechnical Engineering

Terracon Consultants, Inc.

January 2012 – June 2012 (6 months) Baton Rouge, Louisiana & Bellevue, Washington

- * Project Execution & Management
- * Preparation of Geotechnical Study Proposals
- * Geotechnical Report Review
- * Junior Staff Mentoring
- * Design and Review of Slopes and Retaining Walls for a Design-Build Roadway Project

Senior Geotechnical Engineer

Professional Service Industries, Inc.

May 2011 – August 2011 (4 months)Portland, Oregon

- * Managed and implemented subsurface investigation and geotechnical study for several commercial, industrial and government building projects.
- * Reviewed and edited several geotechnical engineering reports for the development of commercial buildings involving difficult ground conditions in Washington and Oregon States.
- * Prepared several technical proposals for authorities and projects from both public and private sectors.

Associate & Senior Geotechnical Engineer

Shannon & Wilson, Inc., Seattle

December 2006 – July 2010 (3 years 8 months)Seattle, Washington

- * Successfully managed multiple transport projects for the Seattle Department of Transportation and a couple of port/harbor improvement projects in the State of Washington, including:
 - Rehabilitation, 15th Ave NE and East Duwamish Waterway Bridges, City of Seattle
 - South Spokane Street Viaduct Widening, City of Seattle
 - Rehabilitation, Airport Way South Viaduct, City of Seattle
 - Rehabilitation, NE 45th Street Viaduct West Approach, City of Seattle
- * Assisted in geotechnical analyses and design of approach embankments for Costal Meridian Overpass Viaduct, Port of Coquitlam, British Columbia.
- * Assisted in foundation analysis and design for Port Mann Bridge, British Columbia.
- * Performed geotechnical study for Interstate 90 Mercer Island East-Bound HOV and Transit Lane, Washington Department of Transportation.
- * Performed constuction observations for Port Facility Improvement, North Marina Combined Project, City of Des Moines, Washington

Associate Professor

Nanyang Technological University, Singapore

January 1991 – December 2006 (16 years)

- » As a university teacher:
 - Taught geotechnical and civil engineering subjects at undergraduate and graduated levels;
 - Executed application-orientated applied research projects on interpretation of in-situ soil tests and axial load behavior and field performance based design of drilled shafts; Directed laboratory development and managed geotechnical laboratory for over 10 years; Coordinated final year projects for an average of 200 final year students per year for 4 years.
- » As a professional serving the community:
 - Served as the Deputy Chairman of a committee responsible for drafting Singapore's Code of

Practice for Foundations published in Year 2004; Served as a technical assessor for the Singapore Laboratory Accreditation Scheme, Singapore Accreditation Council.

Part-Time Specialist Consultant

Nanyang Technological University, Singapore

January 1996 – January 2004 (8 years 1 month)

* Consulted on the design of the bridge pier foundations for the 1.9 Km long Singapore-Malaysia Second Crossing. The pier foundations consist of large diameter bored piles (or drilled shafts) socketed in limestone.

* Consulted on Changi East Land Reclamation project with focus on characterization of soft clay and reclaimed sand fill by means of field exploration, in-situ testing, and laboratory testing.

Publications

Chang, M. F., “Basal Stability Analysis of Braced Cuts in Clay”

Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Vol. 126, No.3, pp. 276-279.

March 2000

Chang, M. F. and Zhu H. “Construction Effect on Load Transfer along Bored Piles”

Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Vol. 130, No.4, pp.426-437.

April 2004

Chang, M. F., Teh, C. I. and Cao, L. F., “Undrained Cavity Expansion in Modified Cam Clay II: Application to the Interpretation of Piezocone Test”

Geotechnique, UK, Vol. 51, No.4, 335-350.

May 2001

Chang, M. F., "Interpretation of Overconsolidation Ratio from In Situ Tests in Recent Clay Deposits in Singapore and Malaysia"

Canadian Geotechnical Journal, Vol. 28, No. 2, p. 210 - 225.

April 1991

M. F. Chang, Yu, G., Na, Y. M., and Choa, V. “Evaluation of Relative Density Profiles of Sand Fill at A Reclaimed Site”

Canadian Geotechnical Journal, Vol. 43, No.9, pp. 903-914.

September 2006

Zhu H. and Chang, M. F. “Load Transfer Curves along Bored Piles Considering Modulus Degradation”

Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Vol. 128, No.9, pp. 764-774.

September 2002