

## CURRICULUM VITAE

AUSTIN MARSHALL, P.E., L. B. C.

### Education

Cornell University, Bachelor of Science, Civil and Environmental Engineering  
University of Michigan, Master of Science, Civil and Environmental Engineering  
University of Detroit, Doctor of Jurisprudence, Contract and Environmental Law  
University of Michigan, Graduate Studies, Geology  
Massachusetts Institute of Technology, Online Studies in Building Science and Management

### Licenses

Licensed Professional Engineer, Michigan and Texas  
Inactive P.E. Licenses in Illinois, Florida, and Rhode Island  
Licensed Building Contractor, Michigan  
Licensed Professional Geologist, Indiana, 1983 - 1995  
Licensed Real Estate Valuation Specialist, Michigan, 1994 – 1997  
Licensed Real Estate Professional, Texas

### Certifications

Registered Environmental Manager, 1983 - 1994  
Construction Arbitrator Panel Member, American Arbitration Association  
Diplomate, Engineering Management, National Academy of Environmental Engineers,  
1983 - 1994  
Certified Hazardous Materials Manager, 1983 - 1994  
OSHA 40 Hour Hazardous Waste Worker Training  
Red Cross First Aid and CPR Training  
Emergency Response Institute Manager's Training  
Lion Hazardous Material Transport Training  
Arbitrator I,II American Arbitration Association  
Certified Ground Water Professional, National Water Well Association, 1980 - 1990

### Experience

Professor; Civil and Environmental Engineering, Director of Construction Management,  
University of Texas at El Paso, 2008 to present. I also serve as the Undergraduate Student  
Director and as a panel member on various National Science Foundation research contract  
panels. Specific research efforts have involved design and construction of a zero energy home  
cooling systems, development of waste disinfection processes, waste elimination equipment and  
construction waste minimization practices. Experience includes Construction Management  
consulting at ChillPak systems in El Paso, Texas and mechanical tunneling/superheating/cooling  
systems for Daniel Mining Systems, Rockwood, Tennessee.

President and Chief Legal Counsel, Harbor Consulting, llc, consulting engineering company specializing in project development, 2007 to present.

Chief Legal Counsel and Environmental Engineer, ME Inc, Providence, Rhode Island. MEI is a firm specializing in environmental engineering and treatment of wastes, including remediation work. The firm has completed projects involving landfill work, spill control and cleanup work, underground tank remediation, ground water cleanup work, and sludge removal and treatment projects.

President and Director, Entropic Technologies Corporation, Ann Arbor, Michigan. A specialty company providing equipment for processing and chilling of municipal solid waste using twin screw extruder technology in the United States and internationally, 1996 – 2008. Efforts included work under USEPA and DOE research grants to maximize efficiency of waste processing equipment.

President and Legal Counsel, Geomanagement, llc, Ann Arbor, Michigan, 1994 - 2009

Principal in Charge of construction management and geotechnical engineering consulting firm specializing in mechanical and geotechnical construction, instrumentation, mine analysis and construction, preparation and analysis of construction claims, expert witness testimony, and business reorganization consulting. Special projects involved with construction management and operational supervision of a hazardous waste deep injection well and treatment facility, solid waste disposal projects in the United States, and Africa; and development of a large international railroad tunnel project spanning between Michigan and Canada. The following contract assignments were performed:

Consultant, Detroit River Tunnel Partnership, Detroit, Michigan

Consultant, Syndeco Realty Corporation and DTE Energy, Construction Oversight and Liability Management for a \$60 million, Mixed Use High Rise Office Building, Ann Arbor, Michigan

Executive Vice President, Construction; Ontario - Michigan Rail Corporation, Detroit, Michigan

Consultant, Mine Construction Operations, RLS Mining llc acquisition analysis of copper and gold mines in the United States, Mexico, Ghana, and Nigeria

Consultant, JA Associates, LLC, project development work on fuel cell based Waste fuel power generation facilities in Texas, Michigan, Iowa, Nigeria, and Vietnam

Construction Manager, 60 inch Sewer Tunnel, River Rouge, Michigan

Of Counsel Construction Management Consultant, Integrated Environmental, Inc., 1998 - 2009

Consulting assignments included geotechnical engineering and construction management work of deep foundation projects, underpinnings of buildings and environmental remediation work.

President, City Environmental Contracting, Inc. and Sierra Environmental Contracting, Inc., Detroit, Michigan, 1988 - 1994

Principal in Charge of construction companies specializing in environmental remediation, landfill design and operation, liquid treatment plant design and operation, excavation support projects, infrastructure construction, and sewer lining construction. Project work included underground tank remediation, State and Federal Superfund site cleanup work, industrial real estate revitalization, tunnel construction, demolition, industrial plant closures, and marine structures.

Principal, Marshall - Halpert Associates, Inc. and GZA Geoenvironmental Inc., Boston, Massachusetts, 1984 - 1988

Principal in Charge of geotechnical engineering, construction engineering, and environmental engineering on commercial, industrial, and government projects including program management of a multi - year, multiple site State superfund site and construction management project. Services provided also included contractor claims analysis. Research efforts included testing and analysis of slurry wall systems for water migration control.

General Manager, Pile and Marine Division, The Millgard Corporation, Livonia, Michigan and Jeddah, Saudi Arabia, 1981 - 1984

Management of construction business procurement, estimating and construction of piling projects, bridge construction, marine structures, road construction and tunnels throughout the United States, Saudi Arabia, and Africa.

Design and Construction Manager, Bechtel Power Corporation, San Francisco, California, 1978 - 1981

Responsible for construction engineering and management of specific activities on nuclear power plants, fossil fuel power plants, marine structures, earth dams, roads, and pipelines. This work included mine design and construction, structures, circulating water systems, cooling water reservoirs, earth dams, concrete dams, dewatering systems, ground freezing systems, underpinning, and material handling systems on projects in the United States, Asia, South America and the Middle East.

Project Construction Engineer, Woodward Clyde Consultants (now URS Corporation), Denver, Colorado, 1975 - 1978

Responsibilities included design and construction management of earth dams,

tailing dams, road construction, sewer construction, water line construction, concrete dam construction, structural failure analysis, power plants, high rise buildings, and mining projects throughout the United States and South America.

Construction Engineer, NTH Consultants, Ltd, Detroit, Michigan, Summer 1974

Responsibilities included construction monitoring of earthwork and sewer line construction associated with the construction of an automobile manufacturing facility and failure analysis of a tunnel construction project between Port Huron, Michigan and Sarnia, Canada.

Surveyor, National Oceanographic and Atmospheric Administration, United States Department of Commerce, Summer 1973

Research Assistant, Remote Sensing Program, School of Civil Engineering, Cornell University, Ithaca, New York, 1972 -1974

Management Intern, Central Manufacturing, Inc., Cranston, Rhode Island, Summers, 1969 - 1972

### Appointments

Fulbright Faculty Specialist, 2013 - 2018

Faculty Scholar, Vietnam Education Foundation, 2012, 2013

Faculty, University of Phoenix, Geology and Environmental Science

Adjunct Professor, University of Detroit, Department of Civil Engineering, 1981 - 1983

Guest Lecturer, Hazardous Waste Disposal by Deepwell Injection, Wayne State University School of Chemical Engineering, 1998 - 2006

Arbitration Panel Member, Boston Central Artery Project

City Engineer, River Rouge, Michigan, 1999 - 2008

Environmental Protection Board Member, City of River Rouge, Michigan, 2001 - 2006

Advisory Board Member, Russell Construction Company, Muskegon, Michigan, 1995-2005

Board Of Directors Member, YMCA, Livonia, Michigan, 1980 - 1983

Board of Directors Member and Chairperson, Entropic Technologies Inc., Mt. Clemens, Michigan, 1999 - 2005

Chairperson, Northville Township, Michigan Department of Public Works Commission, 1980 - 1984

Director, Digital Gas, Inc. 2008

Director and President, Deep Foundations Institute, 1980 - 1984

State of Michigan Speaker of the House Committee on Construction, 1995-1997

Managing Director, The Alternative Dispute Resolution Board, 1995 - 2005

Technical Advisory Board, Perry Johnson ISO Registrars Inc., 1999 - 2004

American Society of Civil Engineers Board of University Engineering Program Evaluators, 1990 - 1994

Federal Emergency Management Agency (FEMA) - Urban Search and Rescue Response

## Team

Director, Lamdol Manufacturing, Ho Chi Minh City, Vietnam  
Panel Judge, University of Texas at El Paso, U.S. Department of Homeland Security Port of Entry Design Competition, 2009 - 2010

## Associations

Engineering Society of Detroit, 1977 - 1998  
Associated General Contractors, 1977 - 1990  
United States Committee of Large Dams, 1975 - 1982  
American Society of Civil Engineers, Previous Member of Deep Foundations Committee and Underground Excavation Committee  
Deep Foundations Institute, 1980 - 1996  
Association of Drilled Shaft Contractors, 1980 - 1986  
National Society of Professional Engineers, 1975 - 1986  
Liquid Industrial Control Association, 1986 - 1994  
Texas Board of Realtors

## Presentations

Guest lectures on "Professional Practice in Engineering," University of Michigan School of Civil and Environmental Engineering, Fall Semester, 1982 - 1983  
"Construction Claims Analysis," Deep Foundations Institute Spring Conference, Ann Arbor, Michigan, 1982  
"Deep Injection Well Disposal of Liquid Hazardous Waste" for Environmental Disposal Systems, Inc., State of Michigan Site Review Board Hearing, Romulus, Michigan, 2003  
"Drilling for Environmental Construction Projects, Your Liabilities," International Drilling Federation, Spring Conference, 1989  
"Superfund Project Construction Management," Liquid Industrial Control Association, Dearborn, Michigan, Fall, 1989  
"Trench Excavation Construction Liabilities," Chicago, Illinois Power Conference, 1978

## Compaction and Instrumentation Projects

Woodward Clyde Consultants, Denver, Colorado

- Rolled Concrete Dam Instrumentation of density and modulus
- Earth dam compaction monitoring of equipment passes vs. density
- Tailing dam in-situ monitoring of in - situ water and soil pressure
- Caisson bearing capacity using preliminary Osterberg sensors

Bechtel Power Corporation, Michigan, Saudi Arabia, Korea, California

- Nuclear Power Plant – Settlement and strength monitoring using Borros anchors, settlement plates, strain gauges, Menard pressuremeter, downhole shear testing, geophysical downhole testing, crosshole modulus analysis, and retaining wall movement monitoring using slope indicator equipment including consulting assistance from Drs. Ralph Peck, M.T. Davisson, Herb Ireland, and Ed Cording.
- Coal fired Power Plants– Use of load cells to determine pile capacity; full scale, in-situ shear testing of 3 foot diameter carved clay samples; excavation stability testing of 45 foot deep excavation in soft clay using strain gauges and slope indicator equipment; foundation vibration cross hole testing and vibration instrumentation, and compaction monitoring using sheepsfoot rollers equipped with plate bearing equipment activated during actual compaction operations including consulting assistance from Bram McClelland of McClelland Engineers of Houston, Texas.

Millgard Corporation, Livonia, Michigan

- Caisson load bearing analyses using load cells and Osterberg pressure sensors on caissons with design loads of up to 1500 tons
- Pile capacity monitoring using strain gages and Osterberg pressure cells
- Pile driving analyser studies during actual pile driving installations
- Load cell analysis of tied-back retaining walls and anchor pullout testing
- Tunnel excavation bracing structural monitoring using strain gauges and movement sensors

Goldberg – Zoino and Dunnicliff Associates, Inc. (GZA), Boston, Massachusetts

- Strain gauge and slope indicator monitoring of various open cut and braced excavations in soft clays
- Mobile nuclear density monitoring of sand and clay backfill test pads
- Retaining wall performance monitoring using strain gauges, load cells and slope indicators