



**FREDERICK J. WENTZ, JR., P.E., G.E.**  
**President, Principal Engineer**

**EDUCATION**

University of California, Berkeley, M.S., Civil Engineering, 1991  
California Polytechnic State University, San Luis Obispo, B.S., Civil Engineering, 1988

**REGISTRATIONS AND CERTIFICATIONS**

California Registered Civil Engineer (No. C 51234)  
California Registered Geotechnical Engineer (No. 2581)  
OSHA 40-hr Health and Safety  
Mine Safety and Health Administration (MSHA) Experienced Miner

**AFFILIATIONS**

American Society of Civil Engineers (ASCE): Member Grade  
American Council of Engineering Companies of California (formerly CELSOC)  
International Society for Soil Mechanics and Foundation Engineering  
Geo-Institute  
Chi Epsilon, National Civil Engineering Honor Society

**EXPERIENCE**

Mr. Wentz has more than 20 years of experience in geotechnical engineering, earthwork construction and testing and inspection. He has a wide range of project experience including shallow and deep foundation design, underground pipelines, earth- and rockfill dam design, seismic safety evaluation of earth- and rockfill dams, numeric modeling and analysis of complex geotechnical problems, probabilistic seismic hazard analysis, liquefaction hazard evaluation, landslide evaluation and repair, construction engineering and geotechnical laboratory testing.

Mr. Wentz has conducted geotechnical field investigations and performed geotechnical design and analysis for various projects throughout Northern California including hospitals, schools, and commercial, light industrial and residential developments. Noteworthy project experience elsewhere includes: foundation design for the \$1 billion construction of the Getty Museum and Funicular Rail System near Los Angeles, CA; engineering design and construction support for one of South America's largest mine tailings storage facilities; and lead geotechnical engineer for design of a \$1.8 billion NRC-licensed plutonium processing facility.

**PUBLICATIONS**

Wentz, Jr., Frederick J., and James K. Mitchell (1991). "*Performance of Improved Ground Sites During the Loma Prieta Earthquake*," Report No. UCB/EERC-91/12, Earthquake Engineering Research Center, University of California, Berkeley.

HLE EXHIBIT 40

## **REPRESENTATIVE PROJECTS**

### **Upper Alamo Creek Detention Basin, Solano County, CA**

Geotechnical investigation for a new 952 acre-foot stormwater detention basin for City of Vacaville. The design included approximately 5,000 feet of embankment up to about 21 feet high and excavations up to about 14 feet deep. The exploration program included borings to a depth of 90 feet; and Cone Penetration Testing (CPT) to a depth of 80 feet. The project included coordination with and design review by California Division of Safety of Dams (DSOD).

### **Brentwood Municipal Refuse Transfer Facility, Brentwood, CA**

Geotechnical investigation for expansion of waste transfer facility for City of Brentwood. The project included a new waste handling/transfer structure located above a new truck loading tunnel. Mitigation of potentially large differential settlements due to seismic liquefaction included stone columns.

### **Chabot College, New and Remodeled Buildings, Hayward, CA**

Geotechnical investigations for four new or remodeled campus buildings. Site specific seismic parameters were developed for a liquefaction evaluation of each building location.

### **Iroquois Detention Basin, Vacaville, CA**

Geotechnical investigation and construction services for a new \$2.5 million, 49 acre-foot stormwater detention basin for City of Vacaville.

### **Wholesale Nursery Expansion, Winters, CA**

Geotechnical investigation and construction observation and testing services for a 300-acre growing bed expansion. Grading for the project totaled over 1 million cubic yards.

### **Goffinet Dam Raise, Amador County, CA**

Geotechnical investigations of a 6- to 8-foot-high raise of a 50-year-old earthfill dam for HDR, Inc. The raise will increase storage from the original 197 acre-feet to between 330 and 375 acre-feet. The project included coordination with and design review by California Division of Safety of Dams (DSOD).

### **Amador Ridge Regional Shopping Center, Amador County, CA**

Geotechnical investigation for a new 35 acre commercial center. The development includes four "anchor" retailers and about one-half-million square feet of floor space.

### **Ophir Water Treatment Plant, Newcastle, CA**

Geotechnical investigation/historic mine evaluation for new 60 MGD water treatment plant for Placer County Water Agency. The project included retaining walls up to 30 feet in height, and excavations on the order of 35 feet deep. The historic mine evaluation included nearly 1,000 linear feet of air percussion drilling, and excavation of test pits up to 25 feet in depth.

HLE EXHIBIT 40



**Forensic Expert Witness**

Geotechnical forensic expert witness litigation support for various projects.

**Landslide Repair, El Dorado County, CA**

Geotechnical investigation, slope stability analysis, and construction services to repair a landslide that destroyed a subdivision road and buried pipeline.

**Placerville Heights Professional Center, Placerville, CA**

Geotechnical investigation for new office development.

**Getty Museum, Los Angeles, CA**

Foundation design for multi-level buildings and a Funicular Rail System supported on large-diameter caissons for \$1 billion museum project.

**Arco AM/PM Gas Stations / Convenience Stores, throughout Northern CA**

Geotechnical investigations for gas station / convenience store rebuild developments.

**McDonald's Restaurants, throughout Central and Northern CA**

Geotechnical investigations for new and rebuild restaurant developments.

**Wastewater Treatment Plant Expansion, El Dorado Hills, CA**

Geotechnical investigation for \$32 million expansion of the El Dorado Hills wastewater treatment plant. Investigations included seismic refraction survey to evaluate rippability of bedrock.

**Steam Turbine and Boiler Replacement Project, Lincoln, CA**

Geotechnical investigations for new 50-MW steam turbine and 170,000 PPH wood-fired boiler and associated pollution control equipment for the Sierra Pacific Industries sawmill.

**Davis Street Transfer Station, San Leandro, CA**

Geotechnical investigation for expansion of a waste transfer station. The structure was built over a truck tunnel and was underlain by both old landfill and compressible bay mud soils.

**Historic District Utilities Rehabilitation Project, Folsom, CA**

Geotechnical services during construction of replacement of buried water and sewer lines for the City of Folsom in their Historic District.

**Diamond Springs Material Recovery Facility (MRF), El Dorado County, CA**

Geotechnical investigation for expansion of an MRF. The expansion is partially located over several feet of soft clay/silt associated with buried mine tailings.

**Stockton-Sierra Co-Generation Plant, San Joaquin County, CA**

Geotechnical study and liquefaction analysis for new 49-MW co-generation plant.

HLE EXHIBIT 40



**Project 184, El Dorado County, CA**

Geotechnical investigations, design and construction services for numerous elements including emergency water supply, access road repair, tunnel access road landslide repair, canal bench restoration, and new tunnel spoils stockpile for the Gold Rush-era water conveyance system. Landslide inventory and slope stability evaluation of 2.1-mile-long segment of restored canal bench for the U.S. Forest Service. Project included FERC licensing.

**Open Reservoir Replacement Program, El Dorado County, CA**

Geotechnical investigations for several water storage tank sites as part of program to replace open reservoirs with covered storage.

**Mud Lake Dam, Gardnerville, NV**

Geotechnical investigations for siting and design of a 60-foot-high, 200-foot-long rockfill dam. Borrow source characterization for embankment construction.

**Flume 14 Replacement, Utica Power Authority (UPA), Calaveras County, CA**

Geotechnical design and construction services for replacement of 1 mile of historic wood flume destroyed by a forest fire. Project included FERC licensing.

**Forensic Evaluations, Sacramento Valley, CA**

Geotechnical forensic evaluations for single-family subdivisions in El Dorado Hills, Folsom, and Vacaville.

**Single-Family Residence, Calaveras County, CA**

Geotechnical investigation for 6,000-square-foot residence designed by Maya Lin Studio. The concrete structure incorporates a 30-foot-high tied-back retaining wall as well as a 60-foot free span over a ravine.

**Single-Family Residence, Santa Clara County, CA**

Geotechnical investigation for 7,000-square-foot residence designed by Living Homes; designer/manufacture of architecturally-designed, pre-fabricated structures comprised of environmentally friendly materials.

**Kaiser Medical Center, Phase I, Vacaville, CA**

Geotechnical investigation of a previously undeveloped 50-acre site for a new 2-story hospital, a 3-story medical building, and a utility plant building. Investigation included a liquefaction evaluation and development of site-specific seismic response spectra.