

## **SPECIALIZED EXPERIENCE**

### **SEISMIC SOIL-STRUCTURE INTERACTION**

Humboldt Bay Power Plant, Eureka, California - As Project Engineer for Dames & Moore, conducted evaluation of soil-structure interaction for an existing nuclear power plant.

Offshore Platforms for Shell Oil Company, Union Oil Company and Chevron USA, supervised site investigations and foundation engineering studies; contributor to three-dimensional nonlinear studies of soil-pile-structure interaction.

Supervised initial development work on Program SuperFLUSH (for Civil Systems Inc.).

Supervised research project on the selection of input motions for nonlinear soil-structure interaction analyses (for Civil Systems Inc.).

Success, Isabella and Terminus Dams, Sacramento District Corps of Engineers, initiated studies of interaction of concrete structures embedded in embankment dams (for Civil Systems Inc.).

Consultant to Agbabian Associates on soil-structure interaction analysis of a tied-back bulkhead.

Jointly supervised research study of the dynamic response of long span culverts.

Supervised development of TELDYN, a program for segmented equivalent-linear or fully nonlinear soil-structure interaction analyses and serves as consultant on applications of TELDYN.

Consultant on study of seismic response of intake structures embedded in the Russian River.

Editor of papers comparing computed and observed results of soil-structure interaction of LNG tanks and Nuclear Power Plants in Japan.

Consultant to City of San Francisco Clean Water Program on design of Ocean Beach Seawall including the issue of soil-structure interaction.

Consultant to Louisville District, Corps of Engineers, on design of a major new lock-and-dam located adjacent to the New Madrid Fault zone.

Islais Creek Storage / Transport Structure for City of San Francisco Clean Water Program - conduct of static and seismic soil-structure interaction analyses.

Jamestown Bridge Replacement, Rhode Island - Consultant to T.Y.Lin International on redesign of piled foundations for major bridge.

Caltrans Bridge Seismic Retrofits Projects - Consultant to TransPacific Geotechnical Engineers on numerous retrofit projects including the Queensway Bridge in Long Beach, California.

Concourse H, San Francisco International Airport - Member of value engineering team on pile supported BART / ART station.

San Francisco - Oakland Bay Bridge - Member of ground motion and foundation design teams for new East Span.

San Francisco International Airport - Member of ground motion and foundation design teams for proposed runway reconfiguration including pile-supported option. Included advanced studies of soil-pile interaction in soft ground.

Bay Area Rapid Transit District – Geotechnical engineer for Sverdrup Civil on precursory Earthquake Safety Program study of expected performance of bridge structures on A-line in East Oakland.

Caldecott Tunnel Fourth Bore – Member of team addressing seismic loading of tunnel lining and seismic pressures on retaining walls at portals.

Bay Area Rapid Transit District – Consultant to Parsons Brinkerhoff on seismic upgrade of San Francisco Transition Structures including SSI analysis of ventilation structure and global analysis of submerged tube.

Yucca Mountain Nuclear Waste Repository, for Bechtel SAIC Company. Member, Seismic Advisory Panel (with J.C.Stepp, A.C.Cornell, R.P.Kennedy and C.J.Costantino).

Chemical and Metallurgical Research Laboratory Replacement, Los Alamos National Laboratory. Consultant to Kleinfelder Associates on seismic issues associated with design of major nuclear research facility.

Idaho National Laboratory. Member, Blue Ribbon Panel for review of seismic basis for IWTU. Facilitated interaction with DNFSB on soil-structure interaction issues.