

# Coffman Experience

## SEISMIC ENGINEERING



**Structures that we engineered have proven themselves with minimal damage during both the Guam earthquake of 1993 and the 1994 Northridge quake in Southern California.**

Experience: we have provided these services for both new and existing projects including numerous evaluations for facilities throughout the Northwest, California, Alaska, and Guam. The implementation of a “Performance Based Seismic Engineering” approach requires not only extensive familiarity and experience with modern guidelines and methods in this field, but also the exercise of sound engineering judgment based on actual project experience with such types of projects. Modern seismic rehabilitation guidelines have evolved, and seismic performance levels are now referred to by terms such as Operational, Immediate Occupancy, Life-Safety, and Collapse Prevention.



Track Record: clear validation of our special strength in this area comes through an award by Structural Engineers Association (SEAOSC) for our Performance Based Seismic Rehabilitation project in Beverly Hills; their top Structural Excellence Award for 2002/2003. The reasons given were not that it was the most complex or sophisticated piece of structural engineering, but that it met or exceeded structural performance goals, constructability, building operation, schedule and most importantly budget constraints of the owner.

### Capabilities:

Application of FEMA Design Guidelines

Assessment & Application of Specialized Technologies:

Seismic (Base) Isolation

Damping

Fiber-Reinforced Polymers, etc.

Assessment of Existing Seismic Risk

Design of Seismic Hazard Mitigation Plans

Development of Seismic Performance Criteria

Evaluation of Seismic Demand Parameters

Field Investigations to Verify Existing Conditions

Non-Linear Dynamic Analysis

Performance Based Seismic Design (PBSD) of structures, both new and retrofit

Review of As-Built Drawings & Other Existing Documents

Three-Dimensional Modeling