



2009

EXCELLENCE IN STRUCTURAL ENGINEERING AWARDS

The Structural Engineers Association of San Diego (SEAOSD) recently recognized three recipients of the 2009 Excellence in Structural Engineering Awards. There were three Excellence Awards and four Certificates of Merit bestowed. Recognition was given for creativity and innovation in design, efficiency in use of materials and labor, suitability of the design to the performance objectives of the project, and addressing any unusual challenges of the project. Project submissions were judged by a panel of three structural engineers: Zubaid Karim of Degenkolb, Jim Conley of Hope Engineering, and Mike Romanowski of SDSE.

Historic Preservation

Filang Construction Headquarters, Escondido

Architect: Nadel Architects

Structural Engineer: Arcon Engineers

Contractor: On-Line Builders

This project involved the complete remodel and seismic retrofit of a dilapidated historical landmark into a modern office workplace. This resulted in the buildings exterior being entirely returned to its original Art Deco finish, while the structure was upgraded to resist current code level lateral events. Some of the significant aspects of the project were the saw-tooth roof diaphragm strengthening with tie-rod and turnbuckle cross-bracing, out of plane strengthening of the unreinforced masonry walls and parapets with cold-formed light gauge studs, 2-story inverted “V” braced frames for lateral resistance, and column repositioning to create larger open spaces.



Retrofit/Alteration

Ferring Pharmaceuticals, Sorrento Valley

Architect: Kornberg Associates

Structural Engineer: Burkett & Wong Engineers

Contractor: DBC

This biopharmaceutical research facility was transformed from an old, one-story tilt-up building into a modern, two-story structure featuring state-of-the-art labs, research offices, and a video conferencing room. The existing building was not conducive to lateral expansion and could not support additional loads; therefore, a separate structure now straddles the existing one. An interstitial level between the first and second floors was configured to hide existing HVAC equipment along with additional equipment hung from the second floor framing. The new second floor skin consists of an energy-efficient insulated-unit glass wall with floor-to-ceiling panels. The white roof will be the site for future photovoltaic energy supplementation using curved amorphous silicon panels.



New Construction

The Hard Rock Hotel, Downtown San Diego

Architect: Carrier Johnson

Structural Engineer: KPFF Consulting Engineers

Contractor: Turner Construction

This project is a 315,000-sf mixed-use development in the prestigious Gaslamp Quarter in Downtown San Diego. The project included a 13-story main tower, a four-story above grade podium structure, a two-level subterranean garage, and the integration of an existing historical structure, the Depot Building. The structural system is comprised of post-tensioned concrete slabs, concrete columns, and concrete coupled shear wall cores supported by a mat foundation.



When incorporating the Depot Building, the architectural setbacks caused a column offset of 6 feet over a 3 level vertical span. Another challenging task was the 130-ft by 70-ft clear-span ballroom whose roof doubles as a floor for an outdoor stage used for events and concerts. This led to an extensive vibration study in order to prevent excessive floor motion during events. Heavily loaded beams were also required to have large openings to accommodate duct work.

2009 CERTIFICATES OF MERIT



Special Use Structures

**Elephant Exhibit,
Houston Zoo**

Architect: PJA

Architects

Structural Engineer:

Arcon Engineers

Contractor: Pepper

Lawson Construction



New Construction

The Wharf at America's Cup, Point Loma

Architect: The Miller/Hull Partnership

Structural Engineer: Curry Price Court

Contractor: MarVista Construction

Special Use Structures

1 Million Gallon Sky Ranch Reservoir, Santee

Consulting Engineer: PBS&J

Structural Engineer: DYK Incorporated

Contractor: TC Construction



Sustainable Design

UCSD Solar Grove, La Jolla

Consulting Engineer: Envision Solar International

Structural Engineer: KPFF Consulting Engineers

Contractor: Envision Solar International