



## CENTURY PLAZA HOTEL

### Seismic retrofit and rehabilitation

#### OVERVIEW

The Century Plaza Hotel was marked for demolition in 2008. The National Trust for Historic Preservation added to its list of endangered historic locations in 2009 in 2010, plans to renovate the building, including a seismic retrofit, were set in motion. The Tyfo® system was a major part of the retrofit of the main building. The project, consisting of column, beam and slab strengthening, started in October 2017 and was completed in spring 2019. As with most seismic retrofits, the Tyfo® systems was only part of the solution. There was additional conventional steel added along with buckling restrained braced frames.

The work was performed by Penhall Company, one of Fyfe's trained and certified applicators in Southern California. The project consisted of many phases with multiple mobilizations. Several trades were working at each level, causing a need for enhanced communication and coordination between the various contractors. The scope of work included over 170 columns, 15 beams and over 32,000 square feet of slab strengthening. The Tyfo® SCH-41 system was the main product used on all the structural elements. The Tyfo® RR finish coating was applied to achieve the required fire-resistant protection for interior locations that were strengthened for seismic loads (Class A flame and smoke rating). In quantity and scope, this is one of the largest building retrofit projects Fyfe Company has worked on to date.

The thin profile and light weight of the Tyfo® system was critical to achieve the design goal. Adding mass creates larger inertia forces during a seismic event and can cause undesirable failure modes in a structure. The detailing was unique for each element depending on the required performance enhancement and location. This unique and innovative approach allowed the owners to achieve their vision while strengthening and preserving this historic site.



Column retrofit in lower levels of structure

*"I'm really glad you could see the hard work myself and my crew has been putting in to be top tier applicators. It is a goal of ours to be one of Fyfe's best and go-to applicators. I really enjoy working with FRP, and Fyfe in particular. It has been a great working relationship from the beginning."*

**Kevin Royal, Superintendent  
Penhall**

# CENTURY PLAZA HOTEL

Seismic retrofit and rehabilitation

# PROJECT PROFILE: STRUCTURAL STRENGTHENING TYFO® SYSTEM

*"It was great to be able to share a successful project like this with others and show what the Tyfo® system is capable of."*

**Margaux Burkholder, Project Director Englekirk**



Front view of the Century Plaza Hotel before renovations



Slab in multiple levels of 17-story building



Front view of the Century Plaza Hotel after renovations



Column retrofit in lower levels of structure



Diaphragm shear retrofit on roof level