

Project Profile



USG Cavity Shaft Wall

Application/Building Type:

Retail Store Environments

Project Name:

Broadway Plaza

Location:

Los Angeles, California

Architect:

Charles Luckman Associates

Featured Products:

USG® Cavity Shaft Wall

SHEETROCK® Brand FIRECODE® Panels

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Construction Systems for Telephone Building Maximize Efficiency and Flexibility

A shimmering showcase of central city renaissance, the Broadway Plaza megastructure in Los Angeles reveals a new approach to the challenge of revitalizing downtown retail districts.

Instead of the popular “open plaza” concept used in so many cities, Broadway Plaza has a fully enclosed central mall that relates better to the elements of the complex and permits a more controlled environment for people. When built, the complex included the first new department store built in downtown Los Angeles in 50 years and the first major new hotel in 20 years. Throughout the project, contemporary drywall systems and novel drywall details enhance the aesthetic and functional aspects of the design while keeping cost factors in line.

The megastructure contains five principal elements that are diverse and yet related in a novel manner. The principal element in size is a 32-story office structure, the 700 Flower Street Building. Next is a 23-story, 500-room hotel, the Hyatt Regency Los Angeles. Third is a three-story, 250,000-square-foot department store, The Broadway. An eight-level, 2,000-car parking facility also is part of the complex. All these elements connect with and center around a large, skylit central mall called “The Galleria,” containing numerous shops and stores. This mall is the functional center of the complex, and it provides an inviting meeting place within the central city.

USG Shaft Wall Performs in LA

Of greatest importance among the various drywall systems and details is [USG® cavity shaft wall](#), which provides significant performance and cost-saving benefits. Other drywall systems meet fire- and sound-rating requirements for partitions and ceilings. Aesthetically speaking, however, the most interesting details are the curved and circular forms in walls and ceilings. Other innovations with drywall include dropped ceilings, abnormally tall partitions and ceiling coffers.

The architect, Charles Luckman Associates, Los Angeles, specified drywall throughout Broadway Plaza because of its versatility and low cost. The economies of fast erection and the light weight of drywall components, combined with fire-rated performance, really paid off in elevator and mechanical shafts.

Charles Luckman Associates originally specified USG solid shaft wall for these applications in the first phase of the project, the office tower. “We were planning to use the two-hour fire-rated solid shaft wall system to enclose elevator and duct shafts on the office tower,” explained Nancy L. Fabus, project captain for the architect. “However, during planning stages a USG representative introduced us to the new box-T-stud [cavity] system. We checked out previous installations of this system and preferred it to the older one. The two-hour-rated cavity system is 4 psf lighter and a little easier to install than the solid system; and since space, weight and construction time are such critical factors on projects built for leasing, these efficiency features were important to us.

“As a result of our success on the office tower, we proceeded to use the cavity system in elevator, duct and pipe shafts in the hotel,” Fabus continued. “One novel application was on exterior walls, where we used this system to back up mineral fiber panels on the stair towers of the hotel. This gave us the one-hour-rated exterior walls required for hotel occupancy. Also, it was a space-saving wall and could be applied from inside the building, so we didn’t need scaffolding outside.

“We also used the cavity system in department store areas, where we had to meet a fire rating. There were certain areas in the project where a three-hour rating was needed; another fire-rated cavity shaft wall [with an additional layer of gypsum panels] was used there,” she said.

Interesting Drywall Applications

“Another interesting drywall application was in the revolving rooftop cocktail lounge. Because the lounge is circular, we had to construct curving walls in that area. These were formed by wetting the gypsum panels and bending them to the desired radius. We also constructed circular ceilings of drywall.

“One other interesting detail was on the hotel’s glass curtain wall under windows. To provide the desired fire rating, we installed 1-inch USG gypsum coreboard, faced on both sides with half-inch [SHEETROCK® brand FIRECODE® panels](#), and with insulation on the curtain wall side of the detail,” Fabus said.

Still other applications of drywall in the office building included fire-rated double-layer applications of 5/8-inch [SHEETROCK FIRECODE panels](#) on 2-1/2-inch USG steel studs around bathrooms, stairwells, mechanical rooms, telephone closets and janitorial areas. Gypsum panels were also used as a backing under windows for the glass curtain wall.

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