

## Case Study

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#### One store Stays Open after Earthquake

##### *6.5 Magnitude Earthquake Shuts Down 76 Stores at Bayshore Mall*

Less than a year after SimplexGrinnell installed FlexHead flexible sprinklers in a new department store in Bayshore Mall, Mother Nature tested Eureka, CA, with a 6.5 earthquake.

This store's fire protection system remained intact and functional throughout the Saturday afternoon quake and its aftershocks, and the store opened for business Sunday morning. Unfortunately, the shaking breached the hard-pipe automatic sprinkler system protecting the rest of the mall, closing the 76 other stores for clean-up and repairs.

The Jan. 9, 2010 quake, which was centered about 25 miles off-shore from Eureka, sent shoppers scrambling at about 4:30 p.m. But after picking up fallen stock, minor clean-up, and the official safety inspection, this store re-opened the following morning. The rest of the mall remained closed until January 13, with damage estimated at \$6 million.

SimplexGrinnell installed the FlexHead-equipped system in May 2009. Although FlexHead products meet the stringent Los Angeles seismic qualification (AC156), the decision to use them was strictly economic.

"The earthquake [rating] didn't have anything to do with it," said Tim Madura, Service Contract Sales for SimplexGrinnell, "It was economics; though, of course, I'm sold on the earthquake thing now! I had to be very competitive, and I knew I had to be low-priced. Using FlexHead was how we could price the job low enough to get it."

The new department store was taking over an existing, 40,000-square-foot anchor-store attached to the main mall, gutting it in order to establish their own layout with new walls, ceilings and fixtures. The existing sprinkler system, which remained in place, was a typical 10x12 spacing with hard-pipe drops hanging down.

"The ceiling height changed [from the previous configuration], so we removed the drops and installed the FlexHeads with the sprinkler heads already attached," Madura said. "We wire-tied them up to the side of the drops until the ceiling went in.

"Prior to the grid going in, the fire department did their 200-pound test for two hours with all our FlexHeads installed, and they were fine with that. Then we waited for the grid, and chased the grid people in there," he continued.

Madura estimates that using FlexHeads saved at least half of the time, cost and aggravation that hard-pipe installations incur. In addition to reducing the need for cutting and threading to a bare minimum, and completely eliminating the back-and-

forth adjustments typical to hard-pipe installation, using FlexHead also required only one drain-down and one 200-pound test.

"Some agencies will make you come back after you've cut in your drops," he explained. "But here, we drained it one time, put the heads on, and had it tested. We didn't have to drain each drop again or hard-pipe over to the center of tile. All we needed to do was remove the wire-tie, move the FlexHead over to where it was going to be, put our bracket on, put our tile in, put our escutcheon in and we were done."

The ability to work fast and efficiently also substantially improved another dimension of SimplexGrinnell's job cost.

"If we had used hard pipe, we would have had an additional trip up there (four hours away) just to put the escutcheons on, which would have been added cost to us," Madura said. "With FlexHeads, we were able to do it in one trip, and when we left the job, we were done way ahead of everybody else. And to me, that's just tremendous!"

This job included about 500 sprinkler heads, none of which were compromised by the earthquake. Even the escutcheons remained in place.

"This store didn't lose any escutcheons," Madura said, "and these were concealed, flat-plate sprinkler covers. The other stores got beat up pretty badly, and, of course, lost very many escutcheons."

Madura wasn't always sold on flexible sprinkler connections. He says that he needed to wait until there was a track record of how well they held up over time. When he was ready to use flexibles, he chose FlexHead because of the quality and the design of the products.

"FlexHeads are one solid piece, whereas some others have a removable end. To me, that's two extra potential leaks," he said. "Where anything screws together, you have a potential leak, and with FlexHead, it's only where you're connected to the hard pipe and where your sprinkler head is. Also, because they're constructed of stainless steel, I think the FlexHeads are just a stronger product.

"I was on a service truck for a long time," he concluded. "And I've always had the mindset that I didn't want to give my customers something that wasn't the best or just because it's new to the market. Part of that is that I didn't want to have to come back and fix it down the road, and I've always operated that way. So I try to give my customers the best product that's out there, and this experience has made me very confident in FlexHead."