

New law lowers seismic standards at two-year colleges

59-word exemption approved by voters, but did they understand?

By Suzanne Bohan, STAFF WRITER
Inside Bay Area

Article Last Updated:06/28/2007 06:01:46 AM PDT

When voters passed the 13,651-word Proposition 1D in November to give \$10.4 billion for school construction, few realized that embedded in it were 59 words that would lower seismic safety standards at community colleges across California.

"It was a stealth bill," said Douglas Hohbach, president of the Structural Engineers Association of Northern California and a principle at Hohbach-Lewin, a structural engineering firm in Palo Alto. "I was shocked as a citizen of California that something like that could be done."

That 59-word clause provides an exemption that community colleges and other parties have sought for years: The option to use the standard building code when constructing buildings at two-year colleges, instead of a stringent seismic safety code mandated by the landmark Field Act.

"This change is for the benefit of the builders, and not the benefit of the students," said Paul Neel, dean emeritus of the California Polytechnic State University's College of Architecture and the California state architect from 1989 to 1991. "It's hard for me to fathom that you would gamble with safety like that."

Proponents of allowing community colleges to opt out of the Field Act offer varying opinions as to whether its stricter standards add up to greater safety. What they are certain of is that the Field Act adds costs and delays to construction projects.

"Safety is No. 1," said Fred Harris, assistant vice chancellor for facilities at the California Community College system in Sacramento. "I will bristle at anyone who claims that anyone who wants to do an alternative is sacrificing safety." Harris used the term "Field Act jihadists" for those who insist community colleges remain under its purview.

The Field Act was passed by the state legislature in March 1933, one month after the 6.4-magnitude Long Beach earthquake, which severely damaged three-quarters of the public schools in the region. Assemblyman C. Don Field, a Glendale general contractor, introduced the legislation, recognizing that shoddy workmanship explained much of the devastating damage. The earthquake occurred at 5:55 p.m., when the schools weren't in session, but it was obvious that many children would have perished had the shaking occurred several hours earlier.

All K-12 public school and community colleges have since been required to follow Field Act building standards. Two-year colleges fell under the Field Act, as they've been regarded as an extension of K-12.

The chief difference between the seismic safety objectives of the two codes, according to a legislative analysis, is that California Building Code standards are designed to allow occupants to safely exit a building after an earthquake, while the Field Act standards are designed to also allow the building to remain standing and usable.

The California Seismic Safety Commission, in a 2007 report advocating for continued Field Act adherence

by community colleges, noted that not only has the legislation protected the lives of generations of students and staff, but Field Act buildings serve as emergency shelter for community members made homeless by an earthquake. They also serve as a staging area for emergency personnel in areas where surrounding buildings have collapsed.

"Since 1933, it's been a good law and saved many lives," Neel said.

"It's tremendous," agreed David Thorman, the current state architect. "Field Act buildings stand up." Thorman directs the Division of the State Architect, or DSA, which oversees Field Act implementation.

While Field Act requirements add about 3 to 4 percent to the cost of construction, according to the Seismic Safety Commission, it concluded that was a bargain in the long run.

"These costs are minuscule compared to lower building lifecycle costs, safer buildings, fewer fatalities and injuries, and vastly lower repair and reconstruction costs," the commission stated.

"Not one public school building built under the Field Act has collapsed, nor has anyone died in earthquakes," the report stated.

The effectiveness of Field Act buildings has also inspired design professionals to incorporate the higher standards into the regular building code, the commission noted.

A coveted exemption

The controversial passage in Proposition 1D, however, isn't yet in effect, due to vagueness over the alternate system that would replace it.

A bill to establish a system clarifying the alternate was approved in May by the state Senate, and is expected to face an Assembly vote in July. If the bill, SB588, passes, it's likely to reach Gov. Arnold Schwarzenegger's desk in August. If enacted, two-year colleges can begin choosing between the two building codes.

As for characterizations of the 59-word clause as stealth, Sen. George Runner, R-Lancaster, who insisted it be added as a condition of Republican support for AB127 (see sidebar), said, "My opinion is when voters vote, they understand."

Rick Simpson, a spokesman for Assembly Speaker Fabian Nunez, D-Los Angeles, was more blunt in his response to the characterization of the clause as stealth: "Bulls---."

Nunez co-authored AB127 along with Senate President Pro Tem Don Perata, D-Oakland.

"We hear that a lot from folks who don't like what ends up in bills," Simpson said.

After he scanned the ballot measure, however, Simpson did confirm there was no mention of the Field Act exemption in arguments for and against Proposition 1D. When asked how voters would know of the existence of the clause in the 13,651-word bill, or understand its meaning, he said "they had the opportunity." Citizens can read entire ballot propositions on the state government Web site, or at locations such as government offices or libraries.

In May 2006, Schwarzenegger signed AB127, which put the school bond bill on the November ballot as Proposition 1D.

"The governor felt it was important to give community colleges a choice, to give them the option to choose what building code they want to follow, what would be most efficient," said Gena Grebitus, a spokeswoman for Schwarzenegger.

It was the culmination of years of effort by community colleges to circumvent the rigors of the Field Act, which community college administrators say burdens them with costly delays. Moreover, University of California and California State University campuses have never been required to follow Field Act standards, they emphasize.

Nonetheless, three times between 2000 and 2004 legislation directly seeking an exemption from the Field Act mandate for community colleges was vetoed by Gov. Gray Davis. In his veto message, he stated, "An exemption would be inconsistent with the state's policy of ensuring structural safety."

Davis added that community colleges "are expected to serve as community facilities as well as emergency shelters following a disaster."

The state Seismic Safety Commission falls squarely on the side of maintaining the Field Act standards for all K-12 schools and community colleges. It objects to the exemptions for charter and private schools as well.

"The exemplary performance of public school buildings is directly attributable to the stringent seismic design provisions required by the Field Act," the commission stated in its 2007 report, "The Field Act and Public School Construction: A 2007 Perspective."

But Harris, with the community college system, said the two codes have become almost identical, and that the Field Act has become a cumbersome process in meeting the same objectives.

"There's been an evolution in the seismic safety requirements of the (standard building) code. I've been told the code is almost identical."

But Simpson, the Nunez spokesman, took a different view.

"Probably there is some difference, otherwise we wouldn't have a Field Act," Simpson said. "I'm assuming our members did not believe there was a substantial enough change in risk for someone attending a community college to justify the additional cost."

"We don't have unlimited money, and we have to strike the best balance between cost and safety," Simpson added.

The primary reason for enacting the Field Act, noted Simpson, was to protect children required to attend school. "We're using police power to compel students to attend school," he said. "So the state has a responsibility to assure maximum safety for those schools."

"We don't require people to come to the State Capitol, the DMV, colleges and universities," he said.

That viewpoint underlies the rationale for exempting community colleges, pointed out a 2004 article in the MIT Undergraduate Research Journal.

"Critics argue that the Field Act was intended primarily to safeguard young children who would be vulnerable in the event of an earthquake. Community college students would be better able to fend for themselves," it stated.

"Critics further argue," the article continued, "that, unlike K-12, community college students are not forced to attend their school, but do so of their own volition." Those are among the reasons that universities were exempted from following the more expensive Field Act standards.

Safer buildings, saving lives

But the Seismic Safety Commission, in its 2007 report, drove home its view: Field Act buildings are cost-effective, in addition to protecting their occupants from injury during earthquakes.

After the 1989 Loma Prieta earthquake, which destroyed buildings throughout the devastated Marina District in San Francisco, Marina Middle School and John Swett Elementary School were used as emergency shelters and disaster assistance centers, according to the report.

During the 1994 Northridge earthquake, several buildings and a newly-constructed parking garage at California State University, Northridge collapsed. The campus sustained an estimated \$400 million in damage. (Both CSU and the University of California follow the California Building Code, not the Field Act.)

But two nearby community colleges that withstood comparable shaking, the report noted, suffered no damage at one campus, and \$5 million at the other.

In the 1971 San Fernando earthquake, 636 schools in the region, that together were worth \$1 billion, suffered \$2.7 million in losses, or 3/10 of a percent of the buildings valuation. In contrast, buildings in the same region that followed the standard building code lost 18 percent of their value.

Thorman, the state architect and a Schwarzenegger appointee, agreed the standard building code and the Field Act are now similar, although the latter requires a 15 percent greater strength to structural components, among numerous other distinctions.

But the crucial difference between the two, building experts emphasize, is the Field Act requirement that an inspector continuously monitor construction.

The inspector's presence thwarts temptations to take shortcuts to save time or costs. For example, a worker laying down pipe may encounter a wood beam, including those that may serve as structural support, impeding the pipe's path, and simply cut a hole or notch in the beam to finish the job.

"That's a relatively common scenario, and an inspector would flag that," Hohbach said. Countless other examples include workers ignoring faulty welds on steel beams, using poor quality concrete, or cutting through reinforcing steel, he said.

"That's really the crux — an inspector is always present during construction," said Larry Rillera, director of legislative affairs for the California Seismic Safety Commission.

"That's the genius of the Field Act," Rillera said. "If I'm going to leave the contractor alone, I want to know that he's putting the nail in the right place, using concrete of this strength."

Neel, the former state architect, expresses dismay at the pressure to weaken the Field Act.

"Who knows what political pressure they're under," Neel said of state politicians. "The bottom line is we're talking about the health, safety and welfare of the people of California and their children.

"And what's more important than that? It's not money, it's not political sway, it's not sneaking things into bills."

Contact Suzanne Bohan at sbohan@angnewspapers.com or (650) 348-4324.