

Earthquake Hazards

Fremont Worse for Deaf/Blind?

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The California Schools for the Deaf and Blind may be moving to a site in Fremont with greater earthquake hazards than now exist at the school's 112-year-old home in Berkeley, some seismic experts say. A university-commissioned geologic study of the Berkeley site showed no active fault trace lies beneath school buildings, as was previously assumed.

"They're moving from the frying pan into the fire," said UC Berkeley geology professor Garniss Curtis, who helped conduct the study. "Why don't they ever ask a geologist?"

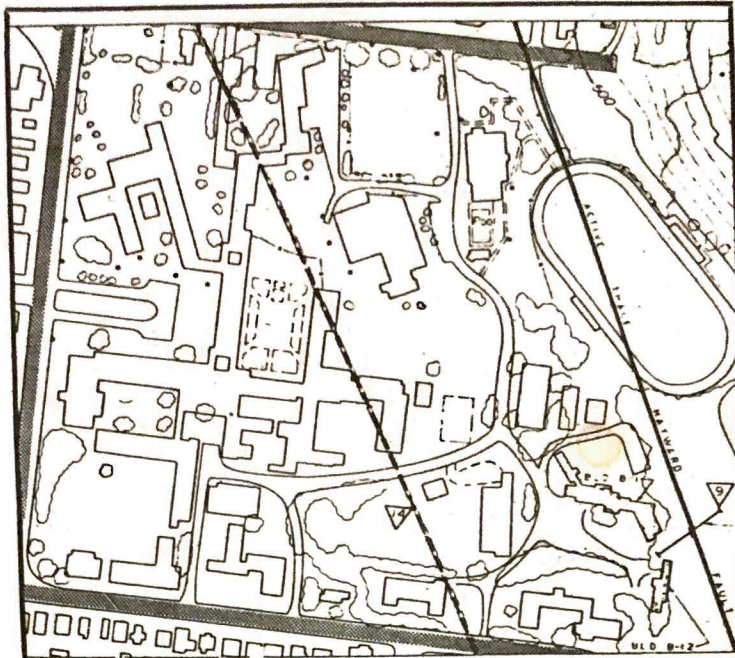
Of the two faults previously thought to pass through the schools property, the only active one runs beneath the athletic track on the eastern edge of the campus, the study said. The study further concluded that any buildings at least 50 feet from the "accurately established" active trace were "by reasonable standards of judgment an acceptable risk, not in hazard due to overt ground surface rupture."

Thomas McEville, Chair of the Department of Geology and Geophysics, said the new geological study has a tremendous bearing on the status of the present structures. He said the Berkeley site has never been examined in detail and should have been studied by Sacramento.

Soil engineer Ben Lennert, who conducted the study with Curtis, said it is not surface rupture but "ground motion" that comprises the "real hazard." His report, however, emphasizes that ground motion resulting from an earthquake would probably be less severe at the school than anywhere else in the Bay Area.

The most important criterion of earthquake safety, Lennert said, is whether a building is on "soft ground" or "hard soil." "In bedrock the amplitude of ground motion is much, much smaller than on saturated alluvial (layered deposits of sand and gravel)," he said.

"Since the bedrock is shallow in the area nearest the fault, ground motion effects on structures will be lesser in this area



Present site of Deaf and Blind Schools in Berkeley. UC study shows dotted line is not an active trace of Hayward Fault. Bold line is path of active trace under athletic track.

than further to the west where deeper alluvium will increase ground surface amplitudes and, thus have damaging effects on structures," states the report.

The Berkeley campus for the Schools for the Deaf and Blind is situated on old, compacted bedrock whereas the new school site, one-half mile from the Hayward fault in Fremont, rests on deeper and more loosely compacted alluvium.

The Fremont site's soils tests have indicated a liquefaction problem — the tendency of soils under foundations to collapse during an earthquake — but according to a state source who asked not to be identified, the problem would not significantly affect the low story wood frame buildings now in construction.

As far back as 1975, shortly after the Fremont site was selected, Robert Brown, U.S. Geological Survey project director for the Bay Area, wrote that concern about the safety of the Fremont location was "warranted," in a letter to School for the Blind teacher John di Francesco.

Lennert compared the two sites

and said any given building would perform better at the Berkeley site in terms of ground motion than in Fremont.

Both the Deaf and Blind Schools' teachers and affiliated neighborhood groups have opposed the move from the very start. Said di Francesco, "we consider Berkeley an ideal location."

"It has all the advantages of a city-community which we would be without in Fremont, which is a predominantly rural area. We feel that there would be a tremendous loss in the special education programs for the school. One of our prime educational goals is orientation and mobility for independence in the community." This orientation would be impossible in the automobile-oriented city of Fremont, added di Francesco.

McEville is familiar with the function of the Deaf and Blind Schools and an expert in earthquake safety. He said the schools should not move because the deaf and blind children thrive in an urban setting. "It is a worse disaster for the kids to move to Fremont than for any likely earthquake disaster."