



Northeast quake zones

Known earthquake fault lines in the Highland Park-South Pasadena area are shown in the map above, released by the California Division of Mines and Geology in a special survey being made by the Raymond Hill fault, under study

in this area at the time. The research being done in connection with Alquist-Priolo law calls for the divulgence of fault locations in real estate transactions on a statewide basis beginning Jan. 1, 1977.

Public must be told about active fault lines starting Jan. 1, '77

By Nelda Thompson

Property owners near active fault lines must be informed of this fact beginning Jan. 1, 1977, according to District Geologist Clifton Gray of California Division of Mines and Geology, who addressed members of Northeast Los Angeles Multiple Listing Service here last week.

As a portion of a statewide survey of earthquake zones that began in 1972, the Raymond Hill Fault which crosses the South

Pasadena-Highland Park area, is now under study and detailed maps of the exact areas involved will be released by the two cities prior to Jan. 1.

The Raymond Fault, the only known "active fault" in this area, begins at the base of the San Gabriel mountains in the Sierra Madre, extending 16 miles through Pasadena, South Pasadena, across the Arroyo and into Highland Park in the general area of York Boulevard.

This particular section under study is one of three quadrangles in this part of the county being scrutinized by geologists in keeping with the Alquist-Priolo Special Studies Zone Act passed in 1972, with further studies expected in other areas during the next 10 years.

Other known faults, not presently under study, are the Highland Park Fault which branches from the York Boulevard segment of the Raymond fault in a south easterly direction from the Toland Way-Buchanan Street area to North Figueroa, and eventually lines up with the Whittier fault.

Another such fault is known as the Eagle Rock Fault, girdling the base of the foothills.

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Gray cautions against speculation concerning these areas since "some may be very old faults" and their movements no longer pertinent.

GENERAL STUDY

General study concerns a frontal system of divergent faults emanating from Raymond Hill, some of which radiate toward the Sylmar fault, according to Geologist Robert Hill.

The relatively of "age" in judging a potential earthquake is expressed by the definition of "active" which means any fault which has moved within the past 11,000 years.

Preliminary studies made under the Alquist-Priolo law specify that no new building permits will be issued in quake zones within the quadrangles outlined by the Department of Geology.

In the local area, the depth involved is no more than 1/8 mile on either side of the designated fault, and does not, as some rumors have had it, involve the entire area, according to Gray.

Even these boundaries may be modified between now and the first of the year (or even later) since cities and counties retain the privilege of further review and appeal.

NOT RETROACTIVE

Generally speaking, single family dwellings are exempt and the law is not retroactive, meaning that present structures will in no way be affected.

The law provides that geological maps and findings must be placed on open file and that persons or their agents selling properties involved must so notify buyers after Jan. 1.

The survey which has already been completed and covers many major faults (including the San Andreas) relied heavily upon information derived from findings made of the 1971 Sylmar-San Fernando earthquake, said to be "the most studied earthquake in history."

Much was learned from the placement of ac-

celographs which had been implanted near known faults prior to 1971. Ironically, one such device (designed to measure structure resistance to earth shakage) was in position at Pacoima Dam, at almost the exact epicenter of the quake in 1971. Its almost accidental placement is even more remarkable in that the so-called Sylmar Fault has never been considered a major threat and was so obscure that little research had been done, according to a compilation of studies made by California Institute of Technology.

QUAKE DAMAGE

Destroyed or severely damaged during that temblor were 450 homes, 60 apartments and 400 commercial buildings. Study of the structures, the terrain upon which they were located and their proximity to the fault zone led to further research and the passage of the Alquist-Priolo Zones Act.

Conclusions derived from these studies include the discovery that wood frame, one story structures are best able to stand up under extreme shakage. The split level home, with garage attached, presents a slightly greater threat. Considered most hazardous are parapets, chimneys and elevators (many of which fail to function even in buildings that sustain little other damage).

The test of the skyscraper, none of which were present in the Sylmar quake zone (and none are located in the

Northeast quadrangle), is not fully completed. Geologists have expressed the opinion, however, that such high rise buildings withstand quakes well, as noted by the failure of glass to break.

SCHOOLS

Schools, having been subjected to intense study and consequent rebuilding to a strict code after the Long Beach earthquake of 1933 are considered among the safest of buildings and have been designated as emergency centers for civil defense in times of emergency.

Hospitals, at least those in the Sylmar quake zone (several of which were of new construction) did not fare so well and further study is being made to determine their failure to cope.

The fact that a study is being made of a fault in the northeast area does not indicate any immediate or imminent danger. It is part of a statewide project which will eventually cover every active and some potentially active faults in the entire state.

Some real estate brokers in the area are already complying with the earthquake fault-designation law and have added amendments to present escrows informing their clients of the existence of nearby faults.

The reaction has been low key. Those so informed have expressed the opinion that "All Southern California is really a quake zone so why get excited about it?"