

✓ Beating *EARTHQUAKES* quake damage

Costly new codes may be on the way

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State and local lawmakers, finding that much of the October earthquake damage to Bay Area homes and offices was predictable and preventable, are pushing for major changes in building safety standards.

From gingerbread homes in San Francisco to tract housing in Silicon Valley, thousands of Bay Area residences could be affected by a raft of unprecedented and potentially costly regulations requiring older buildings to be made safer.

One proposal, for example, would require owners of older homes to bolt their foundations and tie support walls together, among other seismic safeguards. Contractors estimate that the improvements could cost a few hundred to several thousand dollars per house, but lawmakers are considering tax credits and other measures to reduce the true cost.

Whatever the costs, seismic safety experts contend they are worth it. Had such a law been in effect on Oct. 17, they say, heavily damaged residences in the Marina District and commercial offices closer to the quake's epicenter might not have slipped off their foundations.

"So often, prior to this earthquake, I heard the argument that, 'Our community can't afford to strengthen these buildings,'" said Thomas Tobin, executive director of the California Seismic Safety Commission. "But this earthquake proves, 'Gosh, we can't afford not to strengthen these buildings.'"

Overall, at least 65 earthquake safety bills will be taken up by the state Legislature when it convenes this month, and dozens of other ordinances are being considered by local governments in the Bay Area.

Measures being closely followed by seismic safety experts would:

- Authorize a bond measure for the June ballot that would raise \$950 million to reconstruct or seismically retrofit state and local government buildings known to be at risk, including dormitories and offices in the University of California system.

- Require installation of foundation anchor bolts, lateral bracing

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supports and chimney restraints for older homes at the time of resale. An alternative measure would require disclosure to potential buyers if these improvements are not made.

- Require earthquake-prone communities to survey and devise reinforcement measures for concrete offices and other structures built before the 1970s, similar to existing legislation for unreinforced masonry buildings.

- Require the state and localities to inspect high-occupancy buildings, including offices and residences, to determine whether they meet seismic safety standards and notify owners if they do not.

- Ban new highway and bridge construction until the state can certify that all existing roads and bridges have been retrofitted to conform to current state and federal safety standards.

The proposals, if approved, would mark a dramatic increase in state and local government commitment to safety — a change that engineers and seismologists say is necessary if the public is to be adequately protected in another major quake.

Post-quake inspections and analysis have found that almost all damage occurred in landfill and soft-soil areas prone to violent shaking and to structures known to be at risk during a major earthquake.