

A major earthquake

San Leandro's Building Regulations Division and the Emergency Services Division are pleased to help you make your San Leandro home more secure in our next big earthquake.

This program will show you how to conduct a simple check-up of your home's earthquake "fitness," and how to strengthen your home with three inexpensive "do-it-yourself" steps.

Workshops

Even if you decide not to do the work yourself, this program will help you understand the differences between good construction practices and bad; it will help you to make informed choices in hiring a contractor.

This handbook is your guide to the City's "Home Earthquake Strengthening Program," a community preparedness partnership to help you move your home safely into the 21st century. The program includes practical hands-on workshops with experts, educational videos, detailed construction drawings, and a streamlined package of plans and permits.

Experts

This self-help program is designed to address known earthquake weaknesses in older home construction and is tailored to single-family homes in our community. The program is based on contemporary engineering practices and improved construction techniques based on lessons learned from the 1994 Northridge earthquake. As a participant, you have the opportunity to assess deficiencies in the construction of your home, and take preventative steps now that will considerably improve your home's ability to remain intact in the event of an earthquake.

The program is available to San Leandro homeowners and their contractors for a minimal charge. The City has streamlined the permit process and offers you and your contractor a simple, fast-track method to get this vital job done — quickly, easily, and at low cost.

Videos

Follow these steps and the City of San Leandro will supply you with the permit and inspection documentation you need to show that your home has been strengthened to prescriptive standards.

Preserving your neighborhood begins with preserving your home. Get involved. Start today!

of 7.0 or greater by year

San Leandro – Living

How an earthquake can damage your house

During an earthquake the shaking of the ground is transferred upward into your house through its foundation. If your home's wood frame is strong enough, it suffers little structural damage. However, if it has a structural weakness, as most older homes do, the energy of the shaking will focus on that weakness and begin to damage your home.

The photographs in this handbook show what can happen to older homes when earthquakes occur on nearby faults. If there is one lesson to be learned from recent California earthquakes, it is that those who strengthen their homes spend far less on repairs after earthquakes. For a relatively small investment now, you can avoid extensive and expensive structural damage to your home following the next major earthquake.

San Leandro is located in an active area for earthquakes

Scientists agree that California has entered a period of increased seismic activity. Since 1989 the state has been rocked by four magnitude 7 earthquakes, and more are certainly on the way sooner or later. The Loma Prieta earthquake gave us a glimpse of what a large earthquake on the outskirts of the Bay Area can do to weak buildings 50 miles away. The Northridge earthquake opened our eyes even wider showing us the devastation neighborhoods can suffer when just a moderate earthquake strikes in the heart of an urban area.

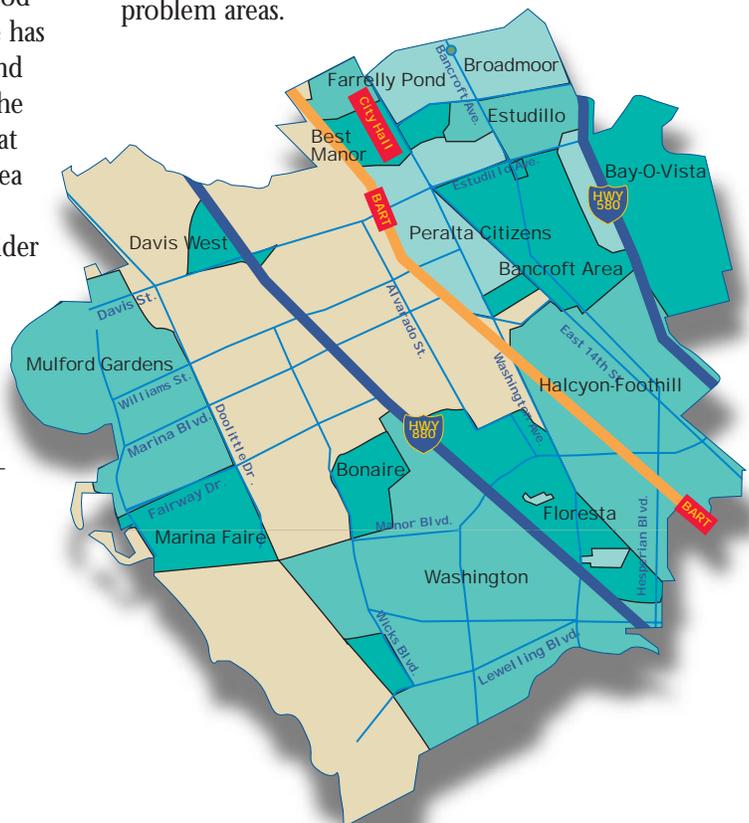
Get the benefit of expert guidance on strengthening techniques specific to the type of homes in your neighborhood. Use a "permit-ready" plan set available from the City's Building Regulations Division.

Earthquakes centered in the densely populated Bay Area will have a much more devastating impact

San Leandro is situated at a very active spot along the 60-mile length of the Hayward fault zone. More temblors happen here than anywhere else along the fault. Most go unnoticed. But the next big one here will damage weak houses and fragile chimneys throughout San Leandro and neighboring Bay Area cities.

Common construction problems in San Leandro neighborhoods

Much of San Leandro's housing was built in phases or tracts. Housing tracts were constructed, usually by the same builder, using very similar building techniques. Some older construction techniques are inadequate for the forces we now know earthquakes can cause, but these older homes can be reinforced easily and inexpensively. The City of San Leandro has identified common design features in our neighborhoods to assist homeowners in locating and fixing these common earthquake-sensitive problem areas.



Living with the fault.



This home, over 13 miles away from the fault, suffered tens of thousands of dollars in damage in the Loma Prieta earthquake because it was not properly bolted down.

Older homes are typical victims . . .

Many wood-frame homes, particularly those built prior to the 1960s, may not be adequately bolted to their foundation. Many older homes in San Leandro were built without bolts. Without this anchorage, a large earthquake can jerk the ground and the foundation right out from under a house. Older homes have been damaged or destroyed in this manner by every major earthquake in California's history. The instructions in this handbook will help you be sure that your home is properly anchored to its foundation.

. . . but earthquakes can cripple modern, anchored homes, too

Some wood frame homes built as recently as the 1970s were shaken off their foundations in recent earthquakes. Even though these modern homes were bolted down, they failed because of another weak link called the "cripple wall." This is a short wall that connects the foundation to the floor of the house and encloses the home's "crawl space." The cripple wall is often not strong enough to survive the force of an earthquake. Therefore it is important that this wall be braced and strengthened. If not, the next earthquake may damage the cripple wall and knock your home off its foundation, even if the house is properly bolted.



This home, in the same neighborhood as the one above, was jerked three feet off its foundation during the Loma Prieta earthquake, due to inadequate cripple wall bracing, a common problem that is cheap and easy to fix.