



Background

The Earthquake Brace and Bolt (EBB) program was created by the California Earthquake Authority to provide incentives to California homeowners to perform seismic-retrofit work to their light-frame wood constructed residential buildings. Eligibility for the program is determined annually based on the seismic vulnerability of houses located in preselected higher-hazard ZIP codes. Only seismic retrofit work done in accordance with Chapter A3 of the CEBC qualifies for the EBB program incentive payment. Retrofits include exterior foundation bolting and perimeter cripple wall bracing, as well as proper strapping of water heaters. Retrofit work can be done by a contractor or owner-builder.

Qualifying Houses

Qualifying Houses are limited to R occupancies with a maximum of four dwelling units and divided into two types.

Type 1 Qualifying House

- Conventional raised foundation*
- 1- and 2-story buildings with maximum 4-foot cripple walls
- 3-story buildings with maximum 14-inch cripple walls
- * Houses where a portion is constructed on concrete slab on grade may qualify as a Type 1 Qualifying House for retrofit work on the raised foundation portion only.

Plans may be a retrofit standard plan in accordance with Chapter A3, such as L.A. City Standard Plan No. 1-
-Earthquake Hazard Reduction.

Type 2 Qualifying House

- Cripple walls exceeding 4 feet in height
- Lateral-force-resisting system using poles or columns embedded in the ground
- Buildings greater than 3 stories
- 3-story buildings with cripple walls greater than 14 inches
- Buildings constructed whole or in part as slab on grade

Plans shall be prepared by a registered design professional, signed, and certify in writing that the plans are in accordance with Chapter A3.

Permit Application Information

Description of work shall identify if the water heater is to be strapped as part of the program.

Type 1 Qualifying House

Submit 2 sets of site specific foundation plans along with standard plans.

The description of work **MUST** state, "Voluntary Seismic Retrofit--Work is to be performed in accordance with Chapter A3 or L.A. City Standard Plan." (Choose appropriate wording)

Type 2 Qualifying House

Submit 2 sets of engineered plans and calculations.

The description of work **MUST** state, "Voluntary Seismic Retrofit--Work is to be performed in accordance with Chapter A3 using plans prepared by a registered design professional."

Inspection Requirements

All footing excavations and placement of reinforcing steel and anchor bolts in formwork shall be inspected prior to pouring of concrete for replacement footings and stem walls.

Special inspection not required for adhesive anchors unless specified on engineered plans.

All cripple wall blocking, connectors and anchors in existing concrete shall be inspected after the work is completed but before the bracing panels are installed.

Inspector verification

Inspector verification shall include, but is not limited to:

- Existing foundation for signs of deterioration
- New footings, if necessary
- Installation and spacing of blocking, bolting, and hardware
- Hardware compatibility with treated lumber
- Load path transfer
- Repair/replacement of damaged or decayed wood
- Location and placement of bracing
- Length of braced panels (2:1 ratio)
- Stud space ventilation
- Existing underfloor ventilation
- Water heater strapping and bracing, if necessary
- Carbon monoxide and smoke detectors

Photographic aids may be utilized in confined or restricted locations subject to inspector approval and the ability to clearly reflect proper application of details.