

Presentation



Northridge Earthquake



January 17, 1994

- \$20 Billion in residential damage
- Insurance companies stopped writing homeowners insurance
- CEA established after Northridge Earthquake

California Earthquake Authority

CEA CALIFORNIA EARTHQUAKE AUTHORITY™

THE STRENGTH TO REBUILD®


Armed Forces Insurance
OUR MISSION IS YOU.®


Golden Eagle Insurance
Member of Liberty Mutual Group


AAA Insurance


Encompass
Creating protection around you

 **State Farm**

 **Safeco Insurance**
A Liberty Mutual Company

 **FOREMOST**
INSURANCE GROUP

California FAIR
Plan PROPERTY INSURANCE


USAA®

 **MAPFRE**
INSURANCE

 **Hyundai Insurance**


Liberty Mutual
INSURANCE


FARMERS
INSURANCE


AAA
SOUTHERN CALIFORNIA


Allstate
You're in good hands.

 **MERCURY**
CASUALTY COMPANY

Homesite
HOME INSURANCE

 **Crestbrook**
a Nationwide Insurance® company


ASI™

 **Allied**
Insurance
a Nationwide Insurance® company

 **Nationwide**®

CommerceWest
INSURANCE
A MAPFRE COMPANY

PROGRESSIVE®

CEA Mitigation Program

- Jointly Managed by CEA and Cal OES
- Promote “Code-Compliant Retrofit”
- More than 23,000 homes have benefitted



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2024 Program Overview

- Help homeowners lessen the potential for damage during an earthquake
- Offer up to \$3,000 toward a code-compliant seismic retrofit for houses that qualify
- Homeowners must apply when registration is open
- Selected after registration closes by a random drawing
- Supplemental Grants for homeowners with an annual income at or below \$87,360

2024 Program Overview (continued)

- Homeowner registration for EBB is January 10 through February 21, 2024
- Reimbursement up to \$3,000
- Code-compliant retrofit in accordance with California Existing Building Code Chapter A3
- You do not need to be a CEA insurance policyholder to be eligible, but doesn't hurt

2024 Program Overview (continued)

Qualifying houses typically:

- Are built before 1980
- Have a raised continuous perimeter concrete foundation
- Sit on a level ground or low-slope site
- May have wood-framed walls (cripple walls) in the crawl space

Typical House for a Retrofit



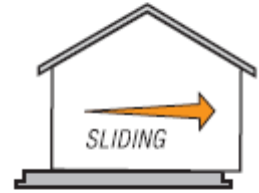
Crawl
space vent

Several steps
to the house

Earthquake Basics

Lateral (or Shear) Forces:

- Are horizontal forces that result in back and forth (side to side) movement, also known as racking
- Can shake the house and weaken its frame and cause it to slide off the foundation



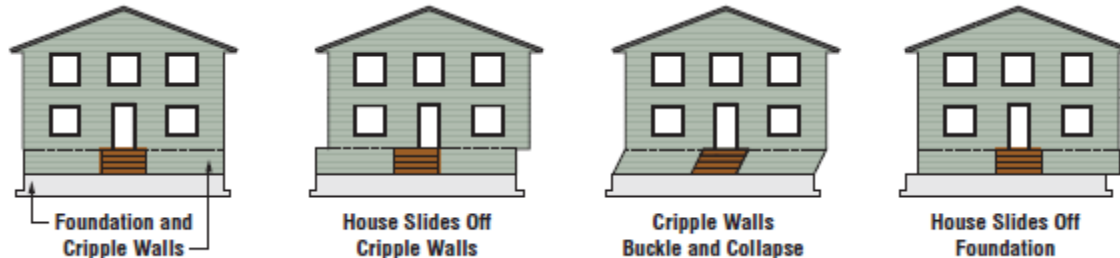
Uplift Forces:

- Are vertical forces that result in up and down movement
- Can cause the house to overturn and lift off the foundation



Effects of an Earthquake

- If your home is not built directly on a concrete slab, chances are it's built on a raised foundation.
- This means the house was built on “cripple walls”.
- These houses typically have crawl spaces underneath.
- Supporting structure may not have been anchored to resist seismic forces.
- Highly susceptible to structural failures.



Retrofit Lessens Potential for Earthquake Damage



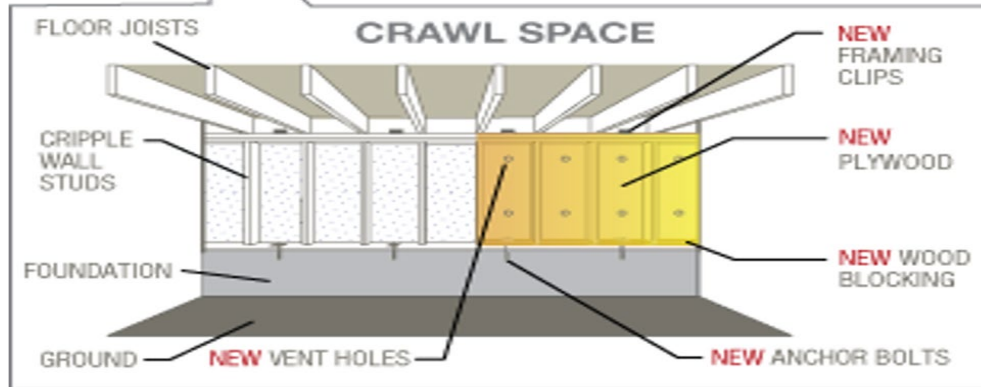
Cripple wall collapse



Brace and Bolt Retrofit



In a brace and bolt retrofit, the house is bolted to its foundation, and if there is a cripple wall, it is braced.



Retrofit Example



EBB Program Process

EBB Program:

- Participants chosen by random selection after registration closes
- Homeowners will be accepted into the program or put on a waiting list

Homeowner must be accepted by EBB before getting permit. Once accepted, they have 3 months to:

- Decide to DIY or hire a contractor on EBB Contractor Directory
- Submit required pre-retrofit documents to EBB

EBB Program Process (continued)

Once approved by EBB, pre-retrofit documents will be forwarded to FEMA, and:

- After EBB receives approval from FEMA (estimated 10 weeks after submission), homeowner will be notified
- Homeowner will have 6 months from that date to complete retrofit and submit post-retrofit documents

EBB Program Documentation

Required Photos Before and After Retrofit



All exterior house photos must:

- be date stamped
- be digital and clearly show front, back and sides
- show corners connecting side and back or side and front
- show from roof to ground and adjust, if possible, around bushes, trees etc. to show as much of house as possible

BEFORE AND AFTER CHECKLIST

Image	Description	Before	After
View 1	Front of house	<input type="checkbox"/>	<input type="checkbox"/>
View 2	Front of house and left side	<input type="checkbox"/>	<input type="checkbox"/>
View 3	Back of house and right side	<input type="checkbox"/>	<input type="checkbox"/>
View 4	Back of house and left side	<input type="checkbox"/>	<input type="checkbox"/>
View 5	Front of house and right side	<input type="checkbox"/>	<input type="checkbox"/>
Entrance to crawl space	Access to crawl space and include something (ruler, yard stick, etc.) for scale		<input type="checkbox"/>
Pre-Retrofit Crawl Space 1	Photo showing foundation, and cripple walls, if present.	<input type="checkbox"/>	
Pre-Retrofit Crawl Space 2	Photo of different section of foundation, and cripple walls, if present.	<input type="checkbox"/>	
Pre-Retrofit Crawl Space 3	Photo of a third view of foundation, and cripple walls, if present.	<input type="checkbox"/>	
Post-Retrofit Crawl Space 1	Photo taken from the same location as "Pre-Retrofit" photo 1		<input type="checkbox"/>
Post-Retrofit Crawl Space 2	Photo taken from the same location as "Pre-Retrofit" photo 2		<input type="checkbox"/>
Post-Retrofit Crawl Space 3	Photo taken from the same location as "Pre-Retrofit" photo 3		<input type="checkbox"/>
Water Heater 1*	Front of strapped water heater		<input type="checkbox"/>
Water Heater 2*	One side of strapped water heater		<input type="checkbox"/>

*Sample photos of water heater not provided. See EBB website

Check to make sure you've taken each photo.

APP Resources for Photos*

- | | |
|--------------------|--------------------------|
| IPHONE | ANDROID |
| • PhotoMarks | • Vignette—Photo Effects |
| • DateStamper | • Auto Stamper |
| • Timestamp Camera | |

*EBB does not recommend, endorse or approve of any of these Apps. EBB provides this list as a convenience only. There are other Apps available.

Examples of Required Photos

The examples are organized as follows:

- VIEW #1:** Front of house
- VIEW #2:** Front of house and left side
- VIEW #3:** Back of house and right side
- VIEW #4:** Back of house and left side
- VIEW #5:** Front of house and right side
- ACCESS CRAWL SPACE:** (show scale with something such as a ruler)
- CRAWL SPACE PRE-RETROFIT #1, #2, #3:** Interior views of the crawl space before retrofit.
- CRAWL SPACE POST-RETROFIT #1, #2, #3:** Interior views of the crawl space after retrofit.

Typical Retrofit Costs

- Between \$3,000 and \$7,000 depending on the location and size of the house, contractor fees, and the amount of materials/work involved
- Most homeowners decide to hire a contractor to do the retrofit work instead of doing it themselves
- If the homeowner is an experienced do-it-yourselfer, a retrofit can cost less than \$3,000

Reasons to Retrofit

- Reside in an active seismic zone
- Better chance of surviving an earthquake
- Improve home's ability to act as shelter
- Reduce cost of repair after an earthquake
- Reduce insurance premiums/deductibles
- Return on investment (ROI)

Tools Needed For Retrofitting

TOOL	PURPOSE
Measuring tape	Measuring walls, spacing, lumber
Circular saw	Cutting plywood and 2x lumber
Rotohammer drill	Drilling into concrete
Carbide-tipped drill bits ¹	For use with rotohammer <i>(bit must share compatible shank type with rotohammer)</i>
Socket wrench or impact wrench ^{1,2}	Installing Titen HD [®] screw anchors, Strong-Bolt [®] 2 wedge anchors, or threaded-rod anchor with SET-XP [®] anchoring adhesive ²
Drill with driver attachment	Driving Strong-Drive [®] SDS (3/8" driver) or SD (1/4" driver) screws
Hammer	Installing A35 angles in areas with clearance
Hammer or nail gun	Nailing off sheathing and installing blocking
Palm nailer <i>(optional)</i>	Installing nails in sheathing or A35 angles and blocking in areas with little vertical clearance
Air compressor	Required for nail gun or palm nailer, also handy for cleaning dust out of holes for anchors
Chalk line	Marking nail lines on sheathing
3" Hole saw drill bit	Drilling ventilation holes in sheathing



Palm Nailer



Rotohammer
Drill

Contractor Directory

On EBB and CEA BB websites



Contractor Directory

SEARCH FOR FEMA-TRAINED CONTRACTORS

The Contractor Directory is a list of contractors who have successfully completed the FEMA training for seismic retrofit of single family wood-frame houses. The Directory is provided as a service and is not an endorsement or approval of any contractor.

EBB is not responsible for confirming the contractor is licensed in the State of California. To verify the contractor is licensed and in good standing, visit the Contractor State License Board website.

To search for a contractor, enter your zip code and choose between a 5 and 100 mile radius. You can also search by Company Name or Contractor License Number.

ZIP Code:


Within: More

Retrofit Programs:

ZIP Code:

Distance:

- OR -

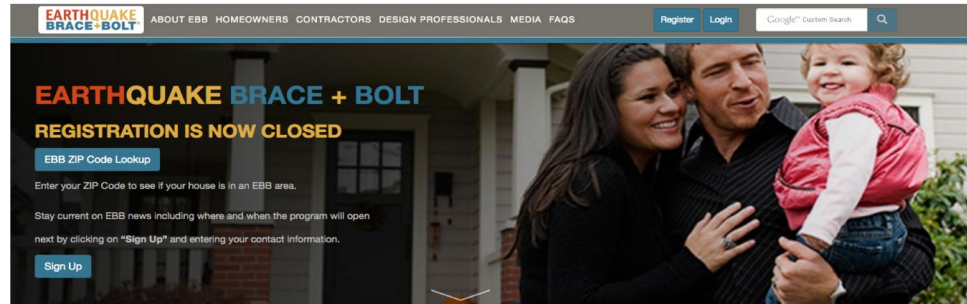
Logo	Business Name	Contact
	PREMIER CHOICE RESTORATION 5173 Waring Rd. Ste 151, San Diego, CA 92120 (License # 911538) About Us: We work with transparency and ... more	Email: rick@premierchoiceresoration.com Phone: (619) 259-6304 Web: http://premierchoiceresoration.com

If using a contractor, EBB homeowners must choose a contractor from the Directory.

Homeowner Registration

**EBB Homeowner Registration
January 10 through February 21, 2024**

www.EarthquakeBraceBolt.com



Homeowners



Contractors



Building
Departments



Licensed Design
Professional

Questions

