Zoom Webinar General Information

- At the top of your Zoom window: Change “View options” to Fit to Window and Side-by-side mode
- Your sound will be on mute
- Your video will not be seen
- Closed captioning is available

We Will Begin Shortly

How to Participate:
- Click “Q&A” to post a question for the panelists
  - There may not be time for all questions to be asked
- Click “Chat” to share information, ask for technical support, and to communicate with panelists
- Click “Closed Caption” to see live captions on desktop computers. For mobile device users, you may need to turn the option on from Zoom settings, meetings section (before joining)
ECA’s Safer at Home Webinar Series

Step 4: Minimize Financial Hardship

EarthquakeCountry.org/step4  Terremotos.org/paso4

Earthquake Country Alliance

- 1500+ Public-Private-Grassroots leaders
- Statewide Sector-based committees and Outreach Bureaus develop resources and deliver programs
- Local Regional Alliances organize meetings and outreach activities
- California’s Office of Emergency Services provides FEMA funding for ECA activities
- USC’s Southern California Earthquake Center administers ECA

Join Us: EarthquakeCountry.org/alliance
### Seven Steps To Earthquake Safety

1. Secure Your Space
2. Plan To Be Safe
3. Organize Supplies
4. Minimize Financial Hardship
5. Drop, Cover, and Hold On
6. Improve Safety
7. Reconnect and Restore

[EarthquakeCountry.org/sevensteps](http://EarthquakeCountry.org/sevensteps)  [Terremotos.org/sietepasos](http://Terremotos.org/sietepasos)

### Safer at Home Webinar Series

- **Step 1 – Secure Your Space:** June 30
- **Step 2 – Plan to Be Safe:** August 19
- **Step 3 – Organize Disaster Supplies:** September 2
- **Step 4 – Minimize Financial Hardship:** September 23
- **Step 5 – Drop, Cover, and Hold On:** September 30
- **Step 6 – Improve Safety:** October 21
- **Step 7 – Reconnect & Restore:** November 11

[EarthquakeCountry.org/SaferAtHome](http://EarthquakeCountry.org/SaferAtHome)
Step 4: Minimize Financial Hardship Webinar Team

Host and Presenter
• Janet Ruiz (Director – Strategic Communications, Insurance Information Institute & Media Bureau Coordinator, Earthquake Country Alliance Bay Area)

Presenters
• Dante Randazzo (Federal Preparedness Coordinator, FEMA Region 9)
• Janiele Maffei (Chief Mitigation Officer, California Earthquake Authority)
• Glenn Pomeroy (Chief Executive Officer, California Earthquake Authority)
• Randy Braverman (Project Manager, Safe-T-Proof)
• Tim Kaucher (Engineering Manager Southwestern U.S., Simpson Strong-Tie)

Moderators
• Mark Benthien (Executive Director, Earthquake Country Alliance & Assoc. Director, SCEC @ USC)
• Sharon Sandow de Groot (Deputy Director, ECA & Dir. for Strategic Partnerships, SCEC @ USC)
• Jason Ballmann (Media & Participation Bureaus Liaison, ECA & Communications Manager, SCEC @ USC)

Step 4 Webinar Agenda

1. Personal Financial Preparedness
2. Protecting Older Houses in Earthquakes
3. Get Prepared – Put your family’s future on solid ground
4. Home retrofit demonstration (live from under a house)
5. Other retrofit types and solutions
6. Additional earthquake insurance options
Financial Preparedness Tips

- Know your Hazards
  - Ready.gov or the FEMA app
- Make a Plan:
  - Gather financial and critical personal, household and medical information and store it in a safe place
  - Consider saving money in an emergency savings account
  - Keep a small amount of cash at home in a safe place
  - Obtain property (homeowners or renters), health and life insurance if you do not have them
Emergency Financial First Aid Kit

• Build a Kit
  – Emergency Financial First Aid Kit (EFFAK)
  – Store the kit
  – Maintain the Kit

ready.gov/financial-preparedness

Q&A

Please type your questions into the “Q&A” tool.

We will try to answer all questions, either in writing or via discussion “live”

The recording or today’s webinar will be available by early next week at:

EarthquakeCountry.org/SaferAtHome
Protecting Older Houses in Earthquakes

Janiele Maffei
Chief Mitigation Officer
California Earthquake Authority
Earthquake Risk = Hazard + Vulnerability + Exposure

HAZARD
Location Matters

- Fault rupture
- Distance
- Soil/Rock between fault and structure
- Type of soil
- Magnitude
HAZARD
Earthquake Faults in California

HAZARD
US and CA Geological Surveys Map for California
VULNERABILITY

- Year of construction (building code)
- Number of stories
- Type of construction
- Type of foundation
- Heavy roof/wall materials
- Retrofitted

California Counties + Housing Built 1939 and Earlier

*Source: American Community Survey (Census Bureau) 2012
1 Year Estimate, based on "Year structure built" 1939 or earlier
VULNERABILITY
Four types of earthquake vulnerabilities in single-family houses

Crawlspace
Living-space-over garage
Hillside house
Chimney

VULNERABILITY
Typical House with Crawlspace Vulnerabilities

Several steps to the house
Crawl space vents
VULNERABILITY
“Cripple Wall” Damage in 2014 M 6.0 Napa Earthquake

Toppled “cripple wall”
**VULNERABILITY**

“Cripple Wall” Damage in 2014 M 6.0 Napa Earthquake

![Toppled “cripple wall”](image)

**VULNERABILITY**

Typical Crawlspace Retrofit

**Median brace and bolt retrofit in:**
- California = $5,100

![Before](image)

![After](image)

Plywood brace on “cripple wall”

Foundation plate bolted to concrete and screwed to the wood sill plate
EXPOSURE

- Number of structures in high hazard zone
- Demographics

EARTHQUAKE BRACE AND BOLT PROGRAM

Up to $3,000 Grants for the Brace and Bolt Retrofit

Sign up to receive a notification when registration opens
Q&A

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EarthquakeCountry.org/SaferAtHome

Get Prepared.
Put your family’s future on solid ground.
Strengthen your house against earthquake shaking today.

Glenn Pomeroy
Chief Executive Officer
California Earthquake Authority
RETROFITTING YOUR HOUSE CAN SAVE YOU MONEY

Over 1.1 million California policyholders trust us to protect their homes. CEA policyholders with a verified seismic retrofit may also receive up to 25% off their insurance policy premium.
# Homeowners: How to Get Your Policy Premium Discount

<table>
<thead>
<tr>
<th>Foundation Type</th>
<th>Year Built</th>
<th>Discount %</th>
<th>Qualifications for single-family homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raised Foundation</td>
<td>1939 or earlier</td>
<td>25%</td>
<td>• Was built before 1980.</td>
</tr>
<tr>
<td></td>
<td>1940 - 1979</td>
<td>20%</td>
<td>• Is wood-frame construction,</td>
</tr>
<tr>
<td>Other Foundation (non-slab)</td>
<td>1939 or earlier</td>
<td>15%</td>
<td>• Is on a raised foundation or other</td>
</tr>
<tr>
<td></td>
<td>1940 - 1979</td>
<td>10%</td>
<td>foundation type that is not entirely slab, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Has been seismically retrofitted in accordance with California standards.*</td>
</tr>
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</table>

Special documentation of your completed and verified retrofit must be sent to your [residential insurer](https://www.earthquakeauthority.com/premium-calculator) in order to receive the discount.
EarthquakeAuthority.com
Premium Calculator

Example
Date: 09/24/2020
Insurance Company:
• Must be CEA Participating Insurer
Address:
• Oakland, CA 94610
EarthquakeAuthority.com
Premium Calculator Example

Year built: 1929
Insured Value: $765,934
Number of Stories: 1
Foundation: Raised
Roof: Composition

No Discount

Without Discount
Premium: $3,411/year
Deductible: 15%
Personal Property: $5,000
Loss-Of-Use: $1,500
EarthquakeAuthority.com
Premium Calculator Example

Eligible For Discount

Premium Calculator Example

With Retrofit Discount

Premium: $2,559/year
EarthquakeAuthority.com

Bottomline: Retrofitting an older home can significantly lower the cost of a CEA Policy

Annual Premium
• No retrofit: $3,411
• With retrofit: $2,559

Annual Savings
• $852

Testimonials
EarthquakeAuthority.com

“Our house was built in 1926...You now know that in the next earthquake your house will be standing. And we also got a discount on our earthquake insurance. If there is an earthquake, our house has a better chance of surviving it.”
– Cliff & Lizz Moser

“I was truly amazed to find how easy it was...And the best part is my house is finally bolted, something I have been putting off for years.”
– Susan from Los Angeles

“Bracing and bolting is a can’t lose proposition...If the house is damaged from an earthquake...we wouldn’t have to give up this home...”
– Roz and Larry May
Q&A

Please type your questions into the "Q&A" tool.

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EarthquakeCountry.org/SaferAtHome

Randy Braverman
Project Manager
Safe-T-Proof, a division of ETC Building & Design

- Completion of more than 100 EBB projects
- From Survey to Sign-Off
Q&A

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Other Retrofit Types and Solutions

Tim Kaucher
Engineering Manager Southwestern U.S
Simpson Strong-Tie
Vulnerable Buildings – Lack of Lateral Resistance

Vulnerable Buildings – Lack of Lateral Resistance
Vulnerable Buildings – Lack of Lateral Resistance

Vulnerable Buildings – Concrete

Courtesy World Housing Encyclopedia - WHE
Vulnerable Buildings – Lack of Lateral Resistance

FRP COLUMN WRAP DETAIL

- 4 ANCHORS CSS-CA110 PER 24" WIDE
  STRIP, INTO 1 1/2" DIA. HOLE, THROUGH
  THE COLUMN, 0" FAN, TYP.

- 3 LAYERS OF CSS-CUCF22, 24" WIDE
  STRIPS @ 24" O.C., FULL COVERAGE
  ORIENTED HORIZONTALLY, TYP.

ROUND CORNERS TO
3/4" MIN. RADIUS, TYP.

VARIES

1" MIN. OVERLAP

ROUND EDGE OF ANCHOR
HOLES TO 3/4" MIN RADIUS AT
FRP ANCHOR BEND, TYP.
Vulnerable Buildings – Tuck under Parking

1989 Loma Prieta
6 of 7 collapsed buildings were four story corner apartments with first story parking

1994 Northridge
200 weak story buildings suffered damage or collapsed
Vulnerable Buildings – Tuck under Parking

Open structure for parking access lacks first story strength creating a weak story condition.

Figure: Rotation of first-story of a corner building with openings on two side walls

Relatively rigid upper level remains intact
Weak ground level with extensive damage
Inspiration for Test Building

A 1920’s San Francisco Apartment Building at a Corner

3D Rendering of Test Building
Q&A

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Additional earthquake insurance options

Janet Ruiz
Director of Strategic Communications
Insurance Information Institute
Prepare Financially: Earthquake Insurance

- Earthquakes in the United States are not covered under standard homeowners or business insurance policies.

- Coverage is available either in the form of an endorsement or as a separate policy for homeowners, renters and small business owners.

- To get more insights and to find out whether earthquake insurance is available in your area, contact your insurance professional or your state insurance department.

Do I Need Earthquake Insurance for my Business?

Q. What does commercial earthquake insurance cover?
A. Your business earthquake policy will generally cover damage to your building and to your business property such as your inventory. Depending on the policy, lost business income caused by an earthquake may also be covered. Coverage only begins when damage has exceeded your policy’s deductible—the amount you pay out of pocket before your insurance kicks in. Earthquake insurance policies often have high deductibles—ranging from 2 percent to as high as 20 percent of the value of your building, depending on its location, age and condition.

Q. Are there special requirements for qualifying for earthquake insurance?
A. Your business property may have to undergo an inspection and upgrades before you can qualify for earthquake insurance. For instance, before your building can be insured against earthquakes, you may have to have the structure bolted to its foundation. You may also be required to brace chimneys and walls, as well as make other improvements.

www.III.org for Earthquake Facts and Statistics
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Safer at Home Webinar Series

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EarthquakeCountry.org/SaferAtHome
ECA's Safer at Home Webinar Series

Step 4: Minimize Financial Hardship

Thank you!

Please take our webinar survey: surveymonkey.com/r/T6WHT97

Questions? info@earthquakecountry.org