



MEMO

DT: September 4, 2008
TO: Executive Board members
FM: Jeanne Perkins, ABAG Earthquake and Hazards Program Consultant
RE: Residential Seismic Strengthening Standard Plan Set - 2008

In a major earthquake, single-family homes that, are not properly bolted to their foundations, or where the outside walls of their crawl space (“cripple walls”) are inadequately braced, are unsafe when exposed to violent shaking. These homes literally slide and fall off their foundations.

An ABAG study in 1999 found that only a third of these homes had been retrofitted, but, more significantly, less than 10 percent had been adequately retrofitted in the Bay Area. The problem of overly expensive and inadequate retrofitting can be solved, in part, with a regional standard for retrofitting these homes.

At the November 2004 meeting, ABAG’s Executive Board adopted Resolution 12-04 endorsing the residential seismic strengthening plan set, called “Plan Set A,” developed by a committee of building contractors and representatives of the Structural Engineers Association of Northern California (SEAONC), the California Building Officials (CALBO), the International Code Council (ICC) Tri-Chapter (East Bay, Peninsula, Monterey Bay) Plan Check Standards Committee, the Earthquake Engineering Research Institute (EERI) Northern California Chapter and ABAG.

During the past four years, both the cities of Berkeley and Oakland have used this Plan Set as a minimum standard to gain rebates of property transfer taxes to help pay for the costs of the retrofits. As a result of that use, contractors, homeowners, and engineers have discovered several small issues with the plan set. The City of Oakland took the lead in re-constituting the original Plan Set A committee.

The revised plan set can be used by homeowners in obtaining quotes for retrofitting, by contractors when obtaining building permits, and by cities and counties as a basis for a minimum prescriptive retrofit standard. While this standard only applies to a subset of homes needing retrofit work (wood-framed residential structures not more than two stories in height and containing not more than two dwelling units), this plan set is a valuable first step.

The revised plan set is scheduled for formal approval by SEAONC, CALBO, ICC (Tri-Chapter) and EERI (Northern California Chapter).

Therefore, staff is asking ABAG to endorse this revised Standard Plan Set and encourage the cities and counties of the region to utilize the Plan Set.

**ASSOCIATION OF BAY AREA GOVERNMENTS
EXECUTIVE BOARD**

RESOLUTION NO. 07-08

**RESOLUTION ENDORSING REVISED RESIDENTIAL SEISMIC STRENGTHENING
STANDARD PLAN SET**

WHEREAS, the Bay Area is subject to various earthquake-related hazards including very violent ground shaking; and

WHEREAS, the U.S. Geological Survey has found that there is 62% chance that one or more earthquakes of magnitude 6.7 or greater will occur on one of several active faults in the Bay Area in the next 30 years; and

WHEREAS, ABAG seeks to maintain and enhance a disaster-resistant region by reducing the potential loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters; and

WHEREAS, ABAG is committed to helping meet the need of Bay Area residents for safe and disaster-resistant housing that is architecturally diverse and serves a variety of household sizes and incomes; and

WHEREAS, ABAG finds that unbraced or inadequately braced cripple wall houses in the Bay Area represent a significant earthquake risk to the safety of residents and their property; and

WHEREAS, ABAG has previously endorsed a "Standard Plan A: Residential Seismic Strengthening Plan" (Plan Set) to address seismic strengthening of wood frame residential buildings; and

WHEREAS, a revised Plan Set has been developed by a committee representing ABAG's Earthquake Program, building contractors, the committees of the Structural Engineers Association of Northern California (SEAONC), the California Building Officials (CALBO), the International Code Council (ICC) Tri-Chapters (East Bay, Peninsula, Monterey Bay), and the Earthquake Engineering Research Institute (EERI) Northern California Chapter, and each organization has, or is scheduled for, formal approval of the revised Plan Set.

NOW, THEREFORE, BE IT RESOLVED, by the Executive Board of the Association of Bay Area Governments that ABAG

a) endorses "Standard Plan A: Residential Seismic Strengthening Plan - 2008" as a prescriptive seismic strengthening plan for cripple wall bracing and foundation sill plate anchorage of light wood-framed residential structures not more than two stories in height and containing not more than two dwelling units, and

**ASSOCIATION OF BAY AREA GOVERNMENTS
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b) strongly encourages the cities and counties of the Bay Area to utilize this Standard Plan Set by encouraging and promoting its use as a minimum standard for seismic retrofitting.

The foregoing adopted by the Executive Board this 18th day of September, 2008.

Rose Jacobs Gibson
President

Certification of Executive Board Approval

I, the undersigned, the appointed and qualified Secretary-Treasurer of the Association of Bay Area Governments (Association), do hereby certify that the foregoing resolution was adopted by the Executive Board of the Association at a duly called meeting held on the 18th day of September, 2008.

Henry L. Gardner
Secretary-Treasurer

Approved as To Legal Form

Kenneth K. Moy
Legal Counsel