

The Retrofit

An Earthquake Brace + Bolt (EBB) retrofit is in compliance with **Appendix Chapter A3**. Appendix Chapter A3 is specific to light, wood-frame houses. This is why it is important to make sure your house has a foundation that is in compliance. Qualifying foundations are concrete and reinforced masonry and include cripple walls or stem walls.

The photos, below, show 1) the top and bottom of a cripple wall (left photo) and 2) a stem wall (right photo).



A slab on grade foundation, unreinforced masonry or stone foundation do not qualify for this type of retrofit.

Appendix Chapter A 3 allows:

- a prescriptive plan for houses that sit directly on their foundation (BOLT-ONLY RETROFIT);
- a prescriptive plan for houses with cripple walls less than 4 feet tall (BRACE AND BOLT RETROFIT); and,
- an engineered solution for cripple walls 4-feet or taller (ENGINEERED SOLUTION).

All retrofit work that complies with Chapter A3 is done in the crawl space and around the perimeter of the foundation. The approved retrofit is for bolting and bracing—anchor bolts or foundation plates and plywood or OSB sheathing on the perimeter cripple walls.

- Bolting=anchor bolts or foundation plates
- Bracing= plywood or OSB sheathing
- An engineered solution is unique to each house

BEFORE AND AFTER RETROFIT PHOTOS

Example 1: Before Photos

Example 1 shows a wood-framed house with a less than 4-foot cripple wall that requires bracing and bolting.



Example 1: After Photos

Note the plywood or OSB sheathing around the perimeter of the foundation (bracing) and the metal foundation plates (bolting) around the perimeter of the foundation.



Example 2: Before Photos

Example 2 shows a wood-framed house that sits directly on the foundation and requires a bolt-only retrofit.



Example 2: After Photos

Note the metal foundation plates (bolting) around the perimeter of the foundation.



PHOTOS OF RETROFIT WORK THAT DOES NOT QUALIFY

All retrofit work takes place around the perimeter of the foundation. These photos show work done to the piers and posts in the middle of the crawl space that do not qualify for a Chapter A3 retrofit.



