

Alaska Seismic Hazards Safety Commission
Position Paper: Adoption of a Statewide Residential Building Code (HB80)
March 3, 2025

The Alaska Seismic Hazards Safety Commission supports advancement of HB80 in the 34th Legislature. The statute will enact a Statewide Residential Building Code and protect consumers from licensed contractors who are not building to code minimums. This legislation will improve earthquake resilience of newly constructed single-family, duplex, and triplex residences, or modifications thereto.

Currently there are design and construction concerns for residences outside communities that have International Residential Code adoption and enforcement:

- Residential contractors are legally required to be licensed in the State of Alaska. However, some licensed contractors do not construct houses to minimum standards of the International Residential Code (IRC).
- Inspections completed by individuals hired by contractors do not seem to identify deficiencies that should be identified during construction.
- When owners discover they have been sold a substandard home, they are often unable to rectify the situation because the contractor claims the IRC is not the standard in that location.
- As a result, the M7.1 November 30, 2018 Anchorage earthquake caused more extensive damage to residences in Eagle River, Chugiak, and the areas of the Matanuska-Susitna Borough (all areas without residential code adoption and enforcement) than in Anchorage (an area with residential code adoption and enforcement) even when ground accelerations were at least as strong in those areas.
- **Identified design and construction concerns include:**
 - Inadequate nailing of shear walls, including no nails at the foundation
 - No holddowns at wall ends of, or the sides of openings in, shear walls
 - Shear walls with inadequate capacity due to excessive openings
 - Large plan dimension changes with inadequate seismic detailing
 - Basement or crawl space walls not adequately designed for soil pressure
 - Improperly compacted soils at foundations or cut and fill slopes
 - No seismic design completed as part of the design stage to save less than \$4000
 - Alaska Housing Finance Corporation plan review and inspection documents were completed by individuals without the requisite seismic design expertise
- The Federal Emergency Management Agency has discussed a different, lower level of disaster assistance in areas that have not adopted basic codes, questioning the reasonableness of financing the rebuilding of substandard construction.

The M7.1 2018 Anchorage earthquake, while significant, was not a design earthquake. The shaking intensity in 2018 was 50-60% of a design earthquake intensity. Should we have another earthquake closer to what we saw in 1964 (M9.2), there will undoubtedly be much greater damage and possibly loss of life.

HB80 will be a good start to addressing these concerns. We have several comments that we believe should be included in amendments prior to passage:

- **Sec. 7** - In accordance with our Policy Recommendation 2020-01 IMPROVE BUILDING CODE ADOPTION AND ENFORCEMENT, inspectors should be independent of the contractor. Thus, the inspector should be hired by the owner or the financial institution funding the construction.
- **Sec. 9** - HB80 lists the 2018 International Residential Code (IRC) as the starting point. The 2021 IRC has already been adopted by three of the ten deferred jurisdictions that adopt a residential Code. Two other jurisdictions have adopted 2018 codes, one has adopted 2015 codes, and four are still on the 2012 codes. The 2024 IRC is currently under review by the Municipality of Anchorage, AHFC, and potentially others. We recommend using the 2021 or 2024 IRC as the starting point.
- **Sec. 9** - We suggest several changes to the makeup of the Residential Building Safety Council that consists of six residential contractors and five members “with building code experience or statewide business or economic development experience.”
 - The makeup of the Residential Building Safety Council should require that one of the eleven members resides in an unorganized borough. This will provide a voice for those outside the larger communities.
 - There seems to be no benefit from having experts in business or economic development on a body dealing with technical building code adoption and amendments. That provision should be removed.
 - We suggest delineating the five Council members with technical expertise more definitively: one architect, one structural or civil engineer with structural design expertise, one mechanical engineer, one electrical engineer, and one local building official or plan reviewer.

We hope that this concept becomes statute. We are willing to discuss our comments with legislators or staff.

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