



POLICY RECOMMENDATION 2020-1

IMPROVE BUILDING CODE ADOPTION & ENFORCEMENT

The Alaska Seismic Hazards Safety Commission recommends that steps be taken to improve building code adoption and enforcement in Alaska communities. This will improve the safety and functionality of our homes and businesses following the next significant seismic event.

Building codes are a standard set of requirements that are intended to ensure buildings are designed and constructed such that they are safe for their occupants. In regions with high seismic hazard, earthquake-resistant structures are much more likely to remain safe and habitable during and after an earthquake.

Effective implementation of a building code requires two activities: code adoption and code enforcement. Code adoption involves a building official requiring construction to be engineered per the building code. Code enforcement involves mandatory inspections during construction to verify that the work is following the approved plans.

Improving building code adoption and enforcement is also supported by the Alaska Statewide Home Building Association and the Structural Engineers Association of Alaska.

Across Alaska, building code adoption and enforcement are inconsistent and depend largely on the location and type of building proposed for construction. Most of the state falls under the jurisdiction of the State Fire Marshal that uses code adoption but no code enforcement for the earthquake design provisions. Furthermore, this code adoption does not apply to residential construction that is three-plex or smaller, so homes are not covered by any building code.

In some larger communities, the local government takes up the role of building official. An example of this is the Municipality of Anchorage where there is a robust code adoption & enforcement program in place for all construction, including residential. However, there are parts of Anchorage such as Eagle River and Chugiak where the code is not enforced.

The 2018 M7.1 Anchorage Earthquake highlighted the impact of this inconsistent building code application. Within the Municipality of Anchorage, there were 40 buildings that suffered significant structural failure as result of the earthquake. Of these, 38 buildings (95%) were located in the areas without code enforcement.

This Commission recognizes that there are many difficulties in improving building code adoption and enforcement in Alaska. The immense size of our state combined with lack of infrastructure and transportation difficulties present considerable challenges to regulating construction, however there several ways to improve the situation.

The Alaska Seismic Hazards Safety Commission puts forward the following recommended actions for improving building code adoption and enforcement in Alaska:

Recommendations

1. State Fire Marshal: Require a Special Inspection Completion Certificate prior to granting occupancy

‘Special Inspections’ are specific inspections specified by the building code to verify that the construction is built correctly and that it can handle seismic loads. Currently there is no mechanism for verifying that these inspections have been completed.

By requiring a completion certificate signed off by the engineer of record, there will be accountability to ensure that the building code requirements are met.

2. Require that residential construction inspectors be certified and hired by the owner or the bank.

The current practice in residential construction is for the builder to hire an inspector to verify their work meets building code requirements. This sets up a conflict of interest where the builder may influence the inspection results. This can be corrected by requiring the inspector to be independent of the builder. In addition, these inspectors should be certified by the International Code Council (ICC) as Residential Building Inspectors to ensure they are qualified to perform their duties.

Currently this is the practice for residential construction completed using financing from Alaska Housing Finance Corporation. This existing program could be expanded to cover all residential construction.

3. Municipality of Anchorage: Expand code adoption and enforcement to include Chugiak and Eagle River

The Anchorage building safety department is very effective at code adoption and enforcement for construction within the Building Safety Service Area. By expanding their existing program to cover Chugiak and Eagle River, a significant population will be better protected.

4. State Fire Marshal: Require plan review of structural design prior to granting building permit

The building code recommends that the building official reviews plans for conformance with provisions of the code. Currently the State Fire Marshal reviews a portion of a design for code conformance, however this does not include a verification that the structural engineering meets seismic requirements.

5. State Fire Marshal: Limited adoption of the residential building code and permitting.

Require building permitting for residential construction in limited circumstances such as when the project is a) in a designated high-seismic zone and b) being completed by a commercial builder intending to sell the property within three years.

These suggested limits would hold accountable commercial builders who may not have a long-term interest in the quality of the construction while sparing owner-builders and remote cabins from additional burden.

6. Obtain FEMA BRIC Grants for Building Code Enforcement

With the 2018 passage of the Disaster Recovery Reform Act (DRRA), FEMA has increased powers to support pre-disaster mitigation activities. This includes grant supporting the establishment and enforcement of building codes along with education programs.

These grants can be used at the state or local level to support implementation of the activities recommended above.