AO 2020-85: Adoption of Updated Building Safety Codes

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CODES BEING ADOPTED BY REFERENCE
NATIONAL CODE DEVELOPMENT
AUTHORITIES/ACCREDIDATIONS/ENDORSEMENTS

• INTERNATIONAL CODE COUNCIL
• INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS
• NATIONAL FIRE PROTECTION ASSOCIATION
• AMERICAN SOCIETY OF MECHANICAL ENGINEERS
• AMERICAN NATIONAL STANDARDS INSTITUTE
• PLUMBING-HEATING-COOLING CONTRACTORS ASSOCIATION
ICC CODE DEVELOPMENT PROCESS

• ICC does not follow the ANSI code development process.
• The ICC Code Development Process:
  • Open to everyone. Anyone can propose a code change.
  • No cost to participate. Can participate online.
  • Broad cross section of interests represented.
  • Code development committees evaluate proposed changes and make recommendations.
  • Recommendations are subject to public comment and council-wide vote.
  • Governmental members cast final votes approving/disapproving proposed changes.
  • 3 year process involving thousands of participants.
LOCAL CODE ADOPTION COMMITTEES

• Purpose: Review changes to national codes. Identify unique local conditions warranting deviations from national codes to achieve safety goals.
• See Exhibit A in the ordinance package for list of participants.
• 8 code committees with over 100 participants.
• Primarily private sector individuals having experience in architecture, engineering and construction providing 1000s of hours of work effort.
• Also includes municipal plan review engineers and inspectors.
• Each committee was chaired by a member of the building board.
• The review process took more than a year to complete.
BUILDING BOARD APPROVAL

• Once the code committee process was complete, staff assembled the proposed changes.

• The final document was submitted to MOA legal for review.

• The version edited by legal was then submitted to the building board for approval over meetings in June and July of 2020.
  • June meeting carried over for additional committee review of final version
  • Both meetings advertised on MOA Boards/Commissions and DSD websites
WHY IT MATTERS

• PURPOSE: Safeguard the public health, safety & general welfare of building occupants.

• OWNER SAVINGS:
  • Building Code Enforcement Grading System (relook in 2021):
    • Commercial 3 Rating: 10% discount on property damage/loss insurance
    • Residential Unrated: Homeowners of post-2012 homes do not get comparable discount
  • Earthquake Damage: 5x higher outside BSSA for analogous inventory
  • FEMA: Every $1 invested in complying with 2018 code saves $11
CHANGES ENHANCING SAFETY AND WELFARE

• IRC Section R302.13 Fire protection of floors.
• Home occupant and fire fighter safety issue new to the 2012 IRC.
• Requirement is currently in effect and is not proposed to be deleted in this ordinance.
• Intended to allow sufficient time for occupant evacuation during fire.
• Intended to allow sufficient time for fire fighter search/rescue operation.
• IRC committee approved an amendment that would have defeated the purpose of the code provision.
• The Administration did not bring the amendment forward.
CHANGES ENHANCING SAFETY AND WELFARE

• IRC Section R302.13 Fire protection of floors.
CHANGES ENHANCING SAFETY AND WELFARE

• Required Fire Protection Water Supply (IFC 23.45.507.1)
  • IFC requires a minimum supply of fire suppression water for all buildings.
  • Minimum flow rate of 1000 gallons per minute for homes, more for commercial.
  • Intent of amendment is to allow construction to continue in areas of the MOA not served by a water utility.
  • Amendment creates 8 Exceptions:
    • Detached one- and two-family dwellings protected by a fire sprinkler system.
    • Accessory structures to the dwelling unit 3,000 sq.ft or less.
    • Group U occupancies 3,000 sq.ft. or less.
    • Group U occupancies in excess of 3,000 sq.ft. protected by a fire sprinkler system.
    • 4 other exceptions for properties protected by fire sprinkler systems.
CHANGES ENHANCING SAFETY AND WELFARE

• **Required Fire Protection Water Supply (IFC 23.45.507.1) cont.**
  • Fires on the hillside are more difficult and time-consuming to suppress because fire fighting water must be hauled by truck.
  • The big scare is fire spreading to the wildland fuel on a windy day where it could quickly spread out of control.
  • Since fire sprinkler systems effectively control the spread of fire within the structure, they significantly reduce the chance of fire spreading to wildland fuel.
CHANGES ENHANCING SAFETY AND WELFARE

• Assisted Living/Custodial Care Facility Fire Sprinkler Monitoring (IFC 23.45.903.4 and 23.45.907.6.6)
  • Requires 3rd party monitoring of fire sprinkler system in one- and two- family homes that operate as assisted living or custodial care facility.
  • Purpose: Expedites arrival of the fire department to assist with evacuation.
  • Typically 1 to 2 caregivers in an assisted living home caring for up to 5 non-ambulatory residents results in an impractical evacuation time.
CHANGES ENHANCING SAFETY AND WELFARE

• Fire alarm and fire sprinkler system monitoring (IFC 23.45.1103.11)
  • Retroactive requirement for existing fire alarm and fire sprinkler systems to be monitored by a third party.
    • Group I and R occupancies to comply by January 1, 2023
    • All other occupancies to comply by January 1, 2025
    • Affects fire alarm systems typically installed before adoption of the 2000 IFC on 1/28/2003
    • Affects fire sprinkler systems of less than 100 sprinkler heads typically installed before adoption of the 2000 IFC on 1/28/2003
    • Public expects the fire department to automatically show up when a fire system activates.
    • Notifies third party in a trouble condition, such as closing an important valve or taking the system offline.
    • Monitored systems are more likely to perform in an emergency.
CHANGES ENHANCING SAFETY AND WELFARE

• Custodial Care/Assisted Living Homes – Fire Sprinklers (IFC 23.45.1103.12)
  • Retroactive requirement to install fire sprinkler system in an existing facility
    • Highly at-risk population, slow or unable to evacuate during a fire.
    • Residents age in place, come in ambulatory and over time become non-ambulatory. Lack of care providers to assist in an emergency.
    • 317 assisted living homes caring for 3 to 5 residents
      • 239 un-sprinklered
      • 78 with fire sprinkler systems
    • Full write-off tax in 1-year incentives. IRS Tax Code section 179 of tax reform legislation PL11597

• Already required for new Assisted Living facilities
CHANGES ENHANCING SAFETY AND WELFARE

• 23.65.302.7-International Existing Building Code
  • Amend section 302.7 to require equipment no longer in use suspended over occupied space shall be removed.
  • Earthquake lesson learned (repeatedly)
• 23.85.Table R302.1(1) Exterior walls.
  • Under the "Projections" row and “Minimum Fire Separation Distance” column, replace 5 feet with 3 feet (two occurrences).

• This local amendment reduces the minimum required fire separation distance between a home and property lines from 5 feet to 3 feet. The purpose of fire separation distance is to reduce the spread of fire from home to home.
• 23.85.R310.1 Emergency escape and rescue opening required.

Add exception #3 as follows:

3. Where windows are provided as a means of escape or rescue in a basement, the sill height shall be measured from the finished floor to the bottom of the clear opening and shall be no more than 48 inches above the finished floor.

This amendment changes the maximum opening height from 44 inches to 48 inches.
RETAINED LOCAL AMENDMENTS REDUCING BUILDING SAFETY & RESILIENCY

23.85.R311.7.7 Stairway walking surface.
   Add the following sentence to the end paragraph:
   Exterior landings at grade can slope up to 5% in either direction.

Created for ease of construction.
RETAI * ENG LOCAL AMENDMENTS REDUCING BUILDING SAFETY & RESILIENCY

23.85.R313 Automatic fire sprinkler systems.

Delete the text in section R313 and replace with the following:

The installation of a fire sprinkler system requires a fire systems permit in accordance with the International Fire Code.

This amendment deletes the requirement for fire sprinkler systems in new homes.
23.85.R313 Automatic fire sprinkler systems.

NIST & USFA

Fatality rate is 87% lower in sprinklered properties

~NEPA
RETAINED LOCAL AMENDMENTS REDUCING BUILDING SAFETY & RESILIENCY

23.85.R703.2 Water-resistive barrier.

Amend the first sentence by starting the sentence with:

"Though not required by the Municipality of Anchorage, when installed or when required by the exterior wall covering manufacturer, apply…".

This amendment deletes the code requirement for a water resistive barrier (like Tyvek) under siding.
23.85.R703.4 Flashing.

Renumber item 1.3 to 1.4 and add 1.3 as follows:

1.3. Where flashing cannot be installed per one of the above referenced methods, the exterior opening shall be caulked and sealed with exterior grade, paintable caulk, a minimum of a 3/8-inch bead.

Simplifies construction.
23.85.R802.12 Wood frame roof attachment at eave - blocking.

OPTION 5

For prescriptively braced wall panels and engineered shear wall designs for one- and two-family dwellings and townhomes, this configuration, as described in R602.10.8.2.2, may be used.
RETAINED LOCAL AMENDMENTS REDUCING BUILDING SAFETY & RESILIENCY

23.85.R905.2.8.5 Drip edge.

Add the following exception:

Exception: A 1x drip edge installed at the top of the fascia shall be permitted where the roof shingles overhang the 1x at least 1-inch.

• Reduces the cost of construction.
23.85.R301.2.1.1 Wind limitations and wind design required.

   Under exceptions add exception 4: 4. Accessory structures 600 square feet or less, consisting of one-story.

This allows one to build prescriptively (versus engineered) a 600 sqft one story building in areas where the design wind speed exceeds 130.

Add the following sentence to the end of the paragraph:
This requirement only applies to exposed glue-laminated timbers in section R317.1.5 and AWW foundation walls.

This amendment allows the builder to not have to paint preservative on all treated wood cuts, like a deck, all end cuts and holes would have to be painted.
RETAINED LOCAL AMENDMENTS REDUCING BUILDING SAFETY & RESILIENCY

23.85.Table R403.1 - Footing depths.

(3) Exterior landings, that are not the primary entrance, and not attached to the building, and not larger than 50 sqft and not greater than 72 inches above grade may be supported on near surface pier blocks founded on adequate soils. Bearing materials shall meet the other provisions of this code. The potential for and the effects of frost heave shall be considered.

Deletes the requirement for a foundation to extend below the frost depth.
Administrative Code Changes

- Lookback for fines reduced to five years
- Cash bonds for temporary structures eliminated
- Audit function created for exempt plan reviews to increase BCEGS residential rating to enable insurance reductions
LOOKING TO THE FUTURE:

• Adopts an energy code, but less stringent than AHFC
• Requires E-vehicle charging rough in for residential garage construction
CONCLUSION

• AO 2020-85 is a culmination of a multi-year effort by the building community involving thousands of participants nationwide
• Occurs once every six years (hopefully)
• Assures reasonable balance between occupant safety and feasibility
• Maintains BCEGS score and associated insurance cost savings
• Some Building Board members are here to offer a few words