

Summary of Fort Collins Revisions to IRC Appendix F Regarding Radon-Resistant New Construction

Fort Collins City Council has adopted Appendix F of the International Residential Code with local amendments. As of January 1, 2005, all new single- and two-family dwellings must include a passive radon reduction system.

This page summarizes the substantive differences between the Fort Collins version of Appendix F and the 2003 IRC version. For more details, please see the section numbers indicated, which refer to the Fort Collins version.

1. **Scope.** The title and scope were rewritten to clarify that the appendix applies only to one- and two-family dwellings [AF101]. Definitions were added for townhouses and single- and two-family detached dwelling units [AF102].
2. **Soil-gas retarder.** Defined as 3-mil, cross-linked polyethylene or equivalent, instead of 6-mil polyethylene [AF102]. A soil gas retarder is not required for a sub-slab depressurization system -- the caulked slab provides the barrier to soil gas entry [AF103.5].
3. **Sub-floor preparation alternatives.** Two more options have been added:
 - foundation drain pipe system of perforated pipe surrounded by filler material to prevent blocking the perforations, and
 - soil-gas-mat collection system placed directly on the sub-grade.Buildings with interior footings/barriers that separate sub-grade areas are allowed to have penetrations through the barrier in lieu of separate vent pipes for each section [AF103.2].
4. **Sub-membrane depressurization system.** The section was revised to include not only crawl spaces but also spaces under interior structural floors. It recognizes that under-floor ventilation for moisture control that complies with IRC Section R408 is equivalent to a radon reduction system. [AF103.4]
5. **Discharge screen.** Discharge end of the vent pipe must be protected from small animal entry with a screen [AF103.5.1]
6. **Notification to homeowner.** Using a conspicuous label near the vent pipe, the homeowner must be notified that the radon system: is a passive system, was not required to be tested during construction, should be tested by the homeowner, and may be made active by the homeowner [AF103.8]
7. **Provisions for future fan installation.** Added more specifics, e.g., provide adequate, permanent space outside the conditioned envelope that is accessible for maintenance. [AF103.11]
8. **System activation.** New section gives requirements for optional fan activation: in-line fan with adequate air-flow rating, designed to operate for at least five years; manometer or other warning device is required within the living space. A separate permit is required if installed after Certificate of Occupancy. [AF103.12]