

STATE BUILDING CODE INTERPRETATION NO. I-52-99

December 3, 1999

The following is offered in response to your letter in which you request an interpretation of contradictory information contained in the State Building Code and the State Fire Safety Code.

Specifically, your question deals with Section 606.2.1 of the 1996 International Mechanical Code (IMC) which requires smoke detectors in the return duct of air handlers moving 2000 CFM or more, and NFPA 90A, which is not referenced by the State Building Code but is referenced by the State Fire Safety Code, which requires smoke detectors in the supply duct of such air handlers.

The philosophies of the two documents are diametrically opposed to one another. The IMC requires the detector in the return portion upstream of any filter, decontamination equipment or connection which might dilute the concentration of smoke. The rationale is to detect the smoke at its most concentrated level, thereby producing the quickest response of the detector. NFPA 90A specifically requires the detector downstream of any filters and, in the appendix, states that the intent of the detector is to prevent the spread of smoke through the supply duct system.

In view of the fact that these differing requirements are found in two codes which have equal standing in the State of Connecticut, nothing short of a code change can resolve the situation. Unfortunately, the window of opportunity to introduce this into the 2000 Errata to the State Building Code and/or State Fire Safety Code has closed. A code change could be introduced during the next code adoption cycle, assuming this conflict still exists. In the meantime, the only short-term fixes I can offer are: 1) Compliance with both codes by installing detectors in both locations; 2) Relief from the return duct detector requirement is offered by the IMC if the space served is fully protected by area smoke detection; 3) Request for modification from either the State Building Code or the State Fire Safety Code if it can be proven that compliance with both codes is unwarranted or creates a hardship.