

## STATE BUILDING CODE INTERPRETATION NO. I-26-00

April 13, 2000

The following is offered in response to your request for interpretations of Articles 4 and 9 of the BOCA National Building Code/1990 (including the 1992 BOCA Supplement) portion of the 1994 State Building Code (SBC).

**Question 1:** Is plastic pipe permitted in a building of Type 2A, protected, noncombustible construction?

**Answer 1:** Yes. Sections 401.4.3 and 401.4 allow the use of combustible pipe in a noncombustible building without altering the construction classification.

**Question 2a:** Is the installation of plastic pipe above the ceiling membrane permitted in a building of Type 2A construction that incorporates a ceiling that is an integral component of a fire resistance rated floor/ceiling or roof/ceiling assembly if the tested and listed fire resistance rated assembly includes plastic pipe?

**Answer 2a:** Yes, as long as the plastic pipe is installed in accordance with the tested and listed assembly. Section 913.4.2 allows for combustible pipe penetrations of a ceiling that is an integral part of a fire resistance rated floor/ceiling or roof/ceiling assembly as long as all penetrations are installed in accordance with the approved ASTM E119 rated assembly.

**Question 2b:** Is the installation of plastic pipe above the ceiling membrane permitted in a building of Type 2A construction that incorporates a ceiling that is an integral component of a fire resistance rated floor/ceiling or roof/ceiling assembly if the tested and listed fire resistance rated assembly does not include plastic pipe?

**Answer 2b:** The 1992 Supplement to the 1990 BOCA Code referenced above does not provide information regarding combustible penetrations of the ceiling membrane portion of a rated floor/ceiling or roof/ceiling assembly other than that information provided in answer 2a. The 1990 BOCA Code, prior to modification by the 1992 Supplement allowed, at Section 913.4.2, penetrations of such a ceiling where they did not exceed an aggregate area of 100 square inches in any 100 square feet of ceiling area in assemblies tested without penetrations. That section of the code was revised by the 1992 Supplement and that provision was deleted. Section 714.2.6.2 of the BOCA

National Building Code/1996 portion of the 1999 SBC does, however, include provisions for the penetration of the ceiling membrane of a rated assembly by combustible pipe by reference to Sections 714.2.2 or 714.2.3. Section 714.2.2 allows such penetrations when tested in accordance with ASTM E119 (essentially the same requirement as Section 913.4.2 of the 1994 SBC). Section 714.2.3 allows such penetrations when they are protected by a through-penetration system tested in accordance with ASTM E814.

Since your question is based on the requirements of the 1994 SBC, there are two methods by which information from the 1999 SBC could be employed: 1) Section 107.4 of the 1994 SBC could be utilized by the local code official to allow provisions of the 1999 SBC to be used as "alternative materials and equipment", or 2) a modification could be sought from the Office of the State Building Inspector to use the above referenced provisions of the 1999 SBC in place of the requirements of the 1994 SBC.