

## STATE BUILDING CODE INTERPRETATION NO. I-03-08

February 19, 2008

The following is offered in response to your letter to me dated February 12, 2008 in which you request a formal interpretation of the provisions of Section 711.4 of the 2003 International Building Code (IBC) portion of the 2005 State Building Code as it pertains to continuity of horizontal rated elements of wood frame construction.

**Question:** In a building of Type VB construction, at the intersection of a one-hour rated roof/ceiling or floor/ceiling assembly and a one-hour rated partition with a single 2x4 top plate, is it code compliant to interrupt the membrane of the ceiling to attach the top plate directly to the bottom of the floor joists?

**Answer:** No. The code path leads us from Section 711.4 to Section 712.4.2 and then to Section 712.4.1.1, which only permits penetrations as tested in an approved assembly. To my knowledge there has been no accepted testing of a single 2x4 top plate as an approved penetration to the membrane of a one-hour rated horizontal assembly. That having been said, this office has, in the past, approved requests for modification of the provisions of Section 711.4 to allow a single top plate (nominal 2" thickness) within a symmetrical one-hour rated wall or a double top plate (both plates nominal 2" thickness each, with staggered joints) in a wall with a 15 minute thermal barrier on each side, as alternative compliance to the code-required continuity of the ceiling membrane. The local building official may feel comfortable using this knowledge to apply the provisions of Section 104.11 of the IBC to approve this scenario at the local level. If not, relief should be sought through the modification process.