

March 27, 2006

Building Official

Dear Sir:

The Texas Board of Professional Engineers (Board) received a request in February 2005 to issue an advisory opinion regarding the engineering aspects of indoor antenna systems and the requirement for professional engineers to design these systems. Indoor antenna systems are installed by vendors to enhance the use of wireless devices inside of buildings and to allow cell phone access to cell towers in signal-challenged environments. These systems consist of coax cable networks connected to passive and sometimes active components to route and amplify the signals from wireless devices.

The Policy Advisory Opinion Committee has declined to issue a policy advisory. In the opinion of the committee, the issues raised by the stakeholders are best addressed by building code compliance. The Board would like to forward the following issues raised by our stakeholders to your department:

- 1) Ensure that cables routed in plenum spaces have plenum rated insulation.
- 2) Ensure that all penetrations to fire rated walls be properly sealed.
- 3) Ensure that all external antennas follow National Electric Code procedures for grounding and lightning protection.

Since these systems are installed during new construction and are also installed in existing buildings, the stakeholders recommended that permits be required for these installations to verify compliance with your local codes.

Please do not hesitate to contact the Board if you have questions or concerns.

Sincerely

Dale Beebe-Farrow P.E.  
Executive Director  
Texas Board of Professional Engineers