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Aurora, CO:

Aurora City Code, Sec. 22-147. Public safety in-building radio coverage.

Section 421 of the IBC adopted in section 22-131 is hereby created to read as follows:

(1) General. No person shall erect, construct, change the use of, remodel, or provide additions to any building or structure, or any part thereof, or cause the same to be done which fails to support adequate in-building radio coverage for the City of Aurora Public Safety Communications System. Prior to issuance of a certificate of occupancy, a final acceptance test must be completed to ensure adequate in-building radio coverage. This amendment does not apply to one and two-family residential structures. The legal occupancy of any structure existing on the date of adoption of this amendment shall be permitted to continue without change.

(2) These provisions apply to:

New buildings and structures greater than 50,000 square feet or additions to an existing structure which cause the building to be greater than 50,000 square feet. (For purposes of this section, area separation walls cannot be used to define separate buildings).

All basements over 10,000 square feet where the design occupant load is greater than 50, regardless of the occupancy.

Any building that creates a "special hazard" for emergency services in-building radio communications due to design characteristics or materials. The fire chief or his/her designee will determine whether or not a "special hazard" exists.

(3) Needs determination. At the proposed site for new construction or existing structures altered by proposed construction covered by subsection (2) of this section, a needs determination of signal strengths shall be conducted. The property owner shall measure or have measured the signal strength of the city's 800 MHz control channel.

a. If the signal strength of the control channel is -88 DBM or less on the outside of the building, the probability of additional in-building coverage is high.

b. If the signal strength of the control channel is greater than -88 DBM, the expected signal strength of the control channel shall be determined by subtracting the sum of the interior losses due to walls, doors, and windows from the ambient signal outside the building.

c. If a signal strength of -88 DBM or greater is calculated at the innermost point of the building, an in-building system may not be required, depending upon the results of the final acceptance test.

(4) Non-complying structures. Buildings and structures which cannot support the required level of radio coverage shall be equipped with either radiating cable system or internal multiple antenna system (with or without bi-directional 800 MHz amplifiers) in order to achieve the required in-building radio coverage.

If any part of this installed system or systems contains an electrically powered component, the system must be capable of operating on an independent battery and/or generator system for a period of at least 12 hours without external power input. Any installed equipment must be FCC type accepted and in compliance with FCC rules and regulations.

(5) Final acceptance test. A minimum signal strength of -88 DBM must be receivable in 90 percent of the area of each floor of the building when an 800 MHz radio signal is transmitted from the nearest Aurora Public Safety Radio Communications System Site. Minimum signal strength of -88 DBM must be received at the nearest Aurora Public Safety Radio Communications Site when an 800 MHz radio signal is transmitted from 90 percent of the area of each floor of the building.

The 800 MHz frequency range must be able to be received and transmitted within 90 percent of the structure 95 percent of the time.

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(6) Testing procedures. Where in-building radio coverage is required, and upon completion of installation, it will be the owner's responsibility to have the radio system tested to ensure that two-way coverage on each floor of the building is a minimum of 90 percent.

Each floor of the building shall be divided into a grid of approximately 20 equal areas. A maximum of two nonadjacent areas will be allowed to fail the test. In the event that three of the areas fail the test, in order to be more statistically accurate, the floor may be divided into 40 equal areas. A maximum of four nonadjacent areas will be allowed to fail the test.

The City of Aurora Information Technology Department, or designee, will conduct all final acceptance testing.

(7) Annual tests. The City of Aurora Fire Department, using standard portable radios used by public safety personnel in the City of Aurora, will conduct annual tests to verify compliance with this section of the code. If it is determined that a structure is not in compliance, the owner is required to comply with this section within 180 days of receiving written notification from the city. Noncompliance after notification may result in a summons and complaint being issued, with the applicable penalties as set forth in section 1-13 of the Aurora City Code. Each day of continued violation shall constitute a separate violation. (Ord. No. 2006-78, § 1(Ex. A), 1-8-2007)



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