

West Whiteland Township, PA

§2709.0. Communications Amplification Systems.

§2709.1. Definitions. The following words and terms shall, for the purposes of this Section and as used elsewhere in this Code, have the meanings shown herein:

APCO - Associates Public Safety Communications Officials International.

CCDES - Chester County Department of Emergency Services.

FCC - Federal Communications Commission.

NABER - National Association of Business and Education Radio.

NPSPAC - National Public Safety Planning Advisory Committee.

PCIA - Personal Communications Industry.

§2709.2. General Provisions.

Except as otherwise provided, no person shall erect, construct, alter, refit, change the use of or provide an addition of more than twenty (20) percent of the existing floor area to any building or structure or a part thereof or cause the same to be done, which fails to support adequate radio coverage for CCDES, the West Whiteland Township Fire Department and the West Whiteland Township Police Department.

For the purposes of this Section, adequate radio coverage shall include all of the following:

(1) A minimum signal strength of -95dBm available in ninety (90%) percent of the area of each floor of the building when transmitted from the closest CCDES radio communications system site.

(2) A minimum signal strength of -95dBm received at the closest CCDES radio communications site when transmitted from ninety (90) percent of the area of each floor of the building.

(3) The frequency range which must be supported shall be between 821.0125 MHz and 868.6095 MHz.

(4) A ninety (90) percent reliability factor.

(5) Signal strength measurements, for the purpose of measuring the performance of a bi-directional amplifier, shall be based on one (1) input signal adequate to obtain a maximum continuous operating output level. The provisions of this Section shall become applicable upon notification to the property owner that unacceptable levels exist. The property owner shall have ninety (90) days from date of notification to enhance radio coverage and bring it within the acceptable limits of these provisions.

§2709.3. Amplification Systems Allowed.

Buildings and structures which cannot support the required level of radio coverage shall be equipped with either a radiating cable system or an internal multiple antenna system with or without FCC type accepted bi-directional 800 MHz amplifiers as needed. If any part of the installed system or systems contains an electrically powered component, the system shall be capable of operating on an independent battery and/or generator system for a period of at least twelve (12) hours without external power input. The battery system shall charge in the presence of an external power input.

If used, bi-directional amplifiers shall include filters to reduce adjacent frequency interference at 35dB below the NPSPAC band. Settings used should not attenuate the NPSPAC frequencies and further provided that they are not more than one (1) MHz from the NSPAC frequencies.

§2709.4. Testing Procedures.

§2709.4.1. Acceptance Test Procedure.

When an in-building radio system is required, and upon completion of installation, it will be the building 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 ninety (90) percent.

Each floor of the building shall be divided into a grid of approximately twenty (20) equal areas. A maximum of two (2) nonadjacent areas will be allowed to fail the test. In the event that three (3) of the areas fail the test, in order to be more statistically accurate, the floor may be divided into forty (40) equal areas. In such event, a maximum of four (4) nonadjacent areas will be allowed to fail the test. After the forty (40) area test, if the system continues to fail, the building owner shall have the system altered to meet the ninety (90) percent coverage requirement.

The test shall be conducted using the most current E.F. Johnson portable radio, or its equivalent, available to the West Whiteland Township Police and/or Fire Department, talking through the CCDES as specified by the authority having jurisdiction. A spot located approximately in the center of a grid area will be selected for the test, then the radio will be keyed to verify two-way communications to and from the outside of the building through the CCDES. Once the spot has been selected, prospecting for a better spot within the grid area will not be permitted.

The gain values of all amplifiers shall be measured and the test measurement results shall be kept on file with the building owner so that the measurements can be verified each year during the annual tests. In the event that the measurements results became lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.

§2709.4.2. Annual Tests.

When an in-building radio system is required, the building owner shall test all active components of the system including, but not limited to, amplifiers, power supplies and backup batteries, a minimum of once every twelve (12) months. Amplifiers shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance. Backup batteries and power supplies shall be tested under load for a period of one (1) hour to verify that they will properly operate during an actual power outage. If within the one (1) hour test period, in the opinion of the testing technician, the battery exhibits symptoms of failure, the test shall be extended for additional one (1) hour periods until the testing technician confirms the integrity of the battery. All other active components shall be checked to determine that they are operating within the manufacturer's specifications for the intended purposes.

§2709.4.3. Five Year Tests.

In addition to the annual test, the building owner shall perform a radio coverage test a minimum of once every five (5) years to ensure that the radio system continues to meet the requirements of the original acceptance test. The procedure set forth above shall apply to such tests. A copy of accepted tests shall be provided to the Chester County Emergency Services Engineering Department.

§2709.4.4. Qualifications of Testing Personnel.

All tests shall be conducted, documented and signed by a person in possession of a current FCC technical license or a current technician certification issued by the APCO, NABER or the PCIA. All test records shall be retained on the inspected premises by the building owner and a copy submitted to officials of the West Whiteland Fire Company and the West Whiteland Police Department.

§2709.5. Field Testing. Police and fire personnel, after providing reasonable notice to the owner or his representative, shall have the right to enter onto the property to conduct field testing to be certain that the required level of radio coverage is present.

§2709.6. Exemptions. This Section shall not apply to structures in Use Groups R-3 and R-4, any building constructed of wood frame, any building thirty-five (35) feet high or less, as long as none of the aforementioned buildings make use of any metal construction or any underground storage or parking areas. For purposes of this Section, parking structures and stairwells are included in the definition of "building" and stair shafts are included in the definition of "all parts of a building" but elevators may be excluded.

§2709.7. Existing Buildings and Structures. Any nonexempt building or structure existing, under construction or for which a building permit application is pending or has been approved as of the effective date of this Section, shall comply with the requirements of this Section if the CCDES, West Whiteland Fire Department or West Whiteland Police Department determines that adequate radio coverage

as defined in §2709.2 does not exist in the building or structure. The owner of the building or structure shall be notified, in writing, of the inadequacy of the coverage and shall have a period of ninety (90) consecutive calendar days from the date of the notice to comply with this Section including, but not limited to, enhancing radio coverage and bringing it within the acceptable limits of this Section.