

City of Tempe Arizona

City Code: Chapter 9 CIVIL DEFENSE AND EMERGENCY SERVICES

ARTICLE II. PUBLIC SAFETY RADIO AMPLIFICATION SYSTEM

Sec. 9-21. Purpose.

The purpose of this article is to provide minimum standards to insure a reasonable degree of reliability for emergency services communications from within certain buildings and structures within the city to and from emergency communications centers. It is the responsibility of the emergency service provider to get the signal to and from the building site.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-22. Applicability.

This article applies to new construction permits issued after the effective date of this article.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-23. Scope.

The provisions of this article shall apply to:

- (1) New buildings greater than fifty thousand (50,000) square feet;
- (2) Existing buildings over fifty thousand (50,000) square feet when modifications, alterations or repairs exceed fifty percent (50%) of the value of the existing building(s) and are made within any twelve (12) month period or the usable floor area is expanded or enlarged by more than fifty percent (50%); and
- (3) All basements where the occupant load is greater than fifty (50), regardless of the occupancy, or sub-level parking structures over ten thousand (10,000) square feet.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-24. Radio coverage.

(a) Except as otherwise provided in this article, no person shall erect, construct or modify any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for firefighters and police officers.

(b) The city's telecommunications unit with consideration of the appropriate police, fire and emergency medical department services shall determine the frequency range or ranges that must be supported.

(c) For the purpose of this section, adequate radio coverage shall constitute a successful communications test between the equipment in the building and the communications centers for all appropriate emergency service providers for the building.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-25. Inbound into the building.

(a) A minimum average in-building field strength of one micro-volts (-107dbm) for analog and five (5) micro-volts (-93dbm) for digital systems throughout eighty-five percent (85%) of the area of each floor of the building when transmitted from the city's police dispatch center and the appropriate emergency service dispatch centers which are providing fire and emergency medical protection services to the building.

(b) If the field strength outside the building where the receive antenna system for the in-building system is located is less than -107dbm for analog, or -93dbm for digital systems, then the minimum required in-building field strength shall equal the field strength being delivered to the receive antenna of the building.

(c) As used in this article, eighty-five percent (85%) coverage or reliability means the radio will transmit eighty-five percent (85%) of the time at the field strength and levels as defined in this article.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-26. Outbound from the building.

A minimum average signal strength of one micro-volts (-107dbm) for analog and five (5) micro-volts (-93dbm) for digital systems as received by the city's police dispatch center and the appropriate emergency service dispatch centers which are providing fire and emergency medical protection services to the building.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-27. FCC authorization.

If amplification is used in the system, all FCC authorizations must be obtained prior to use of the system. A copy of these authorizations shall be provided to the city's telecommunications unit supervisor.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-28. Enhanced amplifications systems.

(a) Where buildings and structures are required to provide amenities to achieve adequate signal strength, they shall be equipped with any of the following to achieve the required adequate radio coverage; radiating cable system(s), internal multiple antenna system(s) with a frequency range as established in § 9-24(b) with amplification system(s) as needed, voting receiver system(s) as needed, or any other city approved system(s).

(b) If any part of the installed system or systems contains an electrically powered component, the system shall be capable of operation of an independent battery or generator system for a period of at least eight (8) hours without external power input or maintenance. The battery system shall automatically charge in the presence of external power.

(c) Amplification equipment must have adequate environmental controls to meet the heating, ventilation, cooling and humidity requirements of the equipment that will be utilized to meet the requirements of this code. The area where the amplification equipment is located also must be free of hazardous materials such as fuels, asbestos, etc. The location of the amplification equipment must be in an area that has twenty-four (24) hour, seven (7) day a week access for the city's telecommunications personnel. All communications equipment including amplification systems, cable and antenna systems shall be grounded with a single point ground system of five (5) ohms or less. The ground system must include an internal tie point within three (3) feet of the amplification equipment. System transient suppression for the telephone circuits, ac power, radio frequency (RF) cabling and grounding protection are required as needed.

(d) The following information shall be provided to a telecommunications unit representative by builder:

(1) A blueprint showing the location of the amplification equipment and associated antenna systems which includes a view showing building access to the equipment; and

(2) Schematic drawings of the electrical, backup power, antenna system and any other associated equipment relative to the amplification equipment including panel locations and labeling.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-29. Testing procedures - method to conduct tests.

(a) Tests shall be made using frequencies close to the frequencies used by the police and appropriate emergency services. If testing is done on the actual frequencies, then this testing must be coordinated within the city's telecommunications unit. All testing must be done on frequencies authorized by the FCC. A valid FCC license will be required if testing is done on frequencies different from the police, fire or emergency medical frequencies.

(b) Measurements shall be made using the following guidelines:

(1) With a service monitor using a unity gain antenna on a small ground plane;

(2) Measurements shall be made with the antenna held in a vertical position at three (3) to four (4) feet above the floor;

(3) A calibrated service monitor (with a factory calibration dated within twenty-four (24) months) may be used to do the test;

(4) The telecommunications unit representative for the city may also make simultaneous measurements to verify that the equipment is making accurate measurements. A variance of 3db between the instruments will be allowed; and

(5) If measurements in one location are varying, then average measurements be used.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-30. Initial tests.

(a) All testing shall be done in the presence of a telecommunications unit representative or by the city's telecommunications unit at no expense to the city or appropriate emergency services department.

(b) Signal strength, both inbound and outbound as defined above, shall be measured on each and every floor above and below ground including stairwells, basements, penthouse facilities and parking areas of the structure. The structure shall be divided into fifty (50) foot grids and the measurements shall be taken at the center of each grid. In critical areas (police substations and fire command posts) the grids shall be subdivided into four (4) twenty-five (25) foot grids in place of each fifty (50) foot grid.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-31. Annual tests.

Annual tests will be conducted by the city's telecommunications unit or appropriate emergency services department. If communications appear to have degraded or if the tests fail to demonstrate adequate system performance, the owner of the building or structure is required to remedy the problem and restore the system in a manner consistent with the original approval criteria. The re-testing will be done at no expense to the city or the appropriate emergency services departments as required in the original testing procedures.

(Ord. No. 2001.25, 9-13-01)

Sec. 9-32. Civil penalty.

Any violation of the provisions of this article is punishable as set forth in § 1-7 of the city code. Each individual day of operation in violation of this article shall be a separate violation.

(Ord. No. 2001.25, 9-13-01)

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City of Tempe Codes

Sec. 1-7. General penalty; civil penalties; fees and collection; continuing violations.

(a) Whenever in this code, or in any ordinance of the city or in any order, rule or regulation issued or promulgated pursuant thereto, any act is prohibited or is made or declared to be unlawful or an offense or a misdemeanor, or the doing of any act is required or the failure to do any act is declared to be unlawful or an offense or a misdemeanor, where no specific penalty is provided therefor, the violation of any such provision of this code or other ordinance of the city or such

order, rule or regulation shall be punished by a fine not exceeding two thousand five hundred dollars (\$2,500) plus applicable surcharges, or imprisonment for a term not exceeding six (6) months, or by both such fine and imprisonment.

(b) Any person violating any of the provisions of this code which are designated as subject to civil sanction or penalty shall be punished by imposition of a civil sanction not to exceed five hundred dollars (\$500.00), unless another penalty is specified.

(c) In addition to any civil sanction imposed, the city court shall assess a default fee of not less than fifty dollars (\$50.00) for:

(1) Each default judgment entered upon a failure of the defendant to appear for any civil violation, or for any civil traffic violation, unless such default judgment is set aside under Rule 28 of the Rules of Procedure in Civil Traffic Violation Cases.

(2) A failure to pay any civil sanction imposed by the court.

A judge or hearing officer may waive all or part of the default fee if the payment of the fee would cause a financial hardship to the defendant.

(d) If the court refers any delinquent fines, fees, sanctions, penalties or restitution for collection, any collection or attorney costs are recoverable from the defendant and may be added to any balance due from the defendant to the court.

(e) In the discretion of the sentencing judge or magistrate, persons convicted of any violation of this code, or any ordinance of the city or any order, rule or regulation promulgated pursuant thereto, may be sentenced to a term of probation not exceeding three (3) years subject to such terms and conditions, including but not limited to the imposition of a fine or incarceration, or both such fine and incarceration, as the judge or magistrate deems appropriate and in the best interests of justice.

(f) Every day a violation of this code or any ordinance of the city or such order, rule or regulation shall continue shall constitute a separate offense.

(Code 1967, § 1-7; Ord. No. 508.2, 4-12-84; Ord. No. 808.90-01, 2-8-90; Ord. No. 95.11, 4-13-95)