

# City of Mercer Island, Washington

## INTERNATIONAL FIRE CODE – ADOPTION AND AMENDMENTS Effective July 1, 2004

The 2003 edition of the International Fire Code (IFC), as adopted and amended by the State Building Code Council in Chapter 51-54 WAC, as published by the International Code Council, excluding WAC 51-54-0500: Chapter 5, Fire Service Features, is adopted by reference, together with the amendments and additions set forth below.

### **P. IFC Section 511 Added – Emergency Radio Coverage in Buildings.**

Section 511 of the International Fire Code is hereby added to read as follows:

#### **Section 511 Emergency Radio Coverage in Buildings.**

**511.1 Building radio coverage.** Except as otherwise provided, no person shall maintain, own, erect, or construct any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for City emergency services workers, including but not limited to firefighters and police officers.

#### **Exceptions:**

1. This section shall not apply to single family residential buildings; any building constructed of wood frame; or any building thirty-five (35) feet high or less, as long as none of the aforementioned buildings make primary use of metal or concrete construction or contain below grade storage or parking areas. For purposes of this section, parking structures 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.

2. Buildings constructed prior to the implementation of this section shall not be required to comply with public safety radio coverage provisions of this section. However, should exempted structures undergo renovation, restoration, or significant alteration to the original structure, exemption from the provisions of this requirement shall not apply.

**511.1.1 Adequate radio coverage.** A minimum signal strength of three (3) micro volts shall be available in all areas of the building when transmitted from the Regional 800 MHz. Radio System. For purposes of this section, 90 percent building coverage is considered to be all areas of the building.

**511.1.2 Minimum signal strength.** A minimum signal strength of one-half (0.5) micro volts shall be received by the Regional 800 MHz. Radio System when transmitted from any area of the building.

**511.1.3 Frequency range.** The frequency range which must be supported shall be 806 MHz. to 824 MHz. and 851 MHz. to 869 MHz. in all areas of the building. Measurements in buildings for the purpose of this ordinance shall be to a portable radio with a half-wave antenna, worn on the belt. The City's Radio System Manager may designate alternate methods of measuring the signal level, which satisfy appropriate levels of public safety grade coverage.

**511.1.4 Annual testing and proof of compliance.** Each owner shall submit at least one field test, or as determined by the Fire Code Official, whenever structural changes occur to the building that would materially change the original field performance tests by a consultant approved by the Fire Code Official. The performance test shall include at a minimum a floor plan and the signal strength in various locations of the building.

**511.2 Annual test.** Each owner shall submit on an annual basis to the Fire Code Official required test data demonstrating that an adequate radio coverage level is available and maintained in all required areas of the building, or that the installed amplification system functions properly. The annual submittal shall ensure that no structural changes have occurred to the building that would materially change the original field tests.

**511.3 Amplification systems allowed.** Buildings and structures which cannot support the required level of radio coverage shall be equipped with a radiating cable system and/or an internal multiple antenna system with FCC-type accepted bi-directional 800 MHz. amplifiers, or systems otherwise approved by the City Radio System Manager in order to achieve the required adequate radio coverage.

The installed system or systems shall be capable of operating on an independent battery system for a period of at least twelve (12) hours without external power input. The battery system shall automatically charge in the presence of external power input.

**511.3.1 Approval prior to installation.** No amplification system capable of operating on frequencies used by the Regional 800 MHz. Radio System shall be installed without prior coordination and approval of the radio system licensee (The Eastside Public Safety Communications Agency) and any such system must meet any standards adopted by the King County Regional Communications Board.

**511.4 Field testing.** Police and Fire Personnel shall at any time have the right to enter onto the property to conduct its own field-testing to be certain that the required level of radio coverage is present.