




TOWNSHIP OF WHITEHALL BUREAU OF PLANNING, ZONING & DEVELOPMENT

MEMORANDUM

TO: CHARLES J. FONZONE, ESQ., SOLICITOR

FROM: LEE A. RACKUS 
BUREAU CHIEF, PLANNING, ZONING & DEVELOPMENT

RE: SIGNAL AMPLIFICATION ORDINANCES

DATE: November 8, 2016

Chuck,

As you will recall, we in Whitehall locally enforce the provisions of the Pennsylvania Uniform Construction Code. As you will further recall, under this State Law, several of the International Codes are adopted, either as a whole or in part. One of the codes adopted is the International Building Code, which by virtue of its' adoption, references other codes.

The area of the code I am concerned with at this time is §915 of the International Building Code, which reads:

915.1 General. Emergency responder radio coverage shall be provided in all new buildings in accordance with Section 510 of the International Fire Code.

Although not adopted in its entirety by the UCC, the International Fire Code Sections referenced are in full force and effect. Section 510 of the International Fire Code is attached to this memorandum for your information, but the first subsection of this section reads as follows:

510.1 Emergency Responder Radio Coverage in Buildings. all building shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

You may further recall that the Township, in 2004, (in advance of the UCC) required testing of all public safety radio systems with the adoption of Ordinance 2477. In 2015 we revised these regulations to comply with the radio coverages as required under the UCC, at which time your office advised that the term “emergency responders” included police, fire *and* ambulance.

It has become apparent to us through our testing agency that while most new construction can comply with the signal amplification requirements of our ordinances (and the PA UCC) with respect to police and fire communications, they *cannot* with respect to ambulance service. Furthermore, our agency has informed us that this is not a township-wide issue but a county issue, as the current signal that these buildings would have to send would have to be to antennae on South Mountain, and is virtually impossible at this time until these antennae are upgraded. To require our property owners to comply with these provisions of the UCC would result in enormous expense, and we are the only municipality at this time requiring this compliance.

I am forwarding this information to you as the solicitor to determine our legal obligations in this matter. Most importantly, I would like your interpretation of the last sentence of Section 510.1 of the IFC which again reads: *“This section shall not require improvement of the existing public safety communication systems”*.

As the existing system in this instance is the County’s, would this provision provide the relief that the ambulance radio coverage needs at this time?

I have attached pertinent copies of the regulations to this memorandum for information and look forward to your response.

/lar

Copy: Edward D. Hozza, Jr. Mayor

Michael Marks, Police Chief

David Nelson, Fire Chief

Dan Bundra, Communications & Utilities Division Chief

Melissa A. Wehr, Zoning Administrator

William E. Landis, TuWay Communications

Christopher Grim, Emergency Management Coordinator

Sarah M. Jolly, Esq.

David Shields, Keycode Inspections

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2. Local signaling service that will cause the sounding of an audible signal at a *constantly attended location*.
3. Locking valves open.
4. Sealing of valves and *approved* weekly recorded inspection where valves are located within fenced enclosures under the control of the owner.

[F] 913.4.1 **Test outlet valve supervision.** Fire pump test outlet valves shall be supervised in the closed position.

[F] 913.5 **Acceptance test.** Acceptance testing shall be done in accordance with the requirements of NFPA 20.

**SECTION 914
EMERGENCY RESPONDER SAFETY FEATURES**

[F] 914.1 **Shaftway markings.** Vertical shafts shall be identified as required by Sections 914.1.1 and 914.1.2.

[F] 914.1.1 **Exterior access to shaftways.** Outside openings accessible to the fire department and that open directly on a hoistway or shaftway communicating between two or more floors in a building shall be plainly marked with the word "SHAFTWAY" in red letters at least 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible from the outside of the building.

[F] 914.1.2 **Interior access to shaftways.** Door or window openings to a hoistway or shaftway from the interior of the building shall be plainly marked with the word "SHAFTWAY" in red letters at least 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible.

Exception: Markings shall not be required on shaftway openings that are readily discernible as openings onto a shaftway by the construction or arrangement.

[F] 914.2 **Equipment room identification.** Fire protection equipment shall be identified in an *approved* manner. Rooms containing controls for air-conditioning systems, sprinkler risers and valves or other fire detection, suppression or control elements shall be identified for the use of the fire department. *Approved* signs required to identify fire protection equipment and equipment location shall be constructed of durable materials, permanently installed and readily visible.

**SECTION 915
EMERGENCY RESPONDER RADIO COVERAGE**

[F] 915.1 **General.** Emergency responder radio coverage shall be provided in all new buildings in accordance with Section 510 of the *International Fire Code*.

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FIRE SERVICE FEATURES

bly constructed in accordance with Section 712 of the *International Building Code*, or both.

508.1.3 Size. The *fire command center* shall be a minimum of 200 square feet (19 m²) in area with a minimum dimension of 10 feet (3048 mm).

508.1.4 Layout approval. A layout of the *fire command center* and all features required by this section to be contained therein shall be submitted for approval prior to installation.

508.1.5 Required features. The *fire command center* shall comply with NFPA 72 and shall contain the following features:

1. The emergency voice/alarm communication system control unit.
2. The fire department communications system.
3. Fire detection and alarm system annunciator.
4. Annunciator unit visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air distribution systems.
6. The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking *stairway* doors simultaneously.
8. Sprinkler valve and water-flow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, *means of egress, fire protection systems, fire-fighting equipment and fire department access, and the location of fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions.*
13. Work table.
14. Generator supervision devices, manual start and transfer features.
15. Public address system, where specifically required by other sections of this code.
16. Elevator fire recall switch in accordance with ASME A17.1.
17. Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.

SECTION 509 FIRE PROTECTION EQUIPMENT IDENTIFICATION AND ACCESS

509.1 Identification. Fire protection equipment shall be identified in an *approved* manner. Rooms containing controls for air-conditioning systems, sprinkler risers and valves, or other fire detection, suppression or control elements shall be identified for the use of the fire department. *Approved* signs required to identify fire protection equipment and equipment location shall be constructed of durable materials, permanently installed and readily visible.

509.2 Equipment access. *Approved* access shall be provided and maintained for all fire protection equipment to permit immediate safe operation and maintenance of such equipment. Storage, trash and other materials or objects shall not be placed or kept in such a manner that would prevent such equipment from being readily accessible.

SECTION 510 EMERGENCY RESPONDER RADIO COVERAGE

510.1 Emergency responder radio coverage in buildings. All buildings shall have *approved* radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

Exceptions:

1. Where *approved* by the building official and the *fire code official*, a wired communication system in accordance with Section 907.2.13.2 shall be permitted to be installed or maintained in lieu of an *approved* radio coverage system.
2. Where it is determined by the *fire code official* that the radio coverage system is not needed.

510.2 Radio signal strength. The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements of Sections 510.2.1 and 510.2.2.

510.2.1 Minimum signal strength into the building. A minimum signal strength of -95 dBm shall be receivable within the building.

510.2.2 Minimum signal strength out of the building. A minimum signal strength of -100 dBm shall be received by the agency's radio system when transmitted from within the building.

510.3 Emergency responder radio coverage in existing buildings. Existing buildings that do not have *approved* radio coverage for emergency responders within the building shall be equipped with such coverage according to one of the following:

1. Wherever existing wired communication system cannot be repaired or is being replaced, or where not *approved* in accordance with Section 510.1, Exception 1.
2. Within a time frame established by the adopting authority.

ARTICLE V
Public Safety Radio Amplification Systems
[Adopted 5-10-2004 by Ord. No. 2477; amended in its entirety 11-9-2015 by Ord.
No. 3031]

§ 10-25. 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 Township Police, Fire and EMS personnel. For purposes of this article, "adequate radio coverage" shall include all of the following:

- A. A minimum signal strength of 95 dBm available in 95% of the area of each floor of the building for two-way portable transmissions when transmitted to the closest Lehigh County Communications System site.
- B. The frequency range to be supported shall be 151.000/162.000.

§ 10-26. Amplification system allowed.

- A. Buildings and structures shall be equipped with any of the following in order to achieve the required adequate radio coverage: a radiating cable system or an internal multiple-antenna system with FCC type accepted bidirectional VHF amplifiers to include Fire, Police and EMS radio networks as needed to encompass Lehigh County
- B. The system shall be capable of operating on an independent battery and/or generator system for a period of at least 12 hours without external power input. The battery system shall automatically charge in the presence of external power input. There shall be no connectivity between the amplification system and fire alarm system. This system shall be designed to operate in conjunction with equipment utilized by the Lehigh County Communications Center and the Whitehall Township Bureau of Police Fire and EMS.
- C. Any bidirectional amplifier unit shall be enclosed in a cabinet with suitable access for servicing the unit. If installed in outdoor or unprotected locations, the cabinet shall be weatherproof stainless steel meeting NEMA standards for weatherproof installations.
- D. The unit shall be installed in a secured environment to prevent tampering. This requirement may be met by the use of a lock on the cabinet or by installing the unit within a secured room. Only authorized radio communications technicians are permitted to make adjustments to these systems.
- E. Township Police, Fire or EMS shall have access to the equipment at all times. A Knox-Box® is required for any building or structure which is required to have radio amplification equipment under this article.
- F. Each signal amplification system shall comply with and be updated to current industry technology standards as adhered to and implemented by Lehigh County, as they may change from time to time.

§ 10-27. Testing procedures.

- A. Acceptance test procedure.
 - (1) New construction.
 - (a) Upon completion of construction of the structure and at such time as the commercial structure shall become fully operational, it will be the building owner's responsibility to have the communication system tested

to ensure that two-way coverage on each floor of the building is a minimum of 95% and shall properly interface with the total county communication design. Said test will be conducted within 30 days of issuance of an occupancy permit. For multitenant buildings, this test shall be conducted within 30 days of the occupancy of 50% of the total building area or at such time as deemed necessary by the Township.

- (b) Each floor of the building shall be divided into a grid of 12 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 24 equal areas. A maximum of four nonadjacent areas will be allowed to fail the test.
 - (c) After the second area test, if the building continues to fail, it will be the building owner's responsibility to have an amplification system installed to meet the coverage requirement of 95%.
 - (d) The test shall be conducted using public safety portable radio, or equivalent portable radio, talking through the Lehigh County Communications System. 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 Lehigh County Communications System. Once the spot has been selected, prospecting for a better spot within the grid area will not be permitted.
 - (e) If the newly constructed and fully operational building fails the test, it will be the building owner's responsibility to bring the building or structure into compliance with this article at the owner's sole expense within 90 days from the date such work is contracted and within 180 days of the date of the determination of noncompliance of the building or structure with this article.
 - (f) 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 measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.
- (2) Existing structures. Upon notification from the Township Police, Fire or EMS personnel, the Township will initiate, at its expense, a radio system test to insure the two-way coverage on each floor of the building is a minimum of 95%. The test shall be conducted using a public safety portable radio, or equivalent portable radio, talking through the Lehigh County Communications System. If the existing building fails the test, the Township will transmit the results of the test to the building owner. It will be the building owner's responsibility to bring the building or structure into compliance with this article at the owner's sole expense within 90 days from the date such work is contracted and within 180 days of the date of the determination of noncompliance of the building or structure with this article.
- B. Annual tests for new construction and existing structures. When an in-building radio system is required, it shall be the building owner's responsibility to have all active

components of the system, such as amplifiers and power supplies and backup batteries, tested to a minimum of once every 12 months. The annual test results shall be supplied to the Township within 18 months next following the original technical certification. Amplifiers shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance. Backup 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 of a period of one hour to verify that they will properly operate during an actual power outage. If within the one-hour test period, and in the opinion of the testing technician, the battery exhibits symptoms of failure, the test shall be extended for additional one-hour periods until the integrity of the battery can be determined. All other active components shall be checked to determine that they are operating within the manufacturer(s) specifications for the intended purpose.

§ 10-28. Qualifications of testing personnel.

Personnel conducting radio system tests shall be qualified to perform the work. All tests shall be documented and signed by a person in possession of a current technician certification. All test records shall be retained on the inspected premises by the building owner and a copy submitted to the Township.

§ 10-29. Administration.

The building owner shall submit to the Township a design for any required amplification system to achieve the required adequate radio coverage. The Township shall transmit to the county the design for review by its technical advisor or his/her designee. Should the design, as submitted, comply with the county design criteria for the building or structure, the county shall issue a conditional approval of the design, as submitted. After installation of the amplification system in the building or structure, the communication interface shall be tested and, if found to be in compliance with the provisions of this article, a technical certificate of compliance shall be issued. The county or its designee and the Township shall each signify their respective approval and consent to the issuance of the technical certificate of compliance. The technical certificate of compliance shall be issued by the Township, provided that all fees exacted therefor are paid in full.

§ 10-30. Exemptions.

This article shall not apply to residential buildings in the use group R-3 pursuant to the Whitehall Township Building Code (the Uniform Construction Code, as amended). Parking structures and stairwells are included in the definition of "building," but elevators may be excluded.

§ 10-31. Violations and penalties.

- A. When any required police, fire and EMS communication enhancement system is installed and becomes inadequate or inoperative thus affecting the safety of a building, structure or the occupants therein, the Township shall order the system, unit or device to be repaired or upgraded as necessary and returned to service within 60 days. It shall be the responsibility of the building owner or occupant to make repairs, alterations or additions to maintain operability of the system.
- B. Any person who violates any provision of this article shall be subject to a fine not to exceed \$1,000, plus costs of prosecution, including attorneys' fees incurred by the

Township; provided, further, that each day's violation of any provision of this article after the expiration of the one-hundred-eighty-day notice of noncompliance period shall constitute a separate offense, and the violation of each section hereof shall constitute a separate offense.

- C. Should any person refuse, neglect or fail to comply with any provision of this article or with any notice given in conformity with or pursuant to the provisions hereof, the Township through its own agents, contractors and/or employees may cause the system, unit or device to be repaired or upgraded as necessary at the owner's sole expense. The cost and expense thereof shall be certified to the Township Solicitor, who shall enter the same as a lien against the property in the Court of Common Pleas and shall proceed to collect the same in like manner as other municipal claims are by law collectible. An action of assumpsit may be brought to recover the same in the name of the Township from the owner.
- D. It has been determined by the Township that the construction and maintenance of any building or structure, or part thereof, that interferes with the Township Police Department and county operational telecommunications networks constitutes a nuisance, per se, because it threatens the health, safety and welfare of the residents and visitors to Whitehall Township. In addition to any other remedies or enforcement procedures provided herein, Whitehall Township may seek an injunction to restrain such a nuisance.
- E. The Mayor or his or her designee is charged with the enforcement of this article.