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SMITHFIELD FIRE DEPARTMENT

"To Help People"

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Two-Way Radio Communication Enhancement System Requirements

The Smithfield Fire Department requires the installation of Two-Way Radio Communication Enhancement Systems per the Rhode Island State Fire Code. This type of in-building radio enhancement system is typically called a Bi-Directional Amplifier (BDA).

The Smithfield Fire Department has accepted a less expensive alternative approach to a BDA called a repeater system. The repeater system is installed on all apparatus and receives two-way radio signals from our portable two-way radios being used inside a building. These repeaters re-broadcast the portable two-way radio signal into the main base station of our radio system.

NFPA 1 – Chapter 11 states:

- 11.10.1 In all new and existing buildings, minimum radio signal strength of fire department communications shall be maintained at a level determined by the AHJ.
- 11.10.2 Where required by the AHJ, two-way radio communication enhancement systems shall comply with NFPA 72.
- 11.10.3 Where a two-way radio communication enhancement system is required and such system, components, or equipment has a negative impact on the normal operations of the facility at which it is installed, the AHJ shall have the authority to accept an automatically activated responder system.

NFPA 72 – National Fire Alarm Code states:

- 24.3.6.8.2 Where a two-way radio communications enhancement system is used in lieu of a two-way in-building wired emergency communications system, the design of the system shall be approved by the authority having jurisdiction.

The method we have selected to enhance our radio communications in commercial buildings is cost effective and useable throughout all, Town of Smithfield, commercial buildings. It does not rely upon an expensive installation of a Two-way Radio Communication Enhancement System in commercial buildings, and assists in alleviating any additional cost to new commercial building projects.

Maintenance and updating of our communications equipment to support this type of system for commercial buildings is the only continued expense, which is assumed by the Town of Smithfield Fire Department. There is no expense to building owners for installation or maintenance.

As of September 1, 2020, all new commercial building projects will be assessed a pre-determined Two-way Radio Communications Enhancement Fee based off the buildings total square footage. All funds received through the above referenced Two-way communication fee will be allocated for purchase and maintenance of the Apparatus Repeater System.

"We will be the most effective and proactive emergency service and disaster mitigation organization to make Smithfield the safest community to live, work and play."