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## BUILDINGS BULLETIN 2015-025

### Technical

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**Supersedes:** Buildings Bulletin 2009-022 dated November 19, 2009

**Issuer:** Thomas Fariello, R.A.  
First Deputy Commissioner

**Issuance Date:** September 9, 2015

**Purpose:** This document clarifies the types of work involving an existing fire alarm system, designed and approved under the, 2008 building code or prior codes, which are subject to the 2014 NYC Construction Codes.

**Related Code Section(s):** AC 28-101.4.3                      BC 907  
BC 901.9    1RCNY 4000-06

**Subject(s):** Fire alarm, ordinary repair; Fire alarm, existing buildings; Fire alarm, alterations

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Work involving an approved fire alarm systems installed pursuant to the 2008 Building Code or prior codes in existing buildings shall comply with the following:

- 1. Work constituting a repair, which is not subject to 2014 sections BC 901.9.2 through 901.9.6.** Repair work pursuant to section BC 901.9.1.1 of the 2014 New York City Building Code ("2014 BC") shall not require a permit however such work shall be performed by a licensed electrician. Repair work pursuant to section BC 901.9.1.1 shall not cause the system's functionality to change from the existing approval. Subject to section BC 901.9.1.1, repair or in kind replacement of devices or repair of control panel or distributed control units (Remote Control Unit (RCU), Terminal Transmission Box (TTB), Data Gathering Panel (DGP), etc.) of an existing fire alarm system, for the purpose of maintaining it in working order, shall constitute a repair and may be installed in the same manner and arrangement as was in the existing system provided the installation is not hazardous and is approved. Such devices shall include, but not be limited to:
  - a) Initiating appliance devices (smoke detector, water flow, manual pull station, etc.)
  - b) Notification appliance devices (audible and visible devices).

**Exception:**

Replacement of a fire command center, fire alarm control panel or distributed control units (RCU, TTB, DGP, etc.), which was installed under the 2008 Building Code or prior codes, is not considered a repair and therefore shall require a work permit. See Part 2(a) below for alterations.

**2. Alterations that do not constitute a repair.**

Pursuant to 2014 section BC 901.9.1 alterations to an existing fire alarm system are required to comply with the requirements of a new system without requiring the existing system to comply with all of the requirements of a new system. It is recognized that limited scope alterations or upgrades on existing approved operational fire alarm systems installed under the 2008 BC or prior codes may not be able to meet full 2014 BC requirements without full replacement of the system. Accordingly, 2014 section BC 901.9.1 allows alterations of limited scope to be performed without mandating full system replacement. The following alteration work scopes shall be allowed

without full system replacement, provided the work performed complies with the requirements pertained herein. An application for a permit must be filed for all work performed

- a) **Relocation or replacement of the Fire Command Center (FCC), Fire Command Station (FCS) or Fire Alarm Control Panel (FACP).** Where the scope of work constitutes the relocation or replacement of FCC, FCS or FACP, full system replacement shall not be required provided that the following conditions are met:
  - 1. The sequence of operations shall match that of the existing system. Any proposed modification(s) to the sequence of operations shall comply with Section 2 (c) of this Bulletin.
  - 2. Where a FCC, FCS or FACP is relocated, the existing power and fire alarm system wiring may be utilized. Splicing of existing power and fire alarm system wiring is prohibited.
  - 3. Where the existing power capacity is not adequate, a new connection shall be provided that complies with Article 760 of the New York City Electric Code.
  - 4. Where a FCC, FCS or FACP is relocated, proximity requirements for related systems and controls shall be maintained including elevator control panel and mechanical fan control panels.
  
- b) **Floor Alterations.** Where the scope of work constitutes an alteration to a floor, full system replacement shall not be required provided that the following conditions are met:
  - 1. Where the alteration requires the installation of notification devices which cannot be supported by the system, a new distributed control panel (RCU, TTB, DGP, etc.) shall be permitted to be installed.
  - 2. Where a new distributed control panel (RCU, TTB, DGP, etc.) is required, the new control panel may be installed in a similar manner with installation and wiring comparable to the approved existing distributed control panel installation.
  - 3. Where the alteration encompasses the entire floor, all core devices and newly installed devices required to be installed within the floor alteration pursuant to 2014 section BC 907, shall comply with the 2014 New York City Construction Codes and the New York City Electric Code.
  - 4. Where the alteration encompasses a partial floor alteration, compliance with 2014 New York City Construction Codes and the New York City Electric Code for newly installed devices shall be limited to the area of alteration. For the portion of the space not being altered, all existing functional devices and wiring may remain.
  
- c) **Upgrades to system technology.** Where the scope of work includes upgrade or replacement of both the distributed control panels (RCU, TTB, DGP, etc.) and FCC, FCS or FACP, full system replacement shall not be required provided that the following conditions are met:
  - 1. New equipment may be located in the same room or location as the existing equipment.
  - 2. Fire alarm system wiring for the riser portion of the upgrade shall be Class A redundant loop or meet the survivability standards outlined in NFPA 72, as amended by 1 RCNY 4000-06.
  - 3. Where distributed control panels include adequate battery power capacity to support all system functions per NFPA 72, as amended by 1 RCNY 4000-06, the existing power supply may be retained.
  - 4. Where existing power capacity is not adequate to support upgraded or replacement distributed control panels, replacement power supply shall be provided for all affected equipment in accordance with the survivability requirements of NFPA 72, as amended by 1 RCNY 4000-06 and the New York City Electrical Code.
  - 5. Initiating device circuits required by 2014 section BC 907.2 items (1) and (2) for selective coverage smoke detection shall be installed if not present at required locations. Existing functional initiating device circuits may remain.
  - 6. All notification appliance devices shall be supervised.
  - 7. Operational sequence shall be conducted in accordance with NFPA 72, as amended by 1 RCNY 4000-06.
  
- d) **Building enlargements not changing use or occupancy.** Fire alarm systems shall be installed within enlarged portions, however full system replacement shall not be required provided that the following conditions are met:

1. The existing fire alarm system is permitted to be extended into the enlarged portion of an existing building utilizing the sequence of operations of the existing, approved system functionality without full system replacement subject to the following:
  - a. The enlarged portion is of the same use or occupancy;
  - b. The enlargement does not cause the building to be classified as a large-area building pursuant to section BC 907.2.2.2 or section BC 907.2.7.1; and
  - c. The existing building is not a high-rise pursuant to section BC 202, nor does the enlargement cause the building to be classified as a high-rise building.
2. Fire alarm system devices and wiring within the enlarged area shall comply with the 2014 New York City Construction Codes.
3. Any portion of the existing fire alarm system which is required to be modified to support the enlargement shall comply with the 2014 New York City Construction Codes.

**Exception:** If the enlargement causes the building to be classified as a large area pursuant to section BC 907.2.2.2 or section BC 907.2.7.1 or high-rise building pursuant to section BC 202, the entire building system shall comply with requirements of the 2014 New York City Construction Codes.

e) **Change of occupancy.** Where the scope of work in a space constitutes a change of occupancy of the space, the following conditions shall be met:

1. The fire alarm system in such a space shall be provided in accordance with the requirements of item 2 of section BC 901.9.2.
2. Where a space is subject to a change of occupancy and the requirements of item 2 of section BC 901.9.2, the interface with the building-wide system is subject to review by the Commissioner.

**Exception:** Where a change is made in the main use or dominant occupancy of the building, full building system replacement shall be provided pursuant to Item 1 of section BC 901.9.2.

f) **Auxiliary Radio Communications System.** An Auxiliary Radio Communication System (ARCS) is not required for any of the above scopes of work unless:

- a) The scope of work is subject to section BC 901.9.4.1
- b) The building enlargement creates a high-rise or large area building pursuant to section BC 907.2.2.2 and BC 907.2.7.1.

**3. System replacements requiring a work permit.** For an existing fire alarm system designed and approved under the 2008 Building Code, 1968 Building Code or prior codes that does not function properly and is not repairable within the scope of item number 1 or 2 of this document, or due to the unavailability of approved replacement parts or for any other reason, the entire system shall be upgraded. An application for a permit must be filed for any replacements to the system. The design and installation of the system replacements shall comply with the 2014 NYC Construction Codes, and the following:

- a. All new electrical work shall comply with Rules 3616-04 and the 2011 NYCEC). Existing wiring not affected by the upgrade shall be permitted to remain.  
(see <http://www.nyc.gov/html/dob/html/reference/rules.shtml>)
- b. Existing functional devices not affected by the upgrade may remain.