



FDNY

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Fire Alarm Inspection/Plan Examination Unit
Bureau of Fire Prevention

Fire Alarm Unit Bulletin # 12-11-2023 As-Built Riser Diagram Requirements

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Purpose: Guidance for Submission of an As-built Riser Diagram

- I. **Purpose.** This bulletin provides guidance for submission of as-built riser diagrams for fire alarm, auxiliary radio communication (ARCS), and emergency alarm systems. The as-built riser diagrams are an official record of the project at the time of construction completion and must be submitted to the Fire Alarm Inspection Unit. The as-built must include modifications during construction, field requested changes and shop drawing modifications.

- II. **General Requirements.** To be accepted by the Fire Department, as-builts shall meet the following requirements:
 1. **Responsibility.** The as-built must be prepared, signed, and sealed by the registered licensed design professional who is *the applicant of record*. As-builts shall be prepared in accordance with [New York State Education Law Article Part 145 , Rules of the Board of Regents, Part 29 \(Unprofessional Conduct\), and Guidelines for Professional Engineering Practice in New York State.](#)
 2. **Size and format.** All pages shall be numbered, signed, and sealed, As-builts shall be 11"x17" in size and in a legible format.
 3. **Content.** As-builts must include the following information:
 - 3.1. **Title block.** Title block must provide the following (as applicable):
 - (a) Name of registered design professional (applicant of record).
 - (b) Address of protected premises, consistent with approved plans.
 - (c) Name of protected premises, owner, and occupant as applicable.

- (d) All job numbers associated with the filing (PW-1, FPIMS, Record ID, PAA's).
- (e) Statement indicating "As-Built Riser Diagram."
- (f) Date of issuance.
- (g) Page numbers as applicable.
- (h) Space allocated for FDNY stamp, minimum 1" tall by 3" wide.

3.2 Riser Diagram. An as-built riser diagram shall reflect the actual installation and provide the following information:

- (a) General arrangement of the system in building cross-section.
- (b) Number of power and network risers.
- (c) Type and number of circuits in each riser.
- (d) Type and number of fire alarm system equipment/devices/appliances on each circuit, on each floor or level, shown as symbols consistent with legend.
- (e) Primary/secondary power connection(s).
- (f) Locations of control interfaces to other systems.
- (g) Symbol legend.
- (h) Applicable notes and technical specifications.
- (i) Construction/marketing floors, if applicable.

3.3. Input/output programming matrix. The as-built must include the input/output programming matrix (sequence of operation). The matrix of operation shall reflect the actual programming at the time of completion, consistent with the Fire Department approval.

3.4. Functionality Statement. The functionality statement attests to the functionality of the system. Fraudulent submissions will be monitored and sent to the licensing boards for further review. Each as-built must include the functionality statement which shall be executed *only by one of the following*:

- (a) Registered Design Professional (NY State Licensed Professional Engineer or Registered Architect).
- (b) Licensed Electrician (raised seal required for paper submissions).
- (c) New York State Licensed Fire Alarm Installer.

The functionality statement shall be as follows:

3.4.1. New Systems

I, (name, title, license/reg. #) certify that the fire alarm (ARCS, Sub System, emergency alarm, as applicable) system filed under Job No. _____ has been installed as per approved plans, tested and operates as designed and in accordance with the input/output programming matrix.

Sign & Seal

Date:

3.4.2. Alterations to Existing Systems

I, (name, title, license/reg. #) certify that the fire alarm system (ARCS, Sub System, emergency alarm, as applicable) filed under Job No. _____ has been installed as per approved plans. A functional test has been conducted of the added/modified devices and the system operates as designed and is in compliance with the base building fire alarm system sequence of operations.

Sign & Seal

Date:

Note: The job number can be any associated with the job (PW-1, FPIMS, Record ID, PAA, etc.)

III. Transmission to the Department of Buildings. Upon approval of the installation, the as-built and Letter of Approval will be electronically transmitted to the Department of Buildings for any jobs filed with DOB.

IV. Recordkeeping. Upon completion of a system installation, a copy of the as-built shall be kept at the fire command center (fire alarm control unit) or other approved location (including any location conspicuously identified at the system main control unit).

V. Changes to system design. Minor additions to the fire alarm system design, such as the addition of up to 10 devices/appliances per floor (this can include booster panels and/or fused disconnect switches) may be accepted without further documentation.

Other modifications to the system design which may include, for example, up to ten (10) devices reflected on the approved plans were not installed, Data Gathering Panels (DGP) installed inconsistent with approved plans, or the system performance being downgraded (i.e. Class of circuits), may be accepted with an affidavit from the applicant of record. The affidavit shall list any/all devices which are not being installed and shall certify that the system design remains fully code compliant. Such certification may appear on the signed and sealed as-built.

The following changes CANNOT be modified through the submission of an affidavit or as-built and must be filed as a post-approval amendment (PAA):

- (a) Relocation of fire alarm control panels (Fire Command Centers cannot be installed other than as specified on approved plans without prior approval).
- (b) Changes that would affect the system type or job description.
- (c) Changes that would affect work floors.
- (d) Changes that would require further review (partial coverage, floor layouts, etc.)
- (e) Addition and/or exclusion of more than 10 devices/appliances on a floor

Note: This does not apply to ARCS. Modifications to ARCS systems will require a PAA.