
DESIGN, INSTALLATION AND MAINTENANCE OF FIRE ALARM SYSTEMS

Disciplines: Fire and Life Safety

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Division of the State Architect (DSA) documents referenced within this publication are available on the [DSA Forms](#) or [DSA Publications](#) webpages.

PURPOSE

This Interpretation of Regulations (IR) applies to projects submitted under the 2019 and later California Building Standards Code and clarifies who is qualified in California to design, install, and maintain fire alarm systems (F/A) for projects under DSA jurisdiction according to the requirements of the California State Licensing Board (CSLB) and applicable referenced standards for all F/A installations in public schools, community colleges, and state essential services buildings.

1. WHO CAN DESIGN FIRE ALARM SYSTEMS

1.1 All system design and installation must comply with the edition of National Fire Protection Association (NFPA) 72 as adopted and amended and in force at the time of submittal. An electrical engineer or a C-10 licensed contractor is authorized to design the system within the parameters of their license.

1.2 When the architect or engineer in general responsible charge utilizes construction documents prepared, signed, and/or stamped by other professionals, such as a fire protection engineer or a National Institute of Certification in Engineering Technologies (NICET) III or IV certified person, the architect or engineer in general responsible charge must stamp and sign those documents. DSA will accept the Statement of General Conformance, shown in Appendix A, of *IR A-18: Use of Construction Documents Prepared by Other Professionals* in lieu of the signature and seal (or stamp) from the architect or engineer in general responsible charge (Title 24, Part 1, Section 4-225(c) or 4-316(e)).

2. WHO CAN INSTALL FIRE ALARM SYSTEMS

2.1 The installation of F/A systems designed by an electrical engineer or other individuals as noted in Section 1.2 above may be contracted out to other firms qualified to install F/A systems.

2.2 Any system designed by a C-10 licensed electrical contractor must be installed by that contractor with their own employees and under the supervision of the license holder. Such systems may not be installed by another company or individual not professionally associated with the licensed installation contractor.

2.2.1 Sub-contracting of either the design or installation by the contracted C-10 licensed electrical contractor is allowed within the parameters of contract law. However, the original C-10 licensed electrical contractor will remain the supervisor and must retain liability and insurance responsibility for both design and construction.

2.2.2 Employees of C-10 electrical contractors working on circuits that exceed 100 volt-amperes in the State of California shall be tested, and certified by the state to perform work under an C-10 license. Effective January 1, 2006, General Journeyman and Fire/Life Safety Technicians must carry cards, issued by the Division of Apprenticeship Standards (DAS), that prove they are certified, and which must be presented to the authority having jurisdiction, upon

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request of the code enforcement official.

2.2.3 NFPA 72 requires persons performing system design, installation, inspection and maintenance work to be qualified. Examples of qualified personnel performing installations include the following:

- Licensed Electrical Engineer.
- Persons certified by the manufacturer for the specific type and brand of system to be provided.
- Persons certified by a nationally recognized organization such as NICET fire alarm level III certified personnel working under the supervision of a C-10 licensed electrical contractor.
- Personnel licensed, registered or certified by state or local authority.

2.3 Systems designed and submitted utilizing one manufacturer's equipment may be substituted for a different manufacturer's equipment provided the substitution is accomplished via DSA's Construction Change Document (CCD) process, and must include the following:

- Current manufacturer's applicable product data sheets.
- Battery and voltage drop calculations to match the new product data sheets.
- Any location changes, additions or deletions of devices or appliances must be shown on updated floor plans.

2.4 NICET certification is a recommended, but not a minimum requirement for California state agencies.

2.5 Local ordinances requiring fewer or additional measures, devices, or appliances shall not apply to public school facilities and may not be required by the local fire authority or any other local entity. (Hall vs. City of Taft).

3. WHO CAN MAINTAIN, TEST AND SERVICE FIRE ALARM SYSTEMS

3.1 Fire alarm systems shall be maintained, tested and serviced by qualified persons, such as a person trained by the manufacturer to maintain the system. Refer to Section 10.5.3.4 of the 2016 edition of NFPA 72 for examples of qualified persons.

3.2 Programming of fire alarm control panels and other system components shall be done by factory (manufacturer) authorized and trained personnel.

3.3 Warranties may be compromised if systems are not maintained according to recognized standards and manufacturer's guidelines and published instructions.

4. TESTING OF FIRE ALARM SYSTEMS

4.1 Acceptance Testing

Acceptance testing of projects under DSA construction oversight shall be performed by the C-10 licensed electrical contractor's qualified supervisory personnel or their installing technicians and witnessed by the project inspector.

4.1.1 The local fire authority may be invited, as a courtesy, to witness the final acceptance test of the DSA approved system so the local fire authority can become familiar with the workings of the system and the system's configurations. The local fire authority is not obligated to witness the test or authorized to delay the testing until witnessing can be scheduled.

4.1.2 The local fire authority may not require, but may ask for or recommend, changes to the DSA-approved system. A CCD shall be generated and processed through DSA. Initiation of any change shall not be performed without prior approval of DSA.

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4.2 Removal and Reinstallation of Fire Alarm Devices

When the scope of work for modernization and alteration projects requires removal of existing fire alarm equipment or devices (panels, wiring, detectors, notification appliances, etc.), the reinstalled equipment and devices shall be subjected to re-acceptance testing as outlined in Section 4.3 below.

4.2.1 Equipment and devices that are removed from a building with the intent of re-installation shall be retained and stored in a safe manner such that the equipment and/or devices are not subjected to impact, damage, or adverse environmental conditions.

4.2.2 Equipment and devices intended for re-installation in a building shall be the same equipment and devices removed from the building. At no time shall “used” equipment or devices from other projects or other buildings be installed.

4.3 Reacceptance Testing After Maintenance or Repair

Reacceptance testing performed after maintenance or repairs have been accomplished shall be performed in accordance with Chapter 14 of NFPA 72, and by technicians trained and/or qualified by the equipment manufacturer or as noted in Section 10.5.3.2 of the 2016 edition of NFPA 72.

4.3.1 Systems that require extensive replacement, modernization, or upgrade shall be submitted to DSA for review and approval (see *IR A-22: Construction Projects and Items Exempt from DSA Review*). Witnessing of tests after routine maintenance or minor repair shall be done by the local fire authority. The responsibility of the local fire authority is to ensure that the system operates as originally installed and approved by DSA.

4.3.2 Fire alarm and detection systems in buildings that have been subjected to a fire, or have been impacted by wildfire events, shall be subjected to reacceptance testing as outlined in NFPA 72 to ensure continued operational integrity.

REFERENCES:

California Code of Regulations (CCR), Title 24
Part 1, California Administrative Code, Sections 4–225(c) and 4–316(e) California Business and Professions Code, Sections 7026.12 & 7058
Title 16, CCR, Professional and Vocational Regulations, Division 8, Article 3, Classifications and Section 832.16
Health & Safety Code 13195 & 13196.5
2016 National Fire Alarm and Signaling Code–NFPA 72 as amended

This IR is intended for use by the DSA staff and by design professionals to promote statewide consistency for review and approval of plans and specifications as well as construction oversight of projects within the jurisdiction of DSA, which includes State of California public schools (K–12), community colleges and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is subject to revision at any time. Please check DSA’s website for currently effective IRs. Only IRs listed on the webpage at www.dgs.ca.gov/dsa/publications at the time of project application submittal to DSA are considered applicable.