

Life Safety Code

Q: Where can I find more information about the Life Safety Code?

A: <https://www.nfpa.org/Codes-and-Standards/All-Codes-and-Standards/Free-access>

Q: What edition of the Life Safety Code are we surveyed under?

A: On May 4, 2016, the Centers for Medicare & Medicaid Services (CMS) published a final rule titled “Medicare and Medicaid Programs; Fire Safety Requirements for Certain Health Care Facilities,” which updates the fire safety requirements for health care providers and suppliers. This regulation requires certain providers and suppliers to meet the requirements of the 2012 edition of the Life Safety Code (LSC), National Fire Protection Association (NFPA) 101 and the 2012 edition of the Health Care Facilities Code, NFPA 99.

Emergency Preparedness

Q: Where can I find more information about Emergency Preparedness

A: <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertEmergPrep/Emergency-Prep-Rule.html>

Plan Review Submittal Instructions

Q: What is the process and requirements for submitting plans for review?

A: This office requires projects regarding review of plans to be submitted electronically. Drawings and specifications shall be well prepared so that clear, distinct, accurately dimensioned, and shall include all necessary explanatory notes, schedules, legends, and stamped with the licensed architect’s seal for the state of Idaho. They shall be scaled to 1/8” – 1’ or larger. Visit <http://healthandwelfare.idaho.gov/Providers/ProvidersFacilities/StateFederalPrograms/FireSafetyConstruction/tabid/351/Default.aspx>

- Click drop down box ☒☒ for Building Plans under Required Forms and select Submittal Form-PDF Format (fillable)
- Provide all pertinent information on the BFS Plan Submittal form.
- Submit BFS Submittal Form and Construction, Fire Alarm, and/or Sprinkler System Plans to the email provided at the bottom of the BFS Plan Submittal Form or via drop box, or thumb drive CD in PDF format mailed to the address provided on the form.
- After completion of the review process the submitter and owner shall be notified in writing.

Q: How long does the review process take?

A: Depends on the project size, availability of plans examiner, and the order in which it was received. This office does not put a minimum time line for the first review or subsequent reviews. However, we understand timeliness of construction projects, so we keep the submitter up-to-date on the progress. If this office determines that the first submittal was substantially incomplete, review times will be extended.

Fire Rated Walls vs. Fire Rated Barriers

Q: Are fire rated walls the same thing as fire rated barrier? And are smoke compartment barriers fire rated walls?

A: A fire rated **wall** is used to subdivide a building into separate areas and they extend from an outside wall to another outside wall, and from the floor of the lowest level up through the roof of the highest level. A fire rated **wall** is structurally self-sufficient and acts as a block in the event a fire develops on one side, to prevent the fire from spreading to the other side.

➤ Fire rated walls are specified by building codes and are not addressed by the Life Safety Code for healthcare occupancies.

- A fire rated **barrier** is not a fire rated **wall** and are used extensively in healthcare occupancies.
- A fire rated **barrier** extends from the floor to the deck above. Examples of a fire rated **barrier** would be the walls surrounding a hazardous room; a vertical shaft (such as a stairwell or elevator shaft); and a separation between different occupancies or construction types.

All opening in fire rated walls and fire rated barriers (such as doors, dampers, access panels, etc.) must be fire rated and equipped with fire rated frames and hardware.

- Smoke compartment barriers are not fire rated barriers; however, they are similar. The barrier itself is constructed with fire rated materials however the doors in the smoke compartment barriers are not required to be fire rated, nor are they required to have positive latching hardware. They only must self-close.
- Smoke compartment barriers are required to extend from the floor to the deck above. Another barrier that you may need to know about are smoke resistant barriers, which have no fire rating, but are required to extend from the floor to the deck above and resist the passage of smoke.

Rated Assemblies

Q: Are smoke barrier doors and frames required to have a fire rating label?

A: No. According to section 19.3.7.6 of the 2012 LSC, doors in smoke barriers are required to be 1¾ inch thick, solid-bonded, wood-core doors, or be of construction that resists fire for at least 20 minutes. This does not mean the door and frame must be a fire-rated door. It only means the door must be of construction that resists fire for at least 20 minutes.

Section 19.3.7.8 of the 2012 LSC says that doors in smoke barriers are not required to be positive latching. So again, the door is not required to be a fire-rated door since all fire rated doors must be positive latching.

Projections in Corridors

Q: What is the requirement for projections in the corridors? Why does the LSC state 6” and the regulation is 4”?

A: When CMS published their Final Rule to adopt the 2012 Life Safety Code on May 4, 2016, they stated they will not recognize the NFPA Life Safety Code on corridor projections which allows a 6-inch projection. Instead, they are adhering to the ADA requirement of a maximum of 4-inches for corridor projections. There are no exceptions to the 4-inch maximum projection rule. So, anything projecting more than 4 inches into the corridor, including fire extinguishers and telephones, is citable by a surveyor.

Projection from Walls - Alcohol-Based Hand-Rub Dispensers

Q: Does alcohol-based hand-rub (ABHR) dispensers have to comply with the corridor projection requirements? Are there any equivalencies permitted for this requirement?

A: The 2012 LSC (issued May 4, 2016) enforces the 4-inch projection (ADA requirement) rule rather than the 6-inch rule that NFPA permits.

A suggestion is to eliminate those dispensers and look for new ones that do not extend more than 4 inches.

There is no equivalency for this issue.

Alcohol-Based Hand-Rub Dispensers

Q: Could you clarify the alcohol-based hand dispensers requirements?

A: Healthcare occupancies (i.e. hospitals, nursing homes, long-term care, free-standing ERs) follow section 18/19.3.2.6 of the 2012 Life Safety Code for alcohol-based hand-rub (ABHR) dispensers, which basically says:

- You cannot mount them in corridors less than 6 feet wide
- Maximum dispenser capacity is 1.2 L for rooms and corridors and 2.0 L for suites
- Maximum dispenser capacity for aerosol containers is 18 oz.
- Dispensers must be separated from each other by 48 inches
- Not more than 10-gallon aggregate total of ABHR solution or 1135 oz. of aerosol solution shall be in use outside of a storage cabinet per smoke compartment, except for the next bullet point
- One dispenser per room shall not be included in the aggregate quantities mentioned above
- Storage of quantities greater than 5 gallons in a single smoke compartment must meet the requirements of NFPA 30 (1-hour FRR room, or fire-resistant cabinet)
- Dispensers must be mounted at least 1 inch away (as measured side-to-side) from ignition sources, and cannot be mounted above ignition sources
- Dispensers mounted over carpeted floors are permitted only in sprinklered smoke compartments
- Maximum 95% alcohol by content

- The dispenser must be designed, constructed and operated in such a way that ensures accidental or malicious activation of the dispensing device is minimized
- For ambulatory health care occupancies (ASCs, outpatient physical therapy) you follow section 21.3.2.6 which is essentially the same as 19.3.2.6. For business occupancies (physician's offices, administration facilities) there is nothing in the occupancy chapter that permits ABHR dispensers in corridors, but other than corridors, you would follow the same as above.

Fire Alarm Batteries

Q: Where can I find the code reference for how often batteries serving fire alarm panels (booster panels, control panels, etc.) need to be replaced based on how old they are?

A: Currently, we are on the 2010 edition of NFPA 72, and Table 14.4.5 (6) (d) says sealed lead acid type batteries used on fire alarm systems need to be replaced 5 years after date of manufacturer, or more often as needed.

Fire Alarm Systems

Q: Does the fire alarm system required to transmit a fire alarm signal to an off-site supervisory station?

A: According to the 2012 LSC, section 19.3.4.3.2.1, you need to comply with section 9.6.4 in regards to fire department notification. Section 9.6.4.2 requires that you communicate the fire alarm signal to the local fire department in one of the following methods:

- Auxiliary fire alarm system
- Central station fire alarm system
- Proprietary supervising station fire alarm system
- Remote supervising station fire alarm system

Fire Alarm System Documentation-Sensitivity Test

Q: Is a sensitivity test required for the smoke detectors? How often? How do I show compliance?

A: Yes, a sensitivity test is required for installed smoke detectors. To ensure that each smoke detector or smoke alarm is within its listed and marked sensitivity range, it shall be tested using any of the following methods:

- Calibrated test method
- Manufacturer's calibrated sensitivity test instrument
- Listed control equipment arranged for the purpose
- Smoke detector/fire alarm control unit arrangement whereby the detector causes a signal at the fire alarm control unit where its sensitivity is outside its listed sensitivity range
- Other calibrated sensitivity test methods approved by the authority having jurisdiction

Sensitivity shall be checked within 1 year after installation and shall be checked every alternate year thereafter. After the second required calibration test, if sensitivity tests indicate that the device has remained within its listed and marked sensitivity range (or 4 percent obscuration light gray smoke, if not marked), the length of time between calibration tests shall be permitted to be extended to a maximum of 5 years.

- Records shall be kept by the building owner specifying which detectors have been tested.

Fire Alarm System Documentation

Q: What is required for documentation for a fire alarm system inspection? What is required to be tested and what is required to be on the documentation for review?

A: “Every annual fire alarm system documentation must include an itemized inventory of each device as passed or failed” ... you will not find those words in NFPA 72, 2010 edition.

What it does say: A record of all inspections, testing, and maintenance shall be provided that includes the information regarding tests and all the applicable information requested in NFPA 72, 2010 edition Figure 14.6.2.4

- Date
- Test frequency
- Name of property
- Address
- Name of person performing inspection, maintenance, tests, or combination thereof, and affiliation, business address, and telephone number
- Name, address, and representative of approving agency(ies)
- Designation of the detector(s) tested
- Functional test of detectors
- Functional test of required sequence of operations
- Check of all smoke detectors
- Loop resistance for all fixed-temperature, line-type heat detectors
- Functional test of mass notification system control units
- Functional test of signal transmission to mass notification systems
- Functional test of ability of mass notification system to silence fire alarm notification appliances
- Tests of intelligibility of mass notification system speakers
- Other tests as required by the equipment manufacturer’s published instructions
- Other tests as required by the authority having jurisdiction
- Signatures of tester and approved authority representative
- Disposition of problems identified during test (e.g., system owner notified, problem corrected/successfully retested, device abandoned in place)

Interim Life Safety Measures-Temporary Construction Areas

Q: Does a door that accesses a construction site within a healthcare occupancy need to have an automatic closer installed on the access door? What if the door is constructed within temporary drywall barriers?

A: The 2012 Life Safety Code references the 2009 edition of NFPA 241 which now requires all construction areas to be separated from occupied areas with 1-hour fire rated construction, which will include $\frac{3}{4}$ hour fire rated doors that are self-closing and positive latching. There is an exception in the 2009 NFPA 241 that allows non-fire rated barriers if the construction area is protected with automatic sprinklers. Tarps, Drop Cloths, Plastic Sheeting, Construction tarps or plastic are prohibited. The construction area would still be considered a hazardous area which requires a self-closing door.

Exit Signs

Q: Do 'Exit' signs with battery backup require the same testing as emergency lighting in the path of egress?

A: Yes, section 7.10.9.2 says 'Exit' signs connected to, or provided with, a battery-operated emergency illumination source must be tested and maintained in accordance with 7.9.3, which is the section that requires a 30-second monthly test and a 90-minute annual test of the battery system.

Exit Discharge to Public Way

Q: Are hard-surface sidewalks, such as concrete, required between the exit door and the public way in order to qualify as an exit discharge?

A: The LSC does not require a hard surface sidewalk, such as a concrete walk. However, the code does have specific requirements that need to be complied with. NFPA 101, 2012 edition Section 7.7 requires exits to terminate directly to the public way or to an exterior exit discharge such as a yard, court or open space. Additional requirements are found in section 7.1.6, which discusses abrupt changes in elevation in the walking surface which cannot exceed $\frac{1}{4}$ inch. This may be difficult to maintain over a grass yard or open space. The path of egress must be maintained free of all obstructions and impediments, including the removal of snow and ice. The requirements for a level walking surface and the removal of snow and ice are easier to comply with when there is a hard walking surface, such as a concrete sidewalk. Even though the LSC does not specifically require it, error on the side of caution to assure the organization meets the level walking surface requirement.

Fire Drills

Q: Is activation of the fire alarm system to include horns or strobes during a fire drill required?

A: Yes... All of the occupant notification devices (i.e. horns, chimes, strobes, bells, whistle, etc.) MUST be activated during all fire drills, with the exception of those drills conducted during the hours from 9:00 pm to 6:00 am. During the evening hours, a coded announcement may be used in lieu of activating the audible devices. Section 19.7.1.4 of the 2012 LSC is very clear... Fire drills in healthcare occupancies must include the transmission of a fire alarm signal and simulation of emergency fire conditions. Section 19.7.1.6 continues to say fire drills must be

conducted quarterly on every shift to familiarize staff with the signals and emergency action required under varied conditions.

Yes... horns and strobes can be disruptive... That's the whole idea of a fire alarm notification system: To disrupt the normal activity and alert everyone that there is a fire emergency. Routine fire drills should be anything but routine. Therefore, fire drills are the utmost importance, and everyone (as much as practical) should participate in each drill. Don't forget that one of the purposes of the fire drill is to educate staff on the emergency process. That is why the Life Safety Code requires so many each year.

Fire Drills

Q: What is the purpose of fire drills? Why are they so important?

A: The purpose of a fire drill is multi-fold: The first one is obvious, to understand how to save lives, stabilize the incident, and conserve property. Each resident and patient are counting on staff to help save them.

- For staff to become familiar with the emergency process
- To evaluate the staff's response to the fire alarm signal
- To evaluate the building's response to the fire alarm signal
- To evaluate the fire alarm system's response

Section 19.7.1.2 says all employees must be periodically instructed and kept informed with respect to their duties under the fire response plan. This is accomplished by conducting fire drills, and then having trained observers in certain locations of the hospital to evaluate the staff's response.

Fire Drills for Operating Rooms and Operating Suites

Q: Is it a requirement to conduct fire drills in Operating Suites?

A: Yes...The 2012 edition of NFPA 99 section 15.13.3.10.3 does require an annual fire drill for the operating room and surgical suite personnel. (recommend not having a drill during surgical operations)

Smoke/Fire Dampers

Q: What is the testing requirements for smoke/fire dampers?

A: Section 8.3.3.1 of the 2012 Life Safety Code requires compliance with NFPA 80 for all openings (i.e. doors, ductwork, windows, etc.) in fire-rated barriers. Section 19.4.1.1 of NFPA 80-2010 says fire dampers in hospitals are required to be tested and inspected every 6 years. Long-Term Care facilities are required to test and inspect smoke/fire dampers once every 4 years.

Sprinkler Protection under Canopies

Q: Does the Life Safety code require a sprinkler under a 4' canopy?

A: Yes, Section 8.15.7.1 of NFPA 13, 2010 edition says sprinklers must be installed under exterior roofs or canopies exceeding 4 feet in width. An exception to this requirement is if canopy or roof is of noncombustible or limited combustible construction. Also, sprinklers must

be installed under roofs or canopies over areas where combustibles are stored and handled. If the canopy is 4 feet in width or less, then you are not required to install sprinklers.

Sprinkler System Gauges Inspections

Q: What is the inspection frequency for sprinkler gauges?

A: According to section 5.2.4.1 of NFPA 25, 2011 edition, Gauges on wet pipe sprinkler systems shall be inspected monthly to ensure that they are in good condition and that normal water supply pressure is being maintained. Section 5.2.4.2, states Gauges on dry, pre-action, and deluge systems shall be inspected weekly to ensure that normal air and water pressures are being maintained. Table 5.1.1.2 of NFPA 25, 2011 edition shows a complete summary of Sprinkler System Inspection, Testing, and Maintenance.

Sprinkler Inspections

Q: Why is that important for sprinkler heads to be free of any foreign material? How much dust or foreign material is allowed?

A: None! If just a little dust or foreign material is allowed, then at what point is too much dust or foreign material. Any foreign material, including dust, can change the reaction time of a sprinkler head. Sprinkler heads have a fusible link, or glass bulb, on the sprinkler head that disintegrates by design by high heat, if a foreign substance is on the sprinkler head, it can create a layer of insulation on the sprinkler head and the sprinkler head may not activate by design in the event of a fire.

Sprinkler Head Stock

Q: How many spare sprinkler heads are we required to keep on hand in our facility?

A: According to Section 6.2.9.1 of NFPA 13-2010 says a supply of at least six spare sprinklers must be maintained on the premises, but to clarify a minimum of two sprinklers of each type and temperature rating be provided. Section 6.2.9.5 requires an increase in spare heads if the facility has more than the following thresholds installed:

- Under 300: No fewer than 6 spare heads
- 300 to 1000: No fewer than 12 spare heads
- Over 1000: No fewer than 24 spare heads

Section 6.2.9.6 says there must be a sprinkler wrench for each type of head stored with the spare sprinkler heads, although a single sprinkler wrench could be appropriate for use on multiple sprinklers. Section 6.2.9.7.1 does require a list of all the sprinklers be included in the spare sprinkler cabinet.

This list includes the following: Sprinkler identification number (SIN) or the manufacturer, model orifice (size), deflector type, thermal sensitivity, and pressure rating

- General description of each sprinkler type, such as:
 - Upright, Pendent, QR, SR, Sidewall, Temperature rating in °F, Quantity of each type of sprinklers maintained in spare cabinet, Issue or revision date of the spare sprinkler list.

Find your spare sprinkler cabinet and make sure you meet all the above requirements

Generator (Diesel Fuel Test)

Q: What are the guidelines on the diesel fuel test for the generator?

A: The 2012 Life Safety Code references the 2010 edition of NFPA 110, the standard for emergency and standby power systems. Section 8.3.8 requires the fuel for the generators to be tested annually for quality. You may purchase a copy of the standard direct from the ASTM website: <https://www.astm.org/Standards/D975.htm>

Emergency Lighting and Special Locking Arrangements

Q: What are the requirements for Emergency Lighting over Delayed Egress Locks?

A: Doors within a required means of egress shall not be equipped with a latch or lock that requires the use of a tool or key from the egress side. Section 19.2.2.2.4 (2) states Delayed-egress locks complying with section 7.2.1.6.1 shall be permitted. Section 7.2.1.6.1(5) states; The egress side of doors equipped with delayed-egress locks shall be provided with emergency lighting.

Receptacle Testing

Q: Is there a code requirement about testing electrical receptacles around hospital beds?

A: Yes, NFPA 99, 2012 code/standard, state all receptacles in patient care rooms must be tested. But the frequency of that test is different, depending on whether the receptacle is a hospital-grade receptacle or not.

NFPA 99, 2012 section 6.3.4.1.1 says hospital-grade receptacles must be tested after initial installation, replacement, or servicing of the device.

NFPA 99, 2012 section 6.3.4.1.2 does say additional testing of receptacles (including hospital-grade receptacles) in patient care rooms shall be performed at intervals defined by documented performance data. This means you do have to test hospital-grade receptacles at a frequency determined by the healthcare organization based on information such as historical data, risk assessments, or manufacturer's recommendation.

NFPA 99, 2012 section 6.3.4.1.3 says receptacles not listed as hospital-grade, at patient bed locations and in locations where deep sedation or general anesthesia is administered, must be tested at intervals not exceeding 12 months.