MAINTENANCE MANUAL:
LIFE SAFETY CODE SYSTEMS IN LONG-TERM CARE

Nursing Home Help

Quality Improvement Program for Missouri (QIPMO)

Leadership Coaching Consultants

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ACKNOWLEDGEMENT

The Maintenance Manual was created to reflect Centers for Medicare and Medicaid Services adoption of the 2012 edition of the National Fire Protection Association 101 Life Safety Code. QIPMO believes the contents of this document to be compliant with the 2012 edition of the National Fire Protection Association 101 *Life Safety Code.* This manual has been adapted from [1]The Ohio Department of Health Office of Health Assurance and Licensing October 2017 NFPA 101® Life Safety Code® 2012 Edition Preventative Maintenance Manual.

[1]NFPA 101® Life Safety Code® 2012 Edition Preventive Maintenance Manual- Ohio Department of Health Office of Health Assurance and Licensing October 2017. https://odh.ohio.gov/wps/wcm/connect/gov/8cbe195b-136d-4e06-a776-f7005baafee3/prevmaintmanual2017.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_M1HGGIK0N0JO00QO9DDDDM3000-8cbe195b-136d-4e06-a776-f7005baafee3-mi7WwNT.

FORWARD

The *Life Safety Code* is a compilation of fire safety requirements for new and existing buildings and is updated and published every three years by the National Fire Protection Association (NFPA), a private, nonprofit organization dedicated to reducing loss of life due to fire. The Medicare and Medicaid regulations have historically incorporated these requirements by reference.

On May 4, 2016, the Centers for Medicare and Medicaid Services (CMS) published final rules in the Federal Register adopting the 2012 edition of NFPA 101, *Life Safety Code (LSC)*. This final rule amended the fire safety standards for certified facilities.

Further, this final rule adopted the 2012 edition of the *LSC* and eliminated references to all earlier editions. These regulations were effective on July 5, 2016.

The objective of the code is to assure safety to life during fires and other emergencies. Adoption and use of the 2012 edition of the LSC is updated to the latest and best technology in fire protection. These requirements are designed to protect all residents and staff. The final rule allows other options for facilities to meet regulatory requirements when correction of a deficiency will create an undue burden or financial hardship such as the FSES (Fire Safety Evaluation System) or waivers.

This Maintenance Manual is intended for use by personnel of Missouri long term care facilities to maintain and improve life safety conditions for the benefit of residents and employees. This document is intended to provide information to facilities but is not necessarily fully inclusive of all details of LSC 2012 or other NFPA Standards. Determinations of compliance with Life Safety Code regulations are made at the time of survey.

Please see the regulatory reference overview included in this manual for applicable NFPA codes. In addition to the mandatory references, existing nursing facilities must comply with NFPA 101 Chapter 19 Health Care Occupancies while new nursing facilities must comply with NFPA 101 Chapter 18 Health Care Occupancies.

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Introduction

Developing a Preventative Maintenance Program

Preventative maintenance is an important aspect of maintaining safe and efficient building operations in a long-term care facility. Here are some reasons why you should develop a preventative maintenance plan for your facility:

Preventative Maintenance Saves Money: We've all heard the old adage "an ounce of prevention is worth a pound of cure." It's trite, but it is also true. Avoiding problems with your physical plant will save you money in the long run by minimizing the need for new systems or repair jobs.

Preventative Maintenance Saves Time: Taking two hours a month to perform maintenance saves time. It saves you the hassles of dealing with system failures and data loss. Most preventative maintenance procedures are quite simple compared to troubleshooting and repair procedures.

Preventative Maintenance Improves Performance: Many parts of your facility degrade over time, and preventative maintenance will help extend the life of your facility's systems.

Preventative Maintenance Provides Safety: Proper working equipment and other safe practices create safe conditions for residents and staff.

Life Safety Code Requirements

Alcohol Based Hand Rub (ABHR) Dispensers K-325

- Ensure that corridors are at least 6 feet wide before installing dispensers and that there is a minimum spacing of 4 feet between dispensers
- Ensure that dispensers in all locations are not installed over or adjacent to an ignition source such as an electrical switch or outlet. If adjacency is in question, look for evidence of spill, splash, or spray pattern from the ABHR dispenser
- Ensure that the maximum individual fluid dispenser capacity is 1.2 liters (2 liters in suites of rooms) and that there are not more than 10 gallons in a single smoke compartment outside a storage cabinet. Storing of quantities greater than 5 gal (18.9L) must meet the requirements of NFPA30. Aerosol Dispensers < 18oz
- If the floor is carpeted, the building must be fully sprinklered to install dispensers

Construction/Renovations See (4.6.10)

- Where major renovations, alterations, or modernizations are made the most current applicable code shall be enforced
- “Major” means the modification of more than 50 percent, or more than 4,500 square feet, of the smoke compartment
- “Minor” means the modification of less than 50 percent, or less than 4,500 square feet, of the smoke compartment
- The replacement of a system, such as a fire alarm system, would be “major” for that system only. Thus, that system would have to meet the requirements for new construction, not the entire building itself. However, if more than one system is renovated, altered, or modernized then the entire building may be required to meet the new construction standards
- When an entire floor is gutted, the renovation of that floor should be considered “major” and must meet the regulatory requirements for new construction. If corridor walls or partition walls between rooms are removed in their entirety (to make additional space or to reconfigure rooms), the replacement wall must meet new requirements
- Cosmetic changes, such as painting and wallpapering, would not constitute a “major” renovation or alteration regardless of the size of the affected area

Corridor Walls/Fire Walls/Smoke Walls K-133, K-362, K-223, K-372, K-374, K-232

- Ensure that corridors are separated from use areas by walls that form a barrier to limit the transfer of smoke and, for existing construction, required to have a fire resistance rating of 30 minutes
- Seal all penetrations with rated materials**.** Do not use expanding foams to seal penetrations unless fire rated

- Ensure that damaged fire rated ceiling tiles are replaced with the same type of fire rated tiles
- See *NFPA 101* 19.3.6.1 and 19.3.6.5 for exceptions to the corridor separation requirements and permissible openings such as lounges, waiting areas and nursing stations
- Fire Walls separating non-conforming buildings are required to maintain a 2- hour fire resistance rating
- Openings in corridor walls, such as a pass through a kitchenette that is nonhazardous or a receptionist area, shall meet the requirements for areas open to the corridor

Corridor Width/Means of Egress K-232, K-233, K-753

- Monitor corridors serving as exit access to ensure that they are clear and unobstructed:
    - NFPA 101 2012 Edition allows for the Following:
        - Fixed Furniture
        - Is securely attached to the floor or to the wall and does not reduce the clear unobstructed corridor width to less than 6 feet
        - Is located only on one side of the corridor and each group does not exceed an area of 50 square feet and is separated from each other by a distance of at least 10ft
        - Is located to not obstruct access to building service and fire protection equipment
        - Corridors are protected by an electrically supervised automatic smoke detection system or the fixed furniture spaces are arranged and located to allow direct supervision

Wheeled Equipment

- Does not reduce the clear unobstructed corridor width to less than 60 inches
- The health care occupancy fire safety plan and training program address the relocation of the wheeled equipment during a fire or similar emergency
- Wheeled equipment is limited to the following:
    - Equipment in use and carts in use
    - Medical emergency equipment not in use
    - Patient lift and transport equipment
    - “Not in use” criteria still applicable
- Linen carts, soiled utility carts, wheelchairs and lifts may not be stored in hallways; isolation carts and crash carts are allowed in the corridors

- Monitor facility to ensure that the facility does not have combustible decorations unless they are flame-retardant. Exception: Combustible decorations, such as photographs and paintings, in such limited quantities that a hazard of fire development or spread is not present
- Storage occurs when an item is left in place or not in use for over 30 minutes. If the appropriate staff is around and using something every 30 minutes the item is not considered to be stored
- "Stop signs" attached to exit doors must not obstruct egress or cover hardware

Doors K-363, K-223, K-372, K-374, K-321, K-271, K-211

- Inspect, repair, and maintain doors to ensure that:
    - Automatic or self-closing devices are properly installed and functioning
    - New construction – Doors in the means of egress from sleeping room; diagnostic and treatment areas shall have not less than 41.5 in. (105 cm) in clear width. (44-inch doors)
    - Smoke doors and doors opening into the corridor close properly and limit the passage of smoke. Non-rated gaskets, such as weather stripping, are not an acceptable method to correct door gaps
    - Doors close and latch into the frame (positive latching hardware), no impediments
    - Doors are unobstructed and not blocked in any manner
    - Hazardous area doors are self-closing (see also hazardous areas). 18/19.3.2.1
    - Smoke barrier doors that swing in the same direction may be required to have a coordinator to ensure doors close properly which allows one door to close first preventing the doors from hitting
    - See CMS Survey and Certification letter 07-18-LSC for clarification and guidance related to door gaps
- Monitor doors with magnetic locked or delayed egress locks to ensure that:
    - Doors release appropriately
    - No more than one delayed egress locked door in the path of travel
    - Doors with magnetic locking devices without the delayed egress function shall unlock upon activation of the complete fire alarm system
    - Doors may not reactivate if the fire alarm system is placed in silent mode. The doors should not relock without the system being reset
    - Check systems after performance of maintenance to assure systems are returned to working order

- Ensure that doors latching mechanisms do not require more than one action to open
- No deadbolt locks
- Obtain written approval from the local fire authority to extend delayed release locking mechanisms to 30 seconds and submit request for extension of the timed delay to the District Office. Facility must have a written approval from ODH for 30 second delayed locking mechanisms
- Notify the local or state fire marshal and obtain any required permits before any changes are made to the system
- Full compliance with annual fire door assembly inspection and testing in accordance with 2010 NFPA 80 is required by January 1, 2018. See S&C letter 17-38-LSC K-211.

Electrical K-915, K-901, K-920

- **o** Verify that nursing homes with life support equipment have a Type I Essential Electrical System (EES) powered by a generator with a transfer switch and separate power supply. The EES is in accordance with *NFPA 99*. 6.3.2.2.10
- **o** Inspect and monitor facility to ensure that power strips with surge protection are used appropriately. Medical EQ: UL 136A or UL 60601-1 Personal EQ: UL 1363
- **o** Power strips may not be used in resident rooms in the “patient vicinity” (6’x6’x6’). This means the area around the patient bed. No medical equipment, including the resident bed or any high current draw devices can be plugged into a power strip. No hair dryers or refrigerators may be plugged into power strips. Appliances that produce heat or are used for cooling cannot be plugged into a power strip
- **o** Power strips may be used be in non-wet, non-direct patient areas. Routine mopping does not constitute a wet area. Equipment such as televisions, DVD players, and clocks, may be plugged into a power strip with surge protection.
- **o** Power strips are not allowed to be plugged into another power strip and extension cords cannot be plugged into them. Where additional outlets are needed in the patient vicinity they must be installed in accordance with NFPA 70, *The National Electrical Code,* 1999 edition
- **o** Power strips cannot be covered with rugs or other material
- **o** Power strips should not be permanently attached to the wall
- **o** Maintain three-foot clearance around all electrical panels
- **o** Ensure that all electrical equipment is in good repair and that all electrical cords and plugs have no frayed or exposed wires
- **o** Multiplug adapters are not permitted

Elevators & Dumbwaiters K-531, K-532

- Subject elevators to routine and periodic inspections and tests as specified in *ASME/ANSI A17.1, Safety Code for Elevators and Escalators*. All elevators equipped with fire fighter service in accordance with 9.4. of *NFPA 101* are subjected to a monthly operation with a written record of the findings made and kept on the premises as required by *ASME/ANSI A17.1, Safety Code for Elevators and Escalators*

Emergency Lighting K-281, K-291

- Conduct a functional test on all battery-operated emergency lighting system at 30-day intervals for not less than 30 seconds. Conduct the annual test on every required battery-powered emergency lighting system for not less than 1.5 hours (90 minutes). Ensure that equipment is fully operational for the duration of the test. Written records of visual inspections and tests shall be kept by the facility
- Monitor exterior exit lighting to ensure that the exterior lighting is equipped with two sources of light either by having two fixtures or one light fixture with two LED light bulbs. The exit discharge must have a functional emergency light that lasts at least 1.5 hours
- Ensure that rooms over 1,000 square feet in area have illuminated exit signs and that the signs are on emergency power

Exits K-271, K-293, K-211

- Exit and directional signs display the correct egress pathway or direction of travel with continuous illumination and are also served by the emergency lighting system in accordance with NFPA 101 sections 7.9., 18.2.8
- Exit access is arranged so that exits are readily accessible always and that the means of egress is continuously maintained free of all obstructions or impediments to full instant use
- Exit discharges outside the building have a hard surface to the public way and that the exit discharge is usable during inclement weather and is without impediments. This includes snow and ice removal in the winter months
- Exit discharges outside of the building are illuminated along the path to the public way. (Minimum of one foot candle of illumination at floor level
- Doors in the path of travel in means of egress that are not exits but appear to be exists must have signage indicating “NOT AN EXIT” in letters 2 in. (5 cm) high with a stroke width of 3/8 in. (1 cm) and the word EXIT in letters 1 in. (2.5 cm) high
- Changes in elevation at thresholds cannot exceed 1/4” and changes less than ½” can be beveled. Changes greater than ½” must be corrected by other means

Fire Alarm System K-341, K-345, K-347, K-342, K-344

- Ensure the fire alarm system is installed and maintained in accordance with *NFPA 72, National Fire Alarm Code, 2010 edition* and that maintenance records are available to the surveyor at the time of the LSC inspection
- Inspect the fire alarm system to determine if the sprinkler system is connected to the alarm system including water flow devices. Verify that activation of the sprinkler system causes the fire alarm to sound
- Verify the fire alarm system transmits to the local fire department or central station
- Ensure the fire alarm system is provided with an alternative power supply in accordance with NFPA 72 as defined in section 9.6. of NFPA 101
- Self-monitoring fire alarm systems are still required to maintain and provide all required documentation of maintenance and testing
- Notify the local or state fire marshal and obtain any required permits before any changes are made to the system

Fire Drills K-712

- Ensure that the facility administration has a plan that has been distributed for the protection of all persons in the event of fire, for their evacuation to areas of refuge, and for their evacuation from the building when necessary. Establish a system to ensure that all employees are periodically instructed and kept informed with respect to their duties under the plan
- Monitor fire drills to ensure that the drill includes the transmission of a fire alarm signal and simulation of emergency fire conditions. Document receipt or verification of call to the remote monitoring company
- Monitor fire drills to ensure that drills are held quarterly, per shift, at unexpected times and under varying conditions
- Maintain documentation concerning fire drills for the preceding 12 months that shows at least the following:
    - Differing times for drills conducted on each shift. Drills should be conducted at various times throughout the shift to avoid patterns. Fire drills that occur within one hour may be considered as having occurred at the same time
    - One drill per shift per quarter. Drills conducted at shift change are only counted for one shift. If a drill is conducted January 1st, then another drill must be conducted by April 30th to meet the quarterly requirement
    - Varying conditions of drill. A drill conducted at mealtime is an example of a varying condition
    - Differing days of the week including weekends
    - Involvement of all departments
    - Documented observations of staff response

- Record of equipment functioning such as the release of doors and alarms sounding
- Between the hours of 9:00 PM to 6:00 AM a silent alarm may be used instead of the audible alarm

- Document the time the alarm monitoring company received the alarm
- When conducting a silent alarm, ensure that the alarm is tested the following morning noting the time the alarm signal was received
- Also refer to Licensure Requirements OAC 1701-17-25 Emergency Disaster and Preparedness

Fire Extinguishers K-355

- Inspect portable fire extinguishers monthly and maintain annually. NFPA 10 2010
- Change chemical for dry chemical fire extinguishers every six years
- Conduct 12-year hydrostatic vessel test. NFPA 101 7.3.1.2.1
- Hydrostatically test CO2 portable fire extinguisher vessels every five years
- Ensure that fire extinguishers having a gross weight not exceeding 40 lbs. (18.14 kg) are installed so that the top of the fire extinguisher is not more than 5 feet above the floor
- Ensure that fire extinguishers having a gross weight greater than 40 lbs. (18.14 kg) shall be installed so that the top of the fire extinguisher is not more than 3.5 feet above the floor. In no case shall the clearance between the bottom of the fire extinguisher and the floor be less than 4 inches

Fire Safety Plan K-711

- Develop a written health care occupancy fire safety plan that addresses all the following components:
  - Use of alarms
  - Transmission of alarm to fire department
  - Response to alarms
  - Isolation of fire
  - Evacuation of immediate area
  - Evacuation of smoke compartment
  - Preparation of floors and building for evacuation
  - Extinguishment of fire
- Ensure that evacuation routes are clearly marked on the plan including alternative routes

Risk Assessment K-901

- Risk Assessments for use in NFPA 99 are limited to use with new construction, remodeling and renovations. Existing facilities are considered in compliance with the code unless found otherwise per section 1.3.2.3, 2012 NFPA 99

Fire Watch K-346, K-354

- Where a required automatic sprinkler system is out of service for more than ten (10) hours **or** a required fire alarm system is out of service for more than four (4) hours in a 24-hour period, the long-term care regional office shall be notified, and the building shall be evacuated or an approved fire watch system be provided for all parties left unprotected by the shutdown until the sprinkler system or fire alarm system has been returned to service. NFPA *101* section 9.7.6
- A fire watch should involve one additional trained staff beyond normal facility staffing. These individuals are specially trained in fire prevention and in occupant and fire department notification and understand fire safety.
- A written log or documentation of fire watch rounds should be kept and available for inspection
- Fire watch policy must address**:**
    - Notification of the local fire department
    - Notification of the State Health Department and Fire Marshal's office (in the event of a catastrophe)
    - Facility procedures must address separate situations in which the sprinkler system and/or the fire alarm system is out of service for more than ten hours (automatic sprinkler system) or four hours (fire alarm system) in a 24-hour period

Fire Safety Evaluation Survey (FSES)

- The Fire Safety Evaluation Survey (FSES) is a measuring system that compares the level of safety provided by an arrangement of safeguards that differ from those specified in NFPA 101, Life Safety Code. The FSES is to be utilized for specific deficiencies that cannot be corrected or will constitute an extreme financial hardship and undue burden on the facility. The FSES will be conducted for a specific deficiency or K Tag and is not intended or designed to be used for deficiencies or K Tags that can be corrected. The FSES will reflect all deficiencies that are present the day that the FSES was completed
- An FSES may be conducted by a qualified individual such as an engineer or architect. The facility may state to request an FSES as part of their plan of correction. An FSES must be done each time a Life Safety Code survey is conducted. In order to use the FSES as an equivalency to the Life Safety Code the facility must meet conditions listed in Table 8 of the FSES. (CMS Form 2786T)

Fireplaces (gas and solid fuel burning)

- NFPA 101 2012 Edition allows:
  - Gas fireplaces:
    - The smoke compartment must be protected throughout with quick response sprinkler heads;
    - The fireplace shall include a sealed glass front with a wire mesh panel or screen;
    - Controls for the fireplace shall be locked or located in a restricted location; and
    - Electronically supervised carbon monoxide detector shall be provided in the room where the fireplace is located.
  - Solid fuel burning fireplaces:
    - Shall not be in a compartment containing patient sleeping areas;
    - The room or area shall be separated from patient sleeping areas by a one-hour fire resistance rating;
    - Fireplace is equipped with an enclosure guaranteed against breakage up to a temperature of 650 degrees Fahrenheit and constructed of heat tempered glass or other approved material; and
    - Electronically supervised carbon monoxide detector shall be provided in the room where the fireplace is located

Generators K-292, K-511, K-916, K-918

- Inspect all generators weekly and exercise under load for 30 minutes per month in accordance with NFPA *99*, 2012 section 6.4.4.1.1.3 and NFPA 110 2010 Edition. Maintenance and testing of essential electrical system
- The monthly testing of Level 1 and Level 2 EES needs to be conducted by one of the following two methods:
  - Under operating temperature conditions or at not less than 30 percent of the EPS nameplate rating
  - Loading that maintains the minimum exhaust gas temperatures as recommended by the manufacturer
- Diesel-powered EPS installations that do not meet the above requirements shall be exercised monthly with the available EPS load and exercised annually with supplemental loads at 50 percent of nameplate rating for 30 minutes, followed by 75 percent of nameplate rating for 60 minutes, for a total of 1.5 continuous hours
- Ensure that the startup and or cool down times are not included in the 30- minute load test

- Maintain all records of inspections and running under load. Records should include at least:
    - Date of inspection
    - Time of inspection
    - Generator's general condition (leaks, hoses, fuel supply, oil, belts, battery, cooling system, transfer switch)
    - Start and end times of the load test including start-up time and cool- down time
    - Generator output readings during load test
    - Signature of individual conducting inspection, testing, or repair
- Ensure that there is battery powered emergency lighting at generator set locations inside a facility (a flashlight is not considered emergency lighting). Lighting from vehicles is an acceptable means of providing emergency lighting for generator sets located outside and accessible
- NFPA 99 requires an emergency generator in a health care facility when life support equipment is utilized. Monitor facility supplies to ensure that a liquid fuel supply is available for use by the emergency generator including fuels such as propane and fuel oil
- Emergency generator sets are required to have a minimum of a 90-minute fuel supply
- Facility must have a contingency plan and a written agreement for the resupplying of fuel in an emergency
- Providers with natural gas generators who do not have a backup fuel source must be able to demonstrate that the reliability of natural gas fuel will not be interrupted to maintain compliance. This can be proven with a letter from natural gas vendor that contains:
    - A statement the fuel source is reasonably reliable
    - Description supporting the reasonable reliability assertion
    - A statement of the low likelihood of an interruption
    - Description supporting the low interruption assertion
    - Signature from technical personnel
    - Maintain a remote generator annunciator panel in an attended area that is staffed twenty-four hours a day seven days a week. This is required in every zone of the facility audio and visual.
    - Ensure that electrical power is transferred within 10 seconds of interruption when using a generator.
    - Facilities with an off-site fuel source are required to have a letter of reliability from their natural gas provider that contains:
    - Statement that the fuel source is reasonable reliable

- Description supporting the reasonable reliability assertion
- Statement of the low likelihood of an interruption
- Description supporting the low interruption assertion
- Signature from technical personnel
- Emergency (battery powered) lighting must be installed in the generator room to Supply task lighting
- For outdoor generators, lighting may be supplied by vehicle lights if the generator is accessible and the vehicle lights supplies sufficient illumination to provide task lighting

Hazardous Areas K-321

- A hazardous area is defined as an area of a structure or building that poses a degree of hazard greater than that normal to the general occupancy of the building or structure, such as areas used for the storage or use of combustibles or flammables; toxic, noxious or corrosive materials; or heat-producing appliances. NFPA 101 18/19.3.2.1
- New construction - any hazardous area is required to have a one-hour fire separation, including a 45-minute rated fire door with positive latching hardware and a self-closing device, and to be completely sprinklered
- For existing facilities, ensure that any hazardous area is separated by a one- hour fire construction or completely sprinklered. If area is sprinklered, maintain a solid wood core door with automatic self-closing device equipped with positive latching hardware that resists the passage of smoke
- Monitor mechanical rooms to ensure that the rooms are clean and orderly and are not used for combustible storage
- Ensure that storage is in accordance with the Life Safety Code and Local Fire and Building Codes
- Ensure that there is a minimum of a 3-foot clearance around all electrical panels and heat producing equipment such as a gas furnace
- Change in use of a room can create a hazardous area
- Hazardous areas for existing facilities include but are not limited to:
    - Boiler and fuel-fired heater rooms
    - Laundries greater than 100 square feet
    - Repair shops and paint shops
    - Laboratories if classified as a severe hazard
    - Combustible storage rooms/spaces (over 50 square feet)
    - Trash collection rooms
    - Soiled linen rooms

- Smoking rooms

Heating, Ventilation, Air Conditioning, & Cooling (HVAC) K-521, K-522, K-372

- Ensure that all HVAC units are installed and maintained in accordance with *NFPA 90A, Standard for the Installation of Air-Conditioning and Ventilation Systems*, 2012 Edition
- Examine each fire, smoke or ceiling damper every two years to ensure that it is not rusted or blocked giving attention to hinges and other moving parts. At least every 4 years, fusible links (where applicable) shall be removed; all dampers shall be operated to verify that they fully close; the latch, if provided, shall be checked; and moving parts shall be lubricated as necessary
- Monitor facility plant to ensure that all air filters are kept free of excess dust and combustible material. Unit filters should be renewed or cleaned according to manufacturer's recommendations
- Semi-annually (twice a year) inspect electrical equipment automatic filters and observe the operation cycle to ensure that the motor, relays, and other controls function as intended. Inspect drive motors and gear reductions at least semiannually and lubricate when necessary

Hood Suppression System K-324

- Inspect and maintain the hood suppression system in accordance with *NFPA* 96 2011 Edition
- Suppression systems inspected semi-annually
- Hood and exhaust ducts must be cleaned at least annually
- Verify that fuel sources are automatically disconnected when the extinguishing system is activated
- Clearly mark and locate the extinguishing system activator in the path of egress from the kitchen
- Verify that activation of the extinguishing system activates the facility fire alarm
- Ensure that the hood suppression system is UL 300 compliant
- Train staff in the operation of any range hood extinguishing system
- Monitor all cooking and warming locations to limit or avoid creating grease laden vapors in accordance with *NFPA 96 2011 Edition*
- Ensure that there is a K Type fire extinguisher installed in the kitchen

Interior Finish, Furnishings, & Decorations K-331, K-332, K-211, K-751, K-752, K-932

- NFPA 101 2012 Edition now allows certain decorations/finishes:
    - Decorations on non-fire-rated doors do not interfere with the operation of any required latching of the door and do not exceed area limitations

- Decoration do not exceed 30 percent of the wall, ceiling, and door areas inside any room or space of a smoke compartment that is protected by an approved supervised automatic sprinkler system
- Decoration do not exceed 50 percent of the wall, ceiling, and door areas inside patient sleeping rooms having a capacity not exceeding four persons, in a smoke compartment that is protected throughout by an approved, supervised automatic sprinkler system
- Interior finish that is an approved existing installation of materials applied directly to the surface of walls and ceilings in a total thickness of less than 1/28 in. shall be permitted to remain in use
- Facilities are required to maintain documentation as to the flame and smoke spread ratings of all their interior finishes that have been replaced and or updated
- Corridor finishes must be Class A or B (existing buildings)
- Interior finishes for non-corridor areas may be Class A, B or C if the building is fully sprinklered (existing buildings)

- **o** Monitor facility to ensure that the means of egress is continuously maintained free of all obstructions or impediment to full instant use in the case of fire or other emergency. No furnishings, decorations, or other objects shall obstruct exits, access thereto, egress there from, or visibility thereof. *NFPA 101* section 7.1.10
- **o** Monitor facility to ensure than no signs or decorations are attached to sprinkler heads or exit signs
- **o** Inspect curtains for flammability, review labels, or tags. Section 10.3.1 requires these materials to be flame resistant as demonstrated by testing in accordance with NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*
- **o** Fabrics can be made flame resistant by chemical treatment. However, such treatments can be made ineffective by laundering, dry cleaning or water leaching. Maintain records to document that treated fabrics are maintained in accordance with the manufacturer's specification to retain flame resistance
- **o** Monitor facility to ensure that the facility does not have combustible decorations unless they are flame-retardant. Exception: Combustible decorations, such as photographs and paintings, in such limited quantities that a hazard of fire development or spread is not present
- **o** Monitor use of outdoor decorations that are placed near the building as these can create a hazard, e.g., hay bales. Consider alternative to mulch in outside bedding areas to reduce the risk of fire
- **o** Monitor facility to ensure that furnishings or decorations of an explosive or highly flammable character are not used. Examples of explosive or highly flammable decorations include live or cut Christmas trees and pine branches/roping/garland; not effectively flame-retardant treated crepe paper decorations; finely divided tinsel-like material, garland; pyroxylin plastic decorations.

Laundry/Trash K-321, K-754

- Monitor facility to ensure that trash (including recycle bins, shredding paper containers) and soiled linen containers do not exceed 32 gallons in a 64- square foot area. o Recycle Bins NFPA 101 18/19.7.5.7.2

Oxygen Storage K-923, K-902, K-906, K-909, K-927

- Monitor facility to ensure appropriate oxygen storage verifying that:
    - Doors are secured against unauthorized entry
    - Interior doors of storage locations are equipped with self-closing devices and positive latching hardware to establish the required separation. Door must have at least a ¾ hour fire rating when transferring of liquid oxygen occurs within the storage location
    - Oxygen cylinders are separated from combustible materials by a minimum distance of five feet if the entire storage location is protected by an automatic sprinkler system
    - Liquefied gas container storage is mechanically ventilated or has natural ventilation to the outside
    - Cylinder and container storage locations meet the temperature limitations
    - Where enclosures (interior or exterior) for supply systems are located near sources of heat, such as furnaces, incinerators, or boiler rooms, they shall be of a construction that protects cylinders from reaching temperatures exceeding 130°F (54°C)
    - Ordinary electrical wall fixtures in oxygen supply rooms are installed in fixed locations not less than five feet (1.5 m) above the floor to avoid physical damage
    - Monitor facility to ensure that oxygen cylinders are protected to avoid damage to the cylinder, valve, or safety device. Such cylinders shall not be stored near elevators, gangways, or in locations where heavy moving objects will strike them or fall on them
    - Monitor facility to ensure that freestanding cylinders are properly chained or supported in a proper cylinder stand or cart
    - Monitor oxygen storage area to ensure the separation of full and empty oxygen cylinders
    - Monitor facility to ensure that smoking, open flames, electric heating elements, and other sources of ignition do not occur within storage locations or within 20 feet of outside storage locations
    - Maintain non-smoking and no smoking signs in areas where oxygen is used or stored
    - Maintain a precautionary sign, readable from a distance of five feet that is conspicuously displayed on each door or gate of the storage room or enclosure.

The sign shall include the following wording as a minimum**:**

"CAUTION OXIDIZING GAS(ES) STORED WITHIN NO SMOKING"

- Ensure that liquid oxygen is transferred in an area in a separate portion of the facility away from where residents reside and separated by a 1- hour fire resistive construction, is mechanically ventilated, sprinklered and has a ceramic or concrete floor
- Monitor facility to ensure that the area is posted with signs indicating transferring is occurring and that smoking in the immediate area is prohibited

Portable space heating devices K-781

- Portable space heating devices are prohibited in health care occupancies. NFPA 101 section 18.7.8, 19.7.8 Exception: portable space-heating devices shall be permitted to be used in non-sleeping staff and employee areas where the heating elements of such devices do not exceed 212 degrees F (100 degrees C)
- If a facility is utilizing space heaters, then the facility must maintain documentation/ policies consistent with the Life Safety Code

Smoke Detectors K-347

- Maintain and calibrate smoke detector systems in accordance with *NFPA* 72 2010 Edition
- Test all smoke detectors at least annually to ensure that each detector is operative and produces the intended response
- Check smoke detector sensitivity within one year of installation and every 2 years thereafter. Maintain specs and range of testing
- NFPA 72 requires smoke detectors to be sensitivity tested at certain intervals and those test results must be documented. A self-monitoring system meets the test criteria of NFPA 72 even without individual smoke detector testing with a special sensitivity testing device. However, the self-monitoring system does not meet the documentation requirements, because sensitivity records must be available for review. The facility can either produce a printed sensitivity report from the fire alarm panel (must be dated within the required timeframe before the date of inspection)
- The sensitivity report from a self-monitoring system will most likely be in a format that does not clearly show the sensitivity levels of each smoke detector. If this is the case, then the facility should have some documentation to show how numbers in the sensitivity report translates to actual sensitivity levels that can be compared to the listed sensitivity range for all smoke detectors
- Ensure that smoke detectors are installed the appropriate distance from intake and exhaust ventilation. No closer than 3 feet
- Ensure sensitivity tests reports have all required information pertaining to the ranges of the sensitivity of the smoke detectors and the time it took to activate

Smoking Regulations K-741

- Monitor facility to ensure that ashtrays of noncombustible material and safe design are provided in all indoor and outdoor areas where smoking is permitted
- Provide metal containers with self-closing cover devices into which ashtrays can be emptied that are readily available to all areas where smoking is permitted
- Evaluate smoking areas for use of gravel rather than flammable mulch around building
- Maintain required **"OXYGEN IN USE"** signs. Signs may be required in non- smoking facilities if entrances are not marked with smoking prohibited in this facility signage
- Monitor facility to ensure that smoking does not occur in any location where oxygen is in use, regardless of whether supplied by comparators, concentrators, tank, direct flow, wall unit, piped-in system, portable backpack, etc.
- Refer to OAC 3701-17-20 for additional licensure requirements regarding smoking and the use of flame producing devices. NFPA 101 18/19.7.4

Sprinkler System K-351, K-352, K-353

- Inspect and maintain sprinkler system in accordance with *NFPA* 25 2011 Edition. Retain maintenance records of the sprinkler system for the preceding 12 months and ensure availability for inspections
- Gauges shall be replaced every 5 years or tested every 5 years by comparison with a calibrated gauge. Gauges not accurate to within 3 percent of the full scale shall be recalibrated or replaced
- Water-flow alarm devices including, but not limited to, mechanical water motor gongs, that provide audible or visual signals shall be tested quarterly. Vane- type water-flow devices and pressure switches that provide audible or visual signals shall be tested annually
- Testing the water-flow alarms on wet pipe systems shall be accomplished by opening the inspector’s test connection. Fire pumps shall not be turned off during testing unless all impairment procedures contained in Chapter 15 are followed
- Fire pumps shall be tested conducted under minimum, rated, and peak flows of the fire pump by controlling the quantity of water discharged through approved test devices annually
- A weekly test of electric motor-driven fire pump assemblies shall be conducted without flowing water. This test shall be conducted by starting the pump automatically. The pump shall run a minimum of 10 minutes
- A weekly test of a diesel engine-driven fire pump assemblies shall be conducted without flowing water. This test shall be conducted by starting the pump automatically, and the pump shall run a minimum of 30 minutes
- Monitor facility to ensure that there are no gaps in ceiling adjacent to sprinkler heads. NFPA 101 6.2.7

- Ensure that all storage is kept at least 18 inches below and away from any sprinkler head
- Monitor facility to ensure that cubicle curtains are installed to prevent interference with the sprinkler system
- Maintain a supply of at least two spare sprinkler heads for each type of sprinkler used in the facility. (Note- more than two sprinkler heads may be required depending on the number of heads used in a facility). Keep the sprinkler wrench with the spare sprinkler heads
- Ensure that the same type of sprinkler head is used throughout each compartment. (Note there are exceptions for special areas such as boiler rooms which may have higher than normal temperatures.) According to NFPA 13 2010 Edition, a compartment is defined as a space completely enclosed by walls and a ceiling. The compartment enclosure is permitted to have openings to an adjoining space if the openings have a minimum lintel depth of 8 in. (203 mm) from the ceiling
- Maintain sprinkler heads clean, dust free, and paint free
- 2010 NFPA 13 describes fully sprinkler coverage to include all:
    - Closets – must have sprinkler protection
    - Area behind dryers in laundry
    - Walk-in coolers/freezers
    - Linen/trash chutes
    - Attic spaces
    - Overhangs that extend more than 48” from building with limited unless construction of non-combustible or limited combustible materials according to 2010, NFPA 13, Chapter 8
    - Elevator machine rooms and shaft space with limited exceptions according to 2010, NFPA, Chapter 8
    - Electrical rooms with limited exceptions according to 2010, NFPA 13, Chapter 8

Vertical Openings K-311, K-223, K-541

- Ensure that stairways, elevator shafts, light and ventilation shafts, trash, laundry chutes and other vertical openings, including pneumatic rubbish and linen systems, that open directly onto any corridor is sealed by fire-resistive construction to prevent further use or is provided with a fire door assembly having a fire protection rating of one hour with self-closing device and positive latching hardware
- Collection rooms must be dedicated for the collection function only
- Monitor facility to ensure that the area under stairways is not used for storage, unless by special design
- Ensure that all chute openings are secure from accidental falls

Waivers

Temporary Construction Waivers

- The purpose of a temporary construction waiver (TCW) is to allow a facility additional time to obtain bids, permits, architectural designs or plans, plan approval, construction time, etc.
- To qualify for a temporary construction waiver, the correction period required must be for more than 90 days from survey exit date
- Documentation must be submitted into the EIDC system supporting the facility's TCW request such as construction bids, pricing quotes, and signed contracts
- Facility must contact their Regional Office if they are unable to meet their original time frame for completion. A good faith effort must have been made for a facility to be granted an extension from CMS

Continuing Waivers

A continuing or annual waiver is for deficiencies that are not covered by the Fire Safety Evaluation Survey (FSES) and are structurally impossible or impracticable to correct and are an undue burden and financial hardship on a facility.

- To be eligible for a continuing waiver the following criteria must be met:
  - Must not adversely affect the safety & health of the residents
  - Must not adversely affect the safety & health of the staff
  - Must be a financial hardship and undue burden on the facility
  - Documentation must be provided to support the claim of no adverse effect on residents and staff, and a financial hardship to correct
- Continuing waivers must be renewed from year to year along with all required supporting documentation

List of Required Documents

The following listing is of various system inspection, testing, and/or documentation that are normally requested by surveyors during the annual and/or complaint surveys involving life safety code. These should be maintained in the facility and retained for at least 24 months or longer based on the last annual survey.

- Facility diagram showing layout, room designation and exits
- Copy of any waivers that are in effect
- Emergency Lighting (Battery Operated):
  - Test monthly for 30 seconds
  - Test annually for 90 minutes

- Electrical Wiring Certification-Every two years
- Fire Alarm
    - Monthly, Quarterly, semi-annual and annual testing
    - Batteries every 4 years
- Fire Dampers
    - Test and lube every 4 years
- Fire Department Consultation-Annual
- Fire Drills
    - One per month, per shift, per quarter
- Fire Pump (if applicable)
    - Weekly
    - Monthly
    - Annual
- Flame Retardant Treatments
- Generator
    - Weekly inspection
    - Monthly exercising
    - Annual Load testing (is applicable)
    - Annual Inspection Report
- Hood Suppression
    - Semi-annual (surveyors will need to see at least the last two)
    - Follow up repairs and corrections completed from semi-annual inspection
    - Cleaning reports
- Sprinkler System
    - Check pressure gauges - weekly (dry)
    - Check pressure gauges monthly (wet)
    - Quarterly inspection
- Annual inspection
    - 5yr. internal inspection if required
    - 5yr. standpipe hydro test
- Smoke detectors
    - Test functionality annually
    - Test sensitivity within one year after installation

        - Test sensitivity every two years afterwards
    - Misc. Items (if necessary)
        - Elevator maintenance, state certificate and state inspection
        - Medical gas certificate
        - Boiler certificate (annual)
    - Facility Policies
        - Fire Alarm
        - Fire Drill
        - Fire Procedures
        - Fire Watch
        - Smoking
        - Generator use, maintenance and malfunction
        - Power strips use
        - Portable space heaters

*Note: Listing may not include all documentation required to demonstrate compliance with the LSC

Documentation and Recordkeeping for Life Safety Code

Life Safety Code recordkeeping and documentation compliance is important for a successful Life Safety Code Survey. Documentation is often one of the top reasons a K-Tag is cited. Being organized is important to ensure that all inspections, testing and maintenance (ITMs) have been completed in accordance to the code. It is imperative that LSC documentation is organized in one place. A survey binder is a uniform format to maintaining LSC documentation. There are advantages to maintaining LSC documentation all in one place. First, it can speed up the LSC documentation review task of the survey and second, it reduces the likelihood that documentation is misplaced or lost. Additionally, it is important that more than one person knows where the Life Safety Code documentation and records (i.e., binder(s)) are kept.

Checklist are a useful tool when performing life safety system ITMs. Compliance tools such as checklist should be filled out in their entirety-no blanks. If there is a section of the checklist or a form that does not apply to your system, indicate that using “N/A”. When filing forms and checklist and/or placing them in a documentation binder, the documentation should be filed in the most recent to the oldest sequence. This will allow you, your administrator or a surveyor to easily access the most recent documentation for the ITMs. The survey binder should be maintained in a manner that allows for the thinning of records and documentation. Thinned documentation and records should be maintained in accordance with state, federal and facility recordkeeping requirements and policies.

There are a number of different possibilities when setting up the LSC survey binder. In general, it is recommended that the binder contain all LSC documentation since the prior LSC survey cycle but not less than 12 months. The order in which you set up the LSC binder is up to you. The list below provides an example of documentation that should be maintained in a LSC survey binder (it is not all-inclusive list).

- Building information
- Electrical Wiring Certification (every two years-keep most recent in binder)
- Smoking Policy
- Fire Drills
- Fire Department Consultation
- Systems Out of Service (Fire Watch)
- Fire Alarm System/Automatic Dialer
- Smoke Detector Sensitivity Testing
- Battery-operated Smoke Alarm Testing
- Sprinkler System/Fire Pump
- Kitchen Hood System
- Portable Fire Extinguishers
- Emergency Generator
- Battery-operated Emergency Lights/EXIT Signs
- Fire/Smoke Dampers

- Interior Finishes/Decorations/Drapes & Curtains
- Upholstered Furniture/Mattresses

LSC Federal Monitoring Surveys (FMS)

The list below contains items that may be requested during a LSC FMS. According to CMS, "LSC FMS' consist of a FOSS or comparative survey. An EP survey will be conducted with all

LSC FMS surveys… LSC comparative surveys will occur within 60 calendar days after a State recertification survey." (CMS, 2021). ***Please note:*** Not all items may be requested; not an all-inclusive list (other items may be requested as well)

1. **Copies of the following:**
    a. Original and current plans: LSC Plans, blueprint, or code footprint
    b. Resident list and room numbers (sorted by room number)
    c. Key personnel list
    d. Administrator's Business Card
    e. Waivers/variances/exceptions and documentation of additional safety measures ***if used***
    f. Equivalencies: Fire Safety Evaluation System (FSES) and Performance Based Design, ***if used***
    g. List of 1135 waivers, ***if used***
2. **Review the following specifications/installation instructions:**
    a. Fire stopping products: fire caulk/putty/pillows/cable trays, UL design #, etc.
    b. Portable fireplaces and space heaters
    c. Foam insulation
    d. Flame retardants, policy and procedures, application documentation
    e. UL design # of rated ceiling assembly and specifications on old and new ceiling tiles
    f. Interior finish ratings: wall/ floor/roof coverings
    g. Door gaskets/astragals
    h. Curtains/cubicle curtains
    i. Furniture
    j. Electrical components of furniture
    k. Power strips
    l. Mattresses
    m. Fire retardant treated wood
3. **Review of Inspection, Testing and Maintenance (ITM), Training, and Policies and Procedures**

a. Fire Drills
    i. Drills (15 months)
    ii. Fire alarm monitoring company receiving log (past 15 months)
    iii. Policies and procedures, including fire plan that includes the following elements:
        1. 1) Use of alarms; 2) Transmission of alarms to fire department; 3) Emergency phone call to fire department; 4) Response to alarms; 5) Isolation of fire; 6) Evacuation of immediate area; 7) Evacuation of smoke compartment; 8) separation of floors and building for evacuation; and 9) Extinguishment of fire

4. Fire reports/investigations/Fire Watches/ Interim Life Safety Measures (ILSM) (24 months)

a. Policies and procedures, including fire watch steps outlined in 2011 edition of NFPA 25, chapter 15

5. Fire Extinguishers

a. Monthly/Annual itemized ITM (24 months)
b. Tags from the last year (12 months)
c. Six year and 12-year itemized ITM (2 reports)
d. Invoices (12 months)
e. Policies and procedures

6. Fire Alarm

a. Record of Completion/Record of changes/Re-acceptance tests/Manufacturer's manuals
b. Technician credentials for all work completed on the FA system included with each report
c. Annual and semi-annual itemized ITM showing 100% of the devices connected to the fire alarm were tested with technician credentials, invoices (two years)
d. Fire detector/CO detector
e. Recalls/outdated/broken/nonworking items must be maintained in working condition or removed
f. Itemized sensitivity within one year of newly installed smoke detectors with technician credential, nuisance log (4 years)
g. Policies and procedures, including fire watch

7. Single Station CO and smoke detectors and Resident Room smoke detection tied to Nurse Call System

a. Manufacturer's instructions
b. Itemized ITM (2 years)
c. Policies and Procedures

d. Staff Education

8. Sprinkler Systems

a. Installation/acceptance records
b. Daily/weekly/monthly/quarterly/ annual sprinkler itemized ITM, invoices (2 years)
c. 3-year/5-year,10-year/20-year (2 of each)
d. Aged sprinkler itemized ITM, invoices (2 of each)
e. Itemized ITM for eater storage tanks
f. All valves locked and tampered
g. Policies and Procedures, including fire watch

9. Fire Pumps

a. Installation/ acceptance records
b. Weekly inspections and annua testing, invoices (2 years)
c. Churn test (Electric 10 m/month) and Diesel (30 m/week) (2 years)
d. Policies and Procedures

10. Generator

a. Installation/acceptance tests/specifications/maintenance manual
b. Weekly belts, hoses, battery, fuel, oil, engine, cooling, exhaust and housekeeping (2 years)
c. Monthly load testing w/amperages on each phase, 30 minutes minimum (2 years)
d. Diesel calculations showing 30% of EPS nameplate KW rating, or minimum exhaust gas temperature or annual load bank of 1.5 hours (2 years)
e. Annual verification of transfer time (2 years)
f. Annual fuel test laboratory results (2 years)
g. Triennial 4-hour “available” load test or for diesel @minimum of 30% (6 years)
h. Invoices (2 years)
i. Transfer switch itemized ITM (2 years)
j. Annual/semi-annual itemized ITM (2 years)
k. Fuel supply calculations-Gallons Per Hour at 100% load
l. Lowest amount before refueling
m. Natural gas company letter ensuring disaster will not interrupt service
n. NFPA Risk Assessment of system (K901)
o. Policies and Procedures: Generator malfunctions/refueling/admission of residents requiring life support

11. Fire Doors (doors in fire walls/ stairwells, fire exits, hazard rooms,

chutes/shafts, shutters, WON doors)

a. Annual Itemized ITM, invoices (2 years)
b. Credentials/Qualifications
c. Policies and Procedures

12. Smoke Doors and Corridor Doors

a. Itemized ITM, invoices (2 years)
b. Policies and Procedures

13. Emergency Lighting and Exit Signage

a. Itemized monthly and annual ITM (2 years)
   Specification sheets showing 90-minute capacity, invoices (2 years)
b. Policies and procedures

14. Elevators

a. Current Certificate, annual itemized ITM, invoices (2 years)
b. Pit and shaft properly sprinkled and protected
c. Monthly FF service itemized ITM (2 years)
d. Policies and Procedures

15. Medical Gas/Vacuum/Waste Anesthetic Gas Disposal

a. Installation/acceptance records
b. NFPA 99 Risk Assessment of system (K901)
c. Annual ITM of piping and equipment with vendor credentials (2 years)
d. Verification testing with vendor credentials, invoices (2 years)
e. Policies and Procedures, including transfilling policies for liquid oxygen (cryogenic) and concentrators

16. Range Hood and Suppression Systems

a. Installation/acceptance records
b. Semi-annual suppression system, itemized by hood, ITM and invoices (2 years)
c. Hood cleaning records and invoices (2 years)
d. Annual cooking equipment cleaning and invoices (2 years)
e. Policies and procedures
f. Training for all staff

17. Fire dampers, smoke dampers and fire/smoke dampers (fusible link and electric)

a. Installation/acceptance records
b. Itemized ITM within 1 year of install (4 years)
c. Itemized ITM every 4 years in LTC-exercise, lubricate, replace fusible links (8 years)

d. Policy and procedures, invoices (8 years)

18. **Emergency Preparedness (EP) Plan (from nursing station/security-new Z QSO-21-15-ALL)**
    a. All hazards risk assessment
    b. Resident population assessment
    c. Life support
    d. Policies and procedures
    e. Annual and tabletop exercises with after-action reports
    f. Staff training (2 years)
19. **NFPA 99 Risk Assessment of Facility Systems (K901) Chapters 5-11 (Chap 7, 8, 12 and 13-NA in LTC)**
    a. Chap. 5-Gas and Vacuum Systems
    b. Chap. 7 Information Technology and Communications Systems for Health Care Facilities
    c. Chap. 8 Plumbing
    d. Chap. 9 HVAC
    e. Chap. 10 Electrical Equipment
    f. Chap. 11 Gas Equipment
20. **Boilers**
    a. Current Certificates (insurance company/state boiler unit)
    b. Itemized ITM
21. **HVAC**
    a. Types of HVAC and locations of units, supplies and returns, any changes to system
    b. Manufacturers' manuals
    c. Itemized ITM, invoices
22. **Policies and Procedures and Staff Training**
    a. Fire Alarm and Sprinkler System Fire Watch and copies of fire watches (2years)
    b. Fire Procedures covering all 9 requirements/Fire Training/Evacuation Plan
    c. Admission of those on life support
    d. Smoking/vaping and Recharging, Blank resident assessment
    e. Laundering of kitchen/housekeeping mops/rags and SDS info on chemicals
    f. Oxygen safety training
    g. Cleaning of laundry/lint
    h. Clinical needs assessments and diagram identifying locking devices

i. Oxygen in beauty shop
j. Microwave in resident room
k. Power strips
l. Medical equipment
m. Kashering

23. Chimney, Fireplaces, and Vents

a. Annual Itemized ITM for chimneys, fireplaces, dryer and other vents, invoices
b. Policies and Procedures

24. Electrical-Power Strips/Taps

a. Each bed has a total of 8 outlets before using power strips (new)
b. Specifications of electrical components in furniture
c. Itemized evaluations of strips on install, with major changes and periodically (2 years)
d. Non-patient care area for personal electronics UL 1363
e. Patient care UL 1363A (rack or cart mounted)
f. Patient care UL 60601-1
g. Manuals and specifications of power strips in use and Policies and Procedures

25. Electrical-Fixed and Portable Patient Care Related Electrical Equipment (PCREE)

a. Physical integrity, resistance, leakage current and touch current itemized ITM (2 years)
b. Service manuals, instructions, safety labels and procedures provided by the manufacturer
c. Policies, procedures, and invoices

26. Electrical-EES 1, 2, 3-Mains and Circuit Breakers

a. Itemized ITM on electrical panels and the manufacturer's instructions or NEMA guidelines for each panel on the EES
b. Annual itemized ITM (2 years)
c. Policies, procedures, and invoices

Survey Preparation Tips

- Review prior LSC survey to ensure prior deficiencies have been corrected
- Audit vendor recordkeeping
- Complete any recommended repairs identified during inspection or testing immediately (keep a copy of related invoices available and in the LSC survey binder)
- Know the codes-NFPA 99 and NFPA 101 are the foundation

- Know the associated K-Tags (CMS)
- Use the resources available (NFPA, CMS, DHSS and QIPMO)
- Set-up a free account at nfpa.org
- Know what LSC citations are trending in your state/region
- Do daily maintenance rounds
- Keep a list of LSC vendors contact information available by system in the survey binder (fire alarm, sprinkler, hood, etc.)
- Create a fire drill calendar grid for the entire year in advance to ensure compliance with quarterly fire drills
- Review LSC survey binder at least twice a month

Inspection, Testing and Maintenance (ITM)

ITM is a service program provided by a qualified contractor or qualified property owner's representative where all system components are inspected and tested at the frequency and necessary maintenance is provided. NFPA 101 4.1.1-Inspections, testing and maintenance is the responsibility of the property owner or a designated representative (i.e., facility administrator/maintenance personnel) to ensure compliance. A qualified person is competent and capable and has met the requirements and training for a given field acceptable to the authority having jurisdiction.

NFPA Code Reference List

NFPA 72, 2010 (Fire alarm systems)

NFPA 13 & 25 2011 and *TIA's (Sprinkler systems)

NFPA 80 (Fire rated door assembly/dampers);

NFPA 96 & 17A (Range hood);

NFPA 10 (Portable fire extinguishers)

NFPA 99 2012 & *TIA's

NFPA 70, 2011 (Electrical)

NFPA 110 2010 (Generators)

***Tentative Interim Amendment (TIA)*

***This is not an all-inclusive list*

Life Safety Documentation Requirements Checklist Based on 2012 NFPA 101

Fire Alarm Test Report	Devices/Function	Frequency	NFPA Standard	Date of Most Recent	Compliant?			Comment
					Yes	No	N/A	
Initiating Devices	Waterflow switches	Semi-annual	**72-**2010; 14.4.5					
	Smoke detectors	Annually	**72**-2010; 14.4.5					
	Heat detectors	Annually	**72-**2010; 14.4.5					
	Duct detectors	Annually	**72**-2010; 14.4.5					
	Manual pull stations	Annually	**72-**2010; 14.4.5					
Supervisory Signal Devices	Low air pressure switches	Quarterly	**72**-2010; 14.4.5					
	Low water level switches	Quarterly	**72-**2010; 14.4.5					
	Tamper switches	Semi-annual	**72**-2010; 14.4.5					
Notification Devices	Strobes	Annually	**72-**2010; 14.4.5					
	Horns	Annually	**72**-2010; 14.4.5					
	Bells	Annually	**72-**2010; 14.4.5					
	Chimes	Annually	**72**-2010; 14.4.5					
Interface relays and modules	Magnetic hold-open	Annually	**72-**2010; 14.4.5					
	Air handler shut-down	Annually	**72**-2010; 14.4.5					
	Kitchen hood suppression sys	Annually	**72-**2010; 14.4.5					
	Elevator recall	Annually	**72**-2010; 14.4.5					
	Magnetic locks / Electric strikes	Annually	**72-**2010; 14.4.5					
	Fire pump	Annually	**72**-2010; 14.4.5					
	Smoke dampers	Annually	**72-**2010; 14.4.5					
	CO2/Clean agent suppression	Annually	**72**-2010; 14.4.5					
	Sprinkler dry-pipe/pre-action	Annually	**72-**2010; 14.4.5					
	Overhead rolling fire doors	Annually	**72**-2010; 14.4.5					
Control panel batteries	Charger test	Annually	**72-**2010; 14.4.5					
	Discharge test	Annually	**72**-2010; 14.4.5					
	Load voltage test	Semi-annual	**72**-2010; 14.4.5					

Smoke detector sensitivity test		Installation/ 2-Years	**72**-2010; 14.4.5					
Off-premises monitoring transmission equipment		Annually	**72**-2010; 14.4.5					
Fire Suppression System Test Report								
Portable fire extinguishers	Inspection	Monthly	**10**-2010; 7.2.1.2					
	Maintenance	Annually	**10**-2010; 7.3.1.1.1					
Alternative suppression systems	Kitchen hood sys– inspection	Monthly	**17A**-2009; 7.2.1					
	Kitchen hood sys – test	Semi-annual	**17A**-2009; 7.3.3					
	Halon system – inspection & test	Semi-annual	**12A**-2009; 7.1.1					
	CO2 system – inspection	Monthly	**12**-2011 4.8.1					
	CO2 system – tank weigh	Semi-annual	**12**-2011; 4.8.3.5.1					
	CO2 system – test	Annually	**12**-2011; 4.8.3.2					
	Clean agent system – inspection	Semi-annual	**2001**-2012; 7.1.3					
	Clean agent system – test	Annually	**2001**-2012; 7.1.1					
Water-based suppression systems	Fire pump churn test	Monthly	**25**-2011; 8.3.1					
	Control valve inspection	Monthly	**25**-2011; 13.3.2.1.1					
	Pressure gauge inspection	Monthly	25-2011; 13.2.7.1					
	Fire department connections	Quarterly	**25**-2011; 13.7.1					
	Fire hose valve-Inspection	Quarterly	25-2011: 13.5.6.1					
	Preaction/Dry pipe priming water	Quarterly	**25**-2011; 13.4.3.2.1					
	Sprinkler inspection	Annually	**25**-2011; 5.2.1					
	Piping & hanger inspection	Annually	**25**-2011; 5.2.2					
	Preaction/Dry pipe valve trip test	Annually	**25**-2011; 13.4.3.2.2					
	Main drain test	Quarterly	25-2011;13.2.5.1					
		Annually	**25**-2011; 13.2.5					
	Control valve exercise	Annually	**25**-2011; 13.3.3.1					
	Backflow preventer	Annually	**25**-2011; 13.6.2					
Water-based suppression systems	Anti-freeze test	Annually	**25**-2011; 5.3.4					
	Private service fire hydrants	Annually	**25**-2011; 7.3.2					

	Fire pump flow test	Annually	**25**-2011; 8.3.3					
	Check valve inspection	5-Years	**25**-2011; 13.4.2.1					
	Pressure gauge calibration	5-Years	**25**-2011; 5.3.2					
	Standpipe waterflow test	5-Years	**25**-2011; 6.3.1					
	Private fire service mains	5-Years	**25**-2011; 7.3.1					
	Internal Inspection of piping	5-years	25-2011; 14.2.1					
	Dry Head sprinkler replacement	10-Years	**25-**2011; 5.3.1.1.1.6					
	QR sprinkler head replacement	20-Years	**25**-2011; 5.3.1.1.1.3					
	SR sprinkler head replacement	50-Years	**25**-2011; 5.3.1.1.1					
Additional Testing & Inspection Requirements								
Emergency power generators *(Two sets of manuals are required)*	Inspection	Weekly	**110**-2010; 8.4.1					
	Battery electrolyte level/volt.	Weekly	**110**-2010; 8.3.7.1					
	Monthly load test	20 to 40 days	**110**-2010; 8.4.2 and **99**-2012; 6.4.4.1.1.4					
	Annual load test (if required)	Annually	**110**-2010; 8.4.2.3					
	Annual fuel test	Annually	110-2010; 8.3.8					
	3-Year 4-Hour load test	3-Years	**110**-2010; 8.4.9					
Automatic Transfer Switches	Monthly test with generator	20 to 40 days	**110-**2010; 8.4.6 and **99**-2012; 6.4.4.1.1.4					
Medical gas and Vacuum sys	Maintenance & testing	As per policy	**99**-2012; 5.1.14.4.5					
	Cross-contamination test	After breach sys	**99**-2012; 5.1.12.1.1					
	Purity and pressure test	After breach sys	**99**-2012; 5.1.12.1.1					
Alternative Life Safety Measures	Policy	Review policy	**101**-2012; 4.6.10.1					
	Implementation	Per policy	**101**-2012; 4.6.10.1					
	Fire Watch	Continuous	**25-**2011; 15.5.2					
Fire/Smoke damper test	Smoke barrier walls/duct work	1-year then every 4 years	**80**-2010; 19.4 and **105**-2010; 6.5.2					
Overhead rolling fire doors	Drop test	Annually	**80**-2010; 5.2.1					
Side-hinged, swinging fire doors	Annual test/inspection	Annually	101-2012; 7.2.1.15.2					

'Exit' signs	Illumination inspection	Monthly	**101**-2012; 7.10.9.1					
Elevator recall	Elevators equipped with Fire Fighter Service	Monthly	**101**-2012; 9.4.6.2					
Kitchen Hood Cleaning	Remove grease	Semi-annual	**96**- 2011; 11.4					
Electrical wiring certification	Electrical system	2-years	**NEC/** MO 580-2762					
Local fire department consult	Consult and assist with fire safety	Annually	**19 CSR 30-85.022(33)(A) MO580-2830**					

MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
DIVISION OF REGULATION AND LICENSURE
SECTION FOR LONG TERM CARE REGULATION

CERTIFICATION OF ELECTRIC WIRING

	FACILITY ID NUMBER
FACILITY NAME	FACILITY TYPE ☐ RCF I ☐ RCF* (II) ☐ ALF ☐ ALF** ☐ ICF ☐ SNF
ADDRESS (STREET, CITY, ZIP CODE)	
OWNER	ADMINISTRATOR

THIS IS TO CERTIFY THAT I, THE UNDERSIGNED, HAVE MADE AN INSPECTION OF THE ELECTRIC WIRING IN THE ABOVE-NAMED ESTABLISHMENT, AND FIND THAT THE ELECTRICAL INSTALLATION ☐ **IS** ☐ **IS NOT** ESSENTIALLY IN COMPLIANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE INSOFAR AS THE INSTALLATION IS CONCERNED, AND IS IN SAFE OPERATING CONDITION.

REMARKS

SIGNATURE	PRINT NAME	TITLE
NAME OF COMPANY	TELEPHONE NUMBER	DATE
ADDRESS (STREET, CITY, ZIP CODE)		

RETURN TO:	**MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES** **DIVISION OF REGULATION AND LICENSURE** **SECTION FOR LONG TERM CARE REGULATION** **REGION**
	ADDRESS
	CITY, STATE, ZIP CODE

MO 580-2762 (6-07) DA-176

Certification of Electrical Wiring

https://health.mo.gov/seniors/nursinghomes/pdf/580-2762.pdf

Save Print Reset

MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
DIVISION OF REGULATION AND LICENSURE
SECTION FOR LONG-TERM CARE REGULATION

ANNUAL FIRE DEPARTMENT CONSULTATION

SNF/ICF – 19 CSR 30-85.022(33)(A) and RCF/ALF – 19 CSR 30-86.022(5)(A)
ALL FACILITIES SHALL REQUEST* CONSULTATION AND ASSISTANCE ANNUALLY FROM A LOCAL FIRE UNIT.

*DATE CONSULT REQUESTED	CONTACT PERSON	CONSULT REQUEST FULFILLED? ☐ YES ☐ NO	DATE OF OTHER ATTEMPTS

DATE	FACILITY ID NUMBER

FACILITY NAME	FACILITY TYPE ☐ RCF ☐ ALF ☐ ICF ☐ SNF

ADDRESS (STREET, CITY, ZIP CODE)	COUNTY

CONTACT NAME	TELEPHONE

OWNER	ADMINISTRATOR/MANAGER

This is to confirm that I, the undersigned, have consulted with the Administrator/Manager of the above-named facility and find that this facility is in compliance with all applicable city/county fire prevention codes, and the items indicated below were discussed.

	YES	NO
1. Was assistance given with an actual fire evacuation drill? If yes, please explain.	☐	☐
2. Was assistance given with fire safety training? If yes, please explain.	☐	☐
3. Was fire evacuation planning discussed and facility plans reviewed? If yes, please explain.	☐	☐
4. Was fire protection equipment inspected for maintenance and operation? If yes, please explain.	☐	☐
5. Is the Fire Department aware of special needs resident? If yes, please explain.	☐	☐

OTHER REMARKS

FIRE DEPARTMENT REPRESENTATIVE

REPRESENTATIVE NAME (PLEASE PRINT)	REPRESENTATIVE TITLE	TELEPHONE NUMBER

FIRE DEPARTMENT NAME AND ADDRESS (STREET, CITY, ZIP CODE)

FIRE DEPARTMENT REPRESENTATIVE SIGNATURE	DATE

MO 580-2830 (2-10)

Annual Fire Department Consultation

https://health.mo.gov/seniors/nursinghomes/pdf/580-2830.pdf

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
7-3												
3-11												
11-7												
Weekend												
Holiday												

Fire Drill Grid

Directions:

Plot actual fire drills by shift and month. Minimum compliance is one drill per month, quarterly on each shift. Include weekend drills. Schedule fire drills in advance to assure compliance. Remember that drills should not be predictable. Times should be either one hour before or one hour after the previous drills time for that quarter. You may add internal and external disaster drills to your schedule. The day of the week and the week of the month should also be vary as well.

CMS/DHSS LSC Information

Below is both state and federal information posted on the Missouri Department of Health and Senior Services website:

Remote Annunciator Panel Emergency Power Supply

The requirements in NFPA 99, 2012 edition:

6.4.1.1.17 Alarm Annunciator. A remote annunciator that is storage battery powered shall be provided to operate outside of the generating room in a location readily observed by operating personnel at a regular workstation (see 700.12 of NFPA 70, National Electrical Code). The annunciator shall be hard-wired to indicate alarm conditions of the emergency or auxiliary power source as follows:

1) Individual visual signals shall indicate the following:
    a. When the emergency or auxiliary power source is operating to supply power to load
    b. When the battery charger is malfunctioning
2) Individual visual signals plus a common audible signal to warn of an engine−generator alarm condition shall indicate the following:
    a. Low lubricating oil pressure
    b. Low water temperature (below that required in 6.4.1.1.11)
    c. Excessive water temperature
    d. Low fuel when the main fuel storage tank contains less than a 4-hour operating supply
    e. Over-crank (failed to start)
    f. Overspeed

6.4.1.1.17.1 A remote, common audible alarm shall be provided as specified in

6.4.1.1.17.4 that is powered by the storage battery and located outside of the EPS service room at a work site observable by personnel.

Hard-wired remote annunciators will use the generator storage battery for their emergency power supply. This battery (the car-like battery on the generator) provides them with power to operate under any condition. It is highly unlikely the remote annunciators will have a local battery at or near their location.

NFPA 110, chapter 8 requires facility staff to inspect the generator storage battery weekly, test it monthly, and replaced it immediately during any fault. Facilities should replace the batteries every 24 to 30 months. It also requires the generator to have a constant float-type battery charger with alarms for charger fail, charger AC fail, high battery voltage, and low battery voltage. Facilities cannot use a remote computer monitor or any kind of wireless device for an annunciator.

https://ltc.health.mo.gov/wp-content/uploads/sites/18/2019/03/Remote-Annunciator-Panel-Emergency-Power-Supply.pdf

Posted on 06/05/2018

CMS Fire Safety Information

CMS provided updated Fire Safety information for distribution to surveyors and providers. Please see the information under the heading Fire Safety information provided by CMS for distribution to surveyors and providers- May 23, 2018 below.

Note: *Missouri's state regulation for implementation of an approved fire watch in a SNF is more stringent than the federal regulations. Facility's must comply with state requirements:*

19 CSR 30-85.022(11) (E) requires: When a sprinkler system is to be out of service for more than ***four (4) hours*** in a twenty-four-(24-) hour period, the facility shall immediately notify the department and the local fire authority and implement an approved fire watch in accordance with NFPA 101, 2000 edition, until the sprinkler system has returned to full service. I/II

https://ltc.health.mo.gov/archives/category/emergencydisaster-planning

Fire Safety information provided by CMS for distribution to surveyors and providers- May 23, 2018

Fire in facilities - Sent on 4/7/17

There have been two fires in the Midwest recently where the fire occurred overnight in a locked area and staff did not have access to the room. As a result, staff were unable to take appropriate action before things got out of control. There are many code references that cover this situation, for example: NFPA Standard:

> 2012 NFPA 101, 19.1.1.3.1 All health care facilities shall be designed, constructed, maintained, and operated to minimize the possibility of a fire emergency requiring the evacuation of occupants.

If you have a locked room and none of your staff have keys, how can staff who know there is a fire situation gain access to the area to help fight the fire? Consider your kitchens, staff offices, boiler rooms, laundry rooms, etc. All areas must be maintained and operated to minimize the possibility of a fire.

Have you had a fire? Don't forget to notify your Fire Marshal and State Health Agency.

Fire Watch Policies - Sent 5/2017

Did you know that the outage time was increased for sprinkler outages from four hours to ten hours [***for Missouri this is still four hours-see first paragraph page 41]*** with the adoption of the 2012 Life Safety Code? (The time for fire alarm outages remained the same – four hours.) Does your plan call for a fire watch when there is a water outage? Does your plan say you don't have to do the fire watch if the systems are only down for routine testing and maintenance? If so, you should remove that statement as the fire watch is required for any type of outage. Does your sprinkler impairment plan meet the 2011 edition of NFPA 25? You can view the requirements for free online at NFPA.org. (Go to the 2011 edition of NFPA 25, chapter 15 Impairments.) Are the staff dedicated to the task? Are the rounds

continuous? Do you notify your insurance company when the sprinkler system is out of service? Do you notify the local fire department, Fire Marshal and Health Department? Do you have accurate telephone numbers in the policy or in your emergency numbers/calling tree? Don't forget to in-service staff when you change your policies. Make sure you have a documentation sheet prepared for the person doing fire watch to make it easier – every room, canopies, garages, basement, stairwells, attic spaces – anywhere there are sprinklers. Don't forget to implement the plan when you have an outage. If your sprinkler system has been determined to be obstructed, that also requires a fire watch until the system is flushed or replaced. Failure to implement the plan can be an Immediate Jeopardy.

Are you ready for the NEW annual requirements due 7/5/2017? Sent 6/2017

There are a few new requirements under the 2012 edition of the Life Safety Code that are coming due on July 5th, 2017.

2010 edition of NFPA 80 - Standard for Fire Doors and Other Opening Protectives

Requirements for all fire-rated door assemblies to be inspected and maintained by a qualified person:

3.3.95 Qualified Person. A person who, by possession of a recognized degree, certificate, professional standing, or skill, and who, by knowledge, training, and experience, has demonstrated the ability to deal with the subject matter, the work, or the project.

5.2.3 Functional Testing.

5.2.3.1 Functional testing of fire door and window assemblies shall be performed by individuals with knowledge and understanding of the operating components of the type of door being subject to testing. Is the door and frame free from holes and breaks in all surfaces?

Are all the glazing, vision light frames and glazing beads intact and securely fastened?

Are the doors, hinges, frame, hardware and threshold secure, aligned and in working order with no visible signs of damage?

Are there any missing or broken parts?

Is the clearance from the door edge to the frame no more than 1/8 inch?

Is the door undercut no more than ¾ inch?

Does the active door leaf completely closes when operated from the full open position?

Does the inactive leaf close before the active leaf when a coordinator is used?

Does the latching hardware operate and secure the door in the closed position?

Is the door assembly free from are auxiliary hardware items which could interfere with its operation?

Has the door been modified since it was originally installed?

If gasketing and edge seals are installed, have they been verified for integrity and operation?

2012 edition of NFPA 99 - Health Care Facilities Code

Requirements for receptacle, main and circuit breaker testing and maintenance:

6.3.3.2 Receptacle Testing in Patient Care Rooms

6.3.3.2.1 The physical integrity of each receptacle shall be confirmed by visual inspection.

6.3.3.2.2 The continuity of the grounding circuit in each electrical receptacle shall be verified.

6.3.3.2.3 Correct polarity of the hot and neutral connections in each electrical receptacle shall be confirmed.

6.3.3.2.4 The retention force of the grounding blade of each electrical receptacle (except locking-type receptacles) shall be not less than 115 g (4 oz).

6.3.4.1 Maintenance and Testing of Electrical System

6.3.4.1.1 Where hospital-grade receptacles are required at patient bed locations and in locations where deep sedation or general anesthesia is administered, testing shall be performed after initial installation, replacement, or servicing of the device.

6.3.4.1.2 Additional testing of receptacles in patient care rooms shall be performed at intervals defined by documented performance data.

6.3.4.1.3 Receptacles not listed as hospital-grade, at patient bed locations and in locations where deep sedation or general anesthesia is administered, shall be tested at intervals not exceeding 12 months.

6.3.4.1.4 The LIM circuit shall be tested at intervals of not more than 1 month by actuating the LIM test switch (see 6.3.2.6.3.6). For a LIM circuit with automated self-test and self-calibration capabilities, this test shall be performed at intervals of not more than 12 months. Actuation of the test switch shall activate both visual and audible alarm indicators.

6.3.4.1.5 After any repair or renovation to an electrical distribution system, the LIM circuit shall be tested in accordance with 6.3.3.3.2.

6.4.4.1.2 Maintenance and Testing of Circuitry

6.4.4.1.2.1* Circuit Breakers. Main and feeder circuit breakers shall be inspected annually, and a program for periodically exercising the components shall be established according to manufacturer’s recommendations.

2012 edition of NFPA 99 - Health Care Facilities Code

This requires training of personnel who work with medical gases.

11.5.2.1 Qualification and Training of Personnel

11.5.2.1.1* Personnel concerned with the application and maintenance of medical gases and others who handle medical gases and the cylinders that contain the medical gases shall be trained on the risks associated with their handling and use.

11.5.2.1.2 Health care facilities shall provide programs of continuing education for their personnel.

11.5.2.1.3 Continuing education programs shall include periodic review of safety guidelines and usage requirements for medical gases and their cylinders.

11.5.2.1.4 Equipment shall be serviced only by personnel trained in the maintenance and operation of the equipment.

11.5.2.1.5 If a bulk cryogenic system is present, the supplier shall provide annual training on its operation.

Fire Alarm System Inspection, Testing and Maintenance (ITM) 7-2017

All devices connected to your fire alarm system need to have evidence that each individual device was tested. That means you also need an accurate inventory of every device, complete with a description as to where it is located. The test report needs to list each and every individual device (individually itemized), a description of where it is located, and whether it passed or failed its test.

Get those fire alarm interface relays included in the fire alarm testing process and document each one individually, with a “Pass” or a “Fail” notation. Here is a list of the most common interface relays used in healthcare fire alarm systems:

- Magnetic hold-open devices
- Air handler shutdown
- Kitchen hood suppression system
- Elevator recall
- Magnetic locks
- Fire pump
- Smoke dampers
- Clean agent suppression systems
- Sprinkler dry pipe/pre-action systems
- Overhead rolling fire doors

If the company that completes the fire alarm ITM is different than the range hood and sprinkler company vendors, then provide a copy of that report to the fire alarm company and they can write in the comments section that these devices were tested by ‘vendor’ on ‘date’, and pass/fail.

Don’t forget to keep a disposition of the devices that failed or had a comment regarding how the system is not to code with your semi-annual inspection and testing. That way we know corrections were made and you don’t have to search for paperwork during a survey.

A note about dampers: Electric fire and smoke dampers must be tested annually with the fire alarm system. Fusible link dampers are required to be exercised and lubricated once every four years in LTC/once every six years in hospitals. Electric fire/smoke dampers are required to be tested annually with the fire alarm.

References: NFPA 72 National Fire Alarm and Signaling Code

Useful Websites sent 8/2017

Would you like to read the new 2012 Life Safety Code K-tags? Go to:

https://www.cms.gov/Medicare/CMS-Forms/CMS-Forms/CMS-Forms-List.html

Enter 2786; then choose your form based on your occupancy type. LTC and hospitals use the Healthcare form, 2786R.

Would you like to view the NFPA codes referenced in the K-tags? Go to NFPA.org and sign up (it's free). Then go to the list of codes and standards. Choose free access: http://www.nfpa.org/codes-and-standards/all-codes-and-standards/free-access

Would you like to see the Life Safety Code survey and certification memos? Go to: https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Policy-and-Memos-to-States-and-Regions.html. Enter LSC to filter out the other type of memos.

Fire and Smoke Door ITM – S&C Memo 17-38

The latest S&C memo is 17-38. This is in reference to fire door inspection, testing and maintenance. According to the memo, the new compliance date is 1/1/2018. (It was 7/5/2017). If you have a citation and are unable to complete the work timely, you may use the new compliance date in your Plan of Correction.

Plan review Sent 9/2017

Are you planning on making changes to equipment in your facility? Examples might be a new fire alarm system, sprinkler system, boiler, elevator, generator, range hood, HVAC, locking devices, electrical work, lighting or walk-in refrigerator/freezer? Or perhaps you are thinking of doing some renovations such as adding/removing doors, walls, smoke barriers, wall coverings, ceilings, changes to locking devices (such as the timing of delayed egress), outdoor storage room, outdoor smoking area, canopy, or exits? Do you know the construction type of your facility? (This is important! If it is of non-combustible construction, you can't use wood studs during your renovation.)

Have you run the proposed changes through your State Agency plan review team? If not, you might be making a change that does not comply with the Life Safety Code and/or Health Care regulations. Please send your information in just to make sure. Depending on your State Agency, you might need a code footprint, blue print, stamped/sealed documents from an architect or engineer, or specification sheets on your new finishes, fire stopping products, etc.

Sprinkler Systems – Sent 10/2017

When it is required that all areas of a facility be completely sprinkler protected, make sure that you have coverage under that garage door. We frequently see these areas with a sprinkler above the door, but when the garage door is in the open position, that sprinkler pattern is blocked. You might need to add a side wall sprinkler to ensure full coverage under the garage door.

Do you have painted, loaded (other substances – kitchen grease, cigarette tar, bird nest) or corroded (green or rusty) sprinklers? These are required to be replaced, not cleaned – there is no such thing as a UL listed paint remover.

5.2.1.1 Sprinklers shall be inspected from the floor level annually.

5.2.1.1.1 Sprinklers shall not show signs of leakage; shall be free of corrosion, foreign materials, paint, and physical damage; and shall be installed in the correct orientation (e.g., upright, pendent, or sidewall).

5.2.1.1.2 Any sprinkler that shows signs of any of the following shall be replaced:

1) Leakage
2) Corrosion
3) Physical damage
4) Loss of fluid in the glass bulb heat responsive element
5) Loading
6) Painting unless painted by the sprinkler manufacturer

5.2.1.1.3 Any sprinkler that has been installed in the incorrect orientation shall be replaced.

5.2.1.1.4 Any sprinkler shall be replaced that has signs of leakage; is painted, other than by the sprinkler manufacturer, corroded, damaged, or loaded; or is in the improper orientation.

5.2.1.1.5 Glass bulb sprinklers shall be replaced if the bulbs have emptied. Is your sprinkler system obstructed? You must then complete a flush of the system. If this is not possible and the system must be replaced – don't forget to implement a fire watch until the flush and/or replacement is completed.

4.1.9.1 Where an impairment to a water-based fire protection system occurs, the procedures outlined in Chapter 15 of this standard shall be followed, including the attachment of a tag to the impaired system.

4.1.9.2 Where a water-based fire protection system is returned to service following an impairment, the system shall be verified to be working properly by means of an appropriate inspection or test. Don't forget to keep a disposition of the devices that failed or had a comment regarding how the system is not to code with your inspection and testing. That way everyone knows corrections were made and you don't have to search for paperwork during a survey.

4.3.1 Records shall be made for all inspections, tests, and maintenance of the system and its components and shall be made available to the authority having jurisdiction upon request.

4.3.2 Records shall indicate the procedure performed (e.g., inspection, test, or maintenance), the organization that performed the work, the results, and the date.

References: 2011 edition of NFPA 25 Inspection, Testing and Maintenance of Water-Based Fire Protection Systems

Fire plans Sent 12-2017

With all the scrutiny on emergency preparedness, take a fresh look at your fire plan. Do you have one complete plan or do you have multiple versions in your disaster manual? Do you have multiple 'sections' that are not incorporated into one complete plan? Make sure that everything is in one plan, so there are no conflicts and that the reader does not think they are done reading 'the' plan when in fact there are multiple editions/sections. Also make sure

every manual in your facility has been updated.

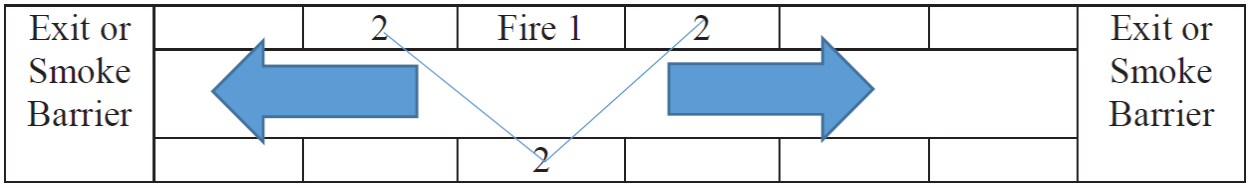
Are the numbers in your plan or calling tree out of date? Or did you use a sister facility's plan that has different phone numbers for your area – Fire Marshal, Health Department and Fire Department?

Do you have an assignment for an evacuation point outside? If you used a sister facility's plan, is the evacuation point accurate for your facility? Have you shared this plan with the local fire department? They might want to set up command in that very spot.

Do you have an assignment for who will be the designee to call 911? This is a new requirement to the 2012 Life Safety Code. This might be a redundant concept, but there is a good reason – what if the fire alarm did not transmit? Or, if it did transmit and the fire department is on the way, staff can now give them good information: (for example) yes, we have a real fire, it is this big, in this room, we used two fire extinguishers and it is not extinguished, we are evacuating to this wing and we will meet you at the front door. Don't forget to have a backup for the night shift if your assignment is the receptionist and that is not a 24/7 position.

Does everyone know to pull a pull station for a fire no matter what? Old plans for 'major' and 'minor' fires are not current/acceptable. Do you have a plan for the preparation and evacuation of a floor or wing?

Do you have a smoke compartment evacuation plan? Once staff determine the need to evacuate, start with residents in immediate surrounding area of fire, then the triangle of rooms around the room of fire origin (next to and across the hall from the room of origin), then the remaining rooms in the smoke compartment working away from the room of origin, trying not to cross the line of fire with the residents. Some residents may be evacuated outside while others may be evacuated beyond a set of smoke doors.



Do your evacuation and fire plans say to evacuate based on if the residents are ambulatory, use wheelchairs or are bedridden? After evacuation of the compartment of origin, and you find the need to evacuate further away, then it would be prudent to evacuate based on ambulation status (ambulatory, wheelchair, bedridden) since you can move faster. But it would not be fair to residents occupying the triangle of rooms around the room of fire origin to be last out because they are bedridden. If you have separate fire and evacuation plans, make sure, they are consistent.

Keep this as simple as possible – if you have a smoke compartment plan from every smoke zone in your building, will staff be able to remember all of those instructions? If they know the above information, they should be able to find the safe zone every time, no matter where they are in the building (and be able to articulate this to a surveyor).

Do you have cross-corridor doors? Examples might be at the entrance to a memory care unit or doors to a service hall. Cross-corridor doors are access control doors that are not smoke barrier doors. You need to evaluate your building and identify where all of your smoke/fire barriers are and if you have cross-corridor doors.

Make sure staff know these are not part of the smoke compartment plan as they sometimes look like smoke barrier doors.

If you care for residents with specialized needs (such as ventilator or bariatric units), have a general plan in place and make sure staff know what to do. If the bed won't fit through the door, you need to have a plan in place for rescue. Always make sure you are adequately staffed for emergencies when you are providing care to special populations.

Does your plan or training materials cover all aspects of what your facility offers staff to fight a fire? Does it cover a bit about the construction, the fire alarm and sprinkler systems, the generator, the smoke barriers, identification of smoke doors, identification of cross–corridor doors that are not smoke barrier doors, all types of fire extinguishers in your facility – including the K or halon, the range hood, etc. It is important for all staff to know what equipment is in the kitchen. There was a recent IJ as a result of a fire where the night shift nursing staff were unable to extinguish the fire because they used the wrong type of extinguisher and didn't know about the range hood or how to activate it.

Do you have the required print copies at the security station or nurse's station? Don't just rely on the computer – it will be the first thing to go down in the event of an emergency. Don't forget to in-service staff when you change your policies.

19.7.2.1* Protection of Patients.

19.7.2.1.1 For health care occupancies, the proper protection of patients shall require the prompt and effective response of health care personnel.

19.7.2.1.2 The basic response required of staff shall include the following:

1) Removal of all occupants directly involved with the fire emergency
2) Transmission of an appropriate fire alarm signal to warn other building occupants and summon staff
3) Confinement of the effects of the fire by closing doors to isolate the fire area
4) Relocation of patients as detailed in the health care occupancy's fire safety plan

19.7.2.2 Fire Safety Plan. A written health care occupancy fire safety plan shall provide for all of the following:

1) Use of alarms
2) Transmission of alarms to fire department
3) Emergency phone call to fire department
4) Response to alarms
5) Isolation of fire
6) Evacuation of immediate area
7) Evacuation of smoke compartment
8) Preparation of floors and building for evacuation
9) Extinguishment of fire

https://ltc.health.mo.gov/wp-content/uploads/sites/18/2018/06/CMS-Fired-Up-information-5-23-18.pdf

Maintenance Resources	
NFPA-Free access to codes	nfpa.org
CMS	
Life Safety Code	https://www.cms.gov/Regulations-and-Guidance/Legislation/CFCsAndCoPs/LSC
Fire safety survey report - 2012 Life Safety Code Healthcare	https://www.cms.gov/Medicare/CMS-Forms/CMS-Forms/Downloads/CMS2786R.pdf
Federal Regulations Manual	https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_pp_guidelines_ltcf.pdf
CMS QSO (Helpful hint: Filter on "LSC")	https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Policy-and-Memos-to-States-and-Regions
CMS Nursing Homes-Survey Resources (under the Downloads heading): F/K Tag Waiver Guide; CMS 20061 Environment	https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Nursing-Homes
CMS Training Website	https://qsep.cms.gov/welcome.aspx
Federal Register 2012 LSC Adoption	https://www.govinfo.gov/content/pkg/FR-2016-05-04/pdf/2016-10043.pdf
DHSS	
DHSS Laws, Regulations & Manual	https://health.mo.gov/seniors/nursinghomes/lawsregs.php#Regs
DHSS Waivers	https://health.mo.gov/living/healthcondiseases/communicable/novel-coronavirus/waivers-laws-rules.php
Emergency/Disaster Planning	https://ltc.health.mo.gov/archives/category/emergencydisaster-planning
Life Safety Code Recalls	https://ltc.health.mo.gov/archives/category/life-safety-code
Disaster Emergency Protocol	https://ltc.health.mo.gov/wp-content/uploads/sites/18/2019/01/Emergency-Protocol-Handout-for-Facilities.pdf
SEMA	
Emergency Managers Listing	https://sema.dps.mo.gov/