

## CHAPTER 37 – LIFE SAFETY PROGRAM

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# CHAPTER 37 – LIFE SAFETY PROGRAM

## A. INTRODUCTION

1. It is the policy of the Smithsonian Institution (SI) to safeguard the lives of all employees and visitors from the danger of fire and smoke through implementation of life safety requirements.
2. The provisions of this Chapter define the processes and requirements for maintaining safety to life from fires.
3. All SI facilities including museums, research facilities or installations, storage facilities, leased spaces, and any other SI facilities not specifically identified by type shall comply with NFPA 101 - Life Safety Code, International Building Code and the requirements of this Chapter. Where conflicts occur, the most restrictive requirement shall apply.
4. This Chapter shall be followed by all SI personnel and contractors.

## B. DEFINITIONS

1. **Critical Risk.** A RAC 1 deficiency, as defined in [Chapter 4, “Safety Risk Management Program”](#), of this *Manual*.
2. **Event.** A planned gathering of people such as, but not limited to: meetings, conferences, film screenings, lectures, seminars, symposia, performances, exhibition opening and cocktail receptions, seated and buffet dinners, luncheons, and press events.
3. **Occupancy Permit.** Document showing that specific critical life safety measures have been completed for a building or portion thereof. Such a permit, signed by the Office of Safety, Health and Environmental Management (OSHEM) director (or his designee), must be issued before occupying a new or modified area with an occupant load over 20 people or where changes impacting life safety have occurred. (See [Attachment 1](#) and [Attachment 2](#).)
4. **Significant Risk.** A RAC 2 deficiency, as defined in [Chapter 4, “Safety Risk Management Program”](#), of this *Manual*.

## C. CHAPTER-SPECIFIC ROLES AND RESPONSIBILITIES

1. **Safety Coordinators** shall:
  - a. Develop and maintain up-to-date all evacuation plans, coordinated with OPS evacuation policies and procedures. Evacuation diagrams shall be posted throughout all normally occupied, non-public areas in SI owned and leased facilities. The following shall be indicated on the evacuation diagrams:

- (1) Walls, doors, stairs, areas of rescue assistance, exit discharge level and other pertinent structural features essential to egress. (Note: exclude features such as fire extinguishers, *abort* switches, *manual* pull stations, non-egress paths, safety showers etc., that only complicate the diagram.)
  - (2) Directional arrows illustrating staff evacuation routes to an exit.
  - (3) The assembly point for evacuating personnel away from the building.
  - b. Ensure supervisors are familiar with evacuation procedures and are discussed with their employees yearly.
  - c. Ensure all required means of egress have the required illumination per the Life Safety Code and exit signage to direct occupants to the nearest exit and away from the building under both normal and emergency power conditions.
  - d. Ensure exit doors are maintained in good operating condition, in compliance with NFPA 101 – Life Safety Code and NFPA 80 – Standard for Fire Doors and Other Opening Protectives.
    - (1) Doors in the means of egress are not locked nor have other impediments to prevent or hinder exiting.
    - (2) Doors in the means of egress do not require more than one single action to open.
    - (3) Fire and smoke barrier doors are not blocked/propped open.
  - e. Immediately correct any condition that is an imminent danger to life safety and inform OSHEM of such condition.
  - f. Ensure self-inspections of facilities are conducted to confirm that means of egress components are unobstructed and maintained free of storage.
  - g. Ensure all special event coordinators have received life safety training.
  - h. Where deemed necessary by OSHEM, ensure occupancy placards are mounted in public areas. (See [Attachment 3](#) for the Occupancy Placard template.) Ensure occupancy limits are enforced.
  - i. Ensure all events comply with the requirements of this Chapter and the attached checklist.
2. **Building Managers** shall:
- a. Maintain exit doors in good operating condition and in compliance with NFPA 101 – Life Safety Code requirements and NFPA 80 – Standard for Fire Doors and Other Opening Protectives.
  - b. Retain an updated list of occupant loads for all public spaces within their facility. Occupant loads to be based on NFPA 101 – Life Safety Code and determined by OSHEM.

- c. Request OSHM to issue an Occupancy Permit for projects outside the purview of Office of Planning Design and Construction (OPDC), but which may affect fire protection/life safety. See [Attachment 1](#) for review items.
  - d. Ensure all building features and systems impacting life safety are operational and adequately maintained.
3. **Supervisors** shall:
- a. Instruct personnel, under their supervision, on emergency exit routes from their work area to outside assembly points and all other evacuation procedures.
  - b. Provide accommodations for people, under their supervision, needing special assistance in evacuating the building or assist them to designated area of rescue assistance (ARA).
4. **Personnel Movement Officer (PMO)** shall:
- a. Survey their designated area to ensure staff have evacuated upon activation of the fire alarm system.
  - b. Ensure arrangements are in-place to aid occupants requiring assistance in evacuating the building.
  - c. Report to the Safety Coordinator at the assembly location status of the evacuation, including unaccounted for occupants.
5. **Employees** shall:
- a. Evacuate the facility upon activation of the fire alarm system or follow emergency instructions provided by VOIP or communicated by other means.
  - b. Keep stairwell and other fire doors closed at all times.
  - c. Keep hallways, exit doors, stairways, and access aisles clear of storage, combustibles and obstacles at all times.
6. **Office of Planning, Design, & Construction (OPDC)** shall:
- a. Ensure construction activities adhere to life safety requirements in accordance with this *Manual*, SI Fire Protection and Life Safety Design Manual and the applicable codes, standards and guidelines.
  - b. Request an Occupancy Permit from OSHM for all projects in an area with an occupant load of 20 or more, or where changes impacting life safety have occurred. Note: A request must be submitted to OSHM at least 2 weeks prior to the desired effective date of the Occupancy Permit. See [Attachment 1](#) for review items.

7. **Office of Protection Services (OPS) or Resident Security Force** shall:
  - a. Ensure trained, knowledgeable security personnel are available to investigate fire alarms, evacuate staff and visitors, and interface with emergency responders.
  - b. Create and maintain up-to-date emergency evacuation policies and procedures. Collaborate with Safety Coordinators to ensure individual facility evacuation plans are consistent with OPS evacuation policies and procedures.
  - c. Conduct unannounced evacuation drills at least once annually.
  - d. Ensure building occupants are safely evacuated away from the building.
  - e. Enforce maximum building occupant loads. This includes the retention of an updated list of occupant loads for all public spaces within the facility. Occupant loads to be based on NFPA 101 – Life Safety Code and determined by OSHM.

## **D. PROGRAM COMPONENTS**

### **1. Occupancy**

- a. The maximum occupant load for a given room, area, gallery or building is not to be exceeded under any circumstances.
- b. An Occupancy Permit, signed by the OSHM director (or his designee), must be issued before occupying a new or modified area (SI owned or leased) with an occupant load over 20 people or where changes impacting life safety have occurred. An Occupancy Permit is to be requested from OSHM at least 2 weeks before the desired effective date of the permit. (See [Attachment 1](#) and [Attachment 2](#).)
- c. OSHM shall be contacted before establishing a new use for a space within a building or structure or making modifications to an existing building's life safety features.
- d. An Occupancy Placard citing the maximum occupant load (see Attachment 3 for the Occupancy Placard template) shall be posted in public spaces where OSHM has determined that occupant loads could possibly be exceeded and existing crowd controls are inadequate (e.g. museum shops, exhibit galleries, and areas which may have limited exiting capacity such as balconies and mezzanines).

### **2. Special Events**

- a. OSHM requires [Form SI-600 "Application for Facilities for Special Events"](#) or work memo be submitted for all gatherings of 100 or more people, or where special circumstances could impact life safety (e.g. cooking, sterno, candles, obstructions to egress) no less than 2 weeks prior to the event. Event applications shall be submitted with floor plans showing the intended

event configuration if tables, chairs, stages, platforms, bars, gates, special lighting and other potential obstructions to egress will be present.

- b. Personnel coordinating the event shall complete the SI Special Events Life Safety and Fire Prevention Checklist ([Attachment 4](#)) for events over 100 people or where special circumstances could potentially impact life safety.
- c. Personnel coordinating an event shall notify security of visitor(s) with disabilities attending the event for evacuation planning purposes.

### 3. Risk Control

- a. OSHEM shall be immediately notified whenever a *critical risk* to life safety exists. The facility Director or designated staff shall take immediate interim measures as necessary to mitigate the risk to life and complete permanent corrective actions within 24 hours. Where critical risks can not be immediately mitigated or corrected, the affected area may have to be vacated to reduce the risk to life, as determined by OSHEM.
- b. Whenever a *significant risk* to life exists, the facility Director shall immediately take action to mitigate completely or reduce the risk to low. Corrective actions must be completed within 30 days.
- c. Modifications of SI and leased spaces affecting the means of egress, including interior finishes, freestanding partitions, space dividers and furniture, shall comply with this *Manual* and applicable codes, standards and guidelines.

### 4. Means of Egress

- a. Unobstructed and adequately marked means of egress shall be provided to ensure safe emergency evacuation.
- b. Security measures or incidental building activities shall not impede exit doors, passageways, or any other part of a means of egress.
- c. Storage is prohibited in stairwells and beneath stairs.
- d. Storage shall not be placed in corridors.
- e. Exit doors shall be arranged so they can be readily opened from the egress side whenever the building is occupied. Locks, if provided, shall not require the use of a key, tool, or *special knowledge* or effort for operation from the inside of the building, unless permitted by NFPA 101 – Life Safety Code.
- f. Where deemed necessary by OSHEM, approved floor proximity exit signs and egress path marking shall be provided.
- g. The minimum unobstructed exit access width for aisles or corridors serving as the primary egress path shall not be less than 44 inches, and not less than 60 inches in galleries.
- h. Emergency lighting (minimum 1 foot-candle at floor level) shall be provided per NFPA 101 – Life Safety Code. Locations requiring

emergency lighting include the following:

- (1) Galleries and all means of egress serving six or more people.
  - (2) Switchgear, mechanical equipment, emergency equipment and transformer rooms.
  - (3) Security control rooms.
  - (4) Emergency command centers.
  - (5) Exit discharge including stairs, ramps and walkways leading to a street, alley or open area dedicated for public use and away from the building structure.
- i. Utilities such as, but not limited to, wiring, computer (IT) cables, piping, ducts and other systems shall not penetrate through exit enclosures (stairwells and horizontal exits), unless serving only the exit enclosure.

#### **D. RECORDS AND REPORTS**

1. Once issued, an Occupancy Permit for a space or building shall be kept on file by the building manager or equivalent until changes require the issuing of a new permit.
2. Emergency evacuation plans are to be kept up-to-date and on file by the Safety Coordinator and OPS.
3. All training records, inspections, and corrective actions are to be kept on file in accordance with [Chapter 8, "Program Reporting and Recordkeeping Procedures"](#) of this *Manual*.

#### **E. REFERENCES**

1. OFEO, Design Management Guide
2. OPS Policy 31, *Fire Prevention, and Awareness*
3. NFPA 101, Life Safety Code, 2015
4. SI Fire Protection and Life Safety Design Manual, 2014
5. NFPA 80, Standard for Fire Doors and Other Opening Protectives, 2013
6. International Building Code 2015