EC 5.10 FIRE PREVENTION MANAGEMENT

The organization manages fire safety risks.

1 ***The organization develops and maintains a written management plan describing the processes it implements to effectively manage fire safety.***

This Life Safety Management Plan describes how Stony Brook University Hospital establishes and maintains a life safety management program to provide a fire-safe environment of care. Stony Brook University Hospital Life Safety Management Plan is designed, communicated, implemented, assessed and changed where improvements are needed, to provide a fire-safe environment of care for patients, staff, and visitors. The document is reviewed annually by the Committee and updated as needed.

2 ***The organization identifies and implements proactive processes for protecting patients, staff, and others coming to the hospital's facilities, as well as protecting property from fire, smoke, and other products of combustion.***

The Life Safety Program in University Hospital is designed as a prevention as well as a containment program. Safe building design and maintenance of protective features is the first step in protecting building occupants. The hospital has and maintains a variety of smoke barriers, fire barriers, horizontal exits, and occupancy separations so that patients can be horizontally evacuated and housed in-place while the sprinkler system controls and the fire department extinguishes the fire. Quick detection of potential hazards including those that could result in fire as well as those that would prevent containment of fire or smoke or impede response, or evacuation is the goal. Staff education to prevent undue patient risks through appropriate response during emergencies is the objective of the training and education component. Deficiencies that are not immediately corrected are listed in the Statement of Conditions, Plan for Improvement. The Physical Plant administers a Building Maintenance Program (BMP) for items allowed by the Statement of Conditions (SOC) in lieu of creating Plan for Improvement's (PFI's)

3 ***The hospital identifies processes for regularly inspecting, testing, and maintaining fire protection and fire safety systems, equipment, and components.***

Both Environmental Health and Safety and the Physical Plant are responsible for coordinating, conducting and documenting testing, inspection, and maintenance of the fire protection systems throughout the building.

Frequencies

Weekly	Fire Pump - no flow
Monthly	Portable fire extinguisher inspection Wet and dry sprinkler inspections
Quarterly	Supervisory signal devices excluding valve tampers Fire department alarm transmission Fire department connection inspection
Semi-annually	Valve tamper switches Water flow devices Cooking suppression systems Halon and FM200 fire suppression systems
Annually	Fire extinguisher maintenance Wet and dry sprinkler inspection/test/maintenance Smoke and heat detectors Electrical mechanical releasing devices Pull stations Audible and visual notification devices Fire Pump – full flow Sprinkler main drains HVAC shutdown Sliding and roll down fire doors
Four year	Fire and smoke dampers
Five year	Standpipe system

4 ***The organization develops and implements a fire response plan that addresses the following:***

a) ***Facility wide fire response***

Fire response in the hospital and ambulatory surgery center requires a combined and coordinated response by all personnel within the facilities. Each person working in the facilities have been trained on their responsibilities which are spelled out in the fire plan, whether they are in the area of fire origin, or elsewhere in the building, preparing for evacuation.

a. Fire wardens are specially trained staff members, tasked with taking charge of their areas during fire and fire alarm situations. They will investigate all fire alarms within their area of the Hospital by first inspecting the annunciator panel located closest to their area. Fire wardens take the lead in coordinating an evacuation for their area, directing where patients will be evacuated to, keeping account of who has moved.

b. Nurses take lead role under the direction of the fire warden or charge nurse in the evacuation and accountability of patients.

c. Doctors will assist the nursing staff and be under the direction of the fire warden, clearing halls, closing doors, and evacuating patients. They will then remain in the evacuation area, providing care as appropriate to the evacuated patients.

d. Volunteers will assist the nursing staff and be under the direction of the fire warden, clearing halls, closing doors, and evacuating patients. If at the time of fire alarm activation they are responsible for patients, the volunteer will stay with those patients and assist in their evacuation under the guidance of the fire warden.

e. All other hospital staff present on the unit will remove any of their items such as housekeeping, food, and linen carts from the corridors. They will assist in patient evacuation if necessary, or evacuate the floor or area if not necessary.

f. Medical students will evacuate the area unless they are specifically tasked by the fire warden or charge nurse to assist in patient evacuation.

Preparedness for fire events is maintained through new employee orientation, annual recertification Right to Know training, and drills. Drills are conducted quarterly, on all three shifts at the hospital, quarterly at the Ambulatory Surgery and Ambulatory Care Buildings, quarterly at all article 28 off-sites, and a minimum of annually at all other facilities.

b) ***Area-specific needs including fire evacuation routes***

Floor maps with identified evacuation zones and areas of refuge for each department or area have been developed for the hospital, with the fire wardens being trained in their usage. The maps are at strategic locations in each department.

c) ***Specific roles and responsibilities of staff, licensed independent practitioners (LIPs), and volunteers at a fire's point of origin.***

Fire Wardens are trained to respond to the annunciator panel in their area to determine location of alarm. The Fire Warden assigns additional specific duties in and away from the fire point of origin as needed. The hospital and ambulatory surgery center utilizes RACE and all staff are trained in it's procedures.

d) ***Specific roles and responsibilities of staff, LIPs, and volunteers away from a fire's point of origin***

When chimes sound, indicating the alarm source is on another floor, staff are trained to be on standby for further instructions. In departments away from the fire origin, staff should prepare the area in case an evacuation is necessary. At a minimum, the following is done: keep patients and visitors calm and informed, close doors in department to limit spread of smoke from a fire, and clear corridors of equipment to ensure clear evacuation route. In off-site facilities, staff, patients, and visitors exit to the exterior of the building, no matter where the fire is located.

e) ***Specific roles and responsibilities of staff, LIPs, and volunteers in preparing for building evacuation***

In the event of a total building evacuation, it is the responsibility of each area Director/Manager/Supervisor to insure that all staff and patients are accounted for in the RACE process. During an evacuation, the hospital utilizes the HEICS to assign specific roles to staff. Nursing staff is trained and responsible to first evacuate patients from the immediate fire area. This normally includes the room that is on fire, rooms on either side or the room directly across the hall, closing all other patient room doors for temporary protection. They will then proceed with full compartment evacuation to the closest adjacent smoke compartment. They will then complete the evacuation of the involved smoke compartment. Further vertical evacuation occurs when and if the IC determines the area or building is untenable and needs to be evacuated. This will occur with the assistance of fire department manpower as well as a manpower pool formed by hospital employees for the specific incident. The Health Sciences Center (HSC) can be used as an initial staging area during complete evacuation.

5 ***The organization reviews proposed acquisitions of bedding, window draperies, and other curtains, furnishings, decorations, and other equipment for fire safety.***

Architectural Services is responsible for reviewing all acquisitions of furnishing and interior finishes to ensure it meets the applicable flame spread and flame resistance criteria. Documentation of flame spread and/or resistance is maintained for architectural projects and non-architectural acquisitions.

EC 5.20 FIRE PREVENTION MANAGEMENT

The organization manages fire safety risks.

1 ***Each building in which patients are housed or receive care, treatment, and services complies with the LSC, NFPA 101® 2000***

The Hospital utilizes the 2000 National Fire Protection Agency (NFPA) 101 Life Safety Codes as the main reference document for fire prevention and life preservation, as referenced by the AIA Guidelines for Design and Construction of Hospital and Health Care Facilities. New construction or renovation projects additionally follow the New York State International Code. More stringent State codes are followed where applicable.

2 **A *current, organization wide Statement of Conditions™ (SOC) compliance document has been prepared.***

The Hospital, Ambulatory Surgery Center, and Ambulatory Care Pavilion all require a Statement of Condition to be maintained. All of the other locations are classified as business occupancy under the NFPA 2000 LSC 101. The Fire Safety Manager maintains the SOC and reports on inspection activities and progress towards elimination of deficiencies to the EOC Committee. BMP items however are not maintained on the SOC, but under the Physical Plants BMP program.

3 **The hospital is making sufficient progress toward the corrective actions described in a previously approved SOC.**

The Hospital is committed both philosophically and financially to provide facilities that meet the established Federal, State, and Local codes. The Facilities Group, as they receive the PFI's from EH&S, will immediately create work orders for the correction of the violation, meeting bi-weekly with EH&S to coordinate work and close out items as necessary.

EC 5.30 FIRE PREVENTION MANAGEMENT

The organization conducts fire drills regularly

1 ***Fire drills are conducted quarterly on all shifts in all buildings defined by the LSC as the following: ambulatory health care occupancy and health care occupancy.***

Fire Drills are conducted quarterly in all locations on each shift. For the Hospital, drills on tower and network floors are conducted so that the area of fire origination is evaluated along with the floor above and below. All drills are reviewed for the purpose of identifying deficiencies and opportunities for improvement. Reports on fire drills are maintained by Environmental Health and Safety. Unless specifically arranged, all fire drills are unannounced. The effectiveness of this program is evaluated annually. Any major deficiencies and improvement activities are reported to the EOC Committee.

2 ***Fire drills are conducted annually in all freestanding buildings classified as business occupancy as defined by the LSC where patients are seen or treated.***

As per State DOH requirements, all freestanding clinics that see or treat patients and are classified as article 28 facilities, conduct a fire drill quarterly. Drills are conducted by hospital fire marshals and are coordinated with the off-site manager. Drill reports are reviewed and reported through the off-site environment of care coordinator to the safety committee

3 ***At least 50% of the required drills are unannounced.***

Environmental Health and Safety maintains a schedule of drills which is designed to cover all areas of the facility. With few exceptions such as an OR, drills are not announced in advance of their completion. The Fire Safety Manager reviews the schedule and makes adjustments based upon drill performance and real events.

4 ***All staff in all areas of every building where patients are housed or treated participates in drills to the extent called for in the facility's fire plan.***

It is the expectation of the Hospital that all employees participate in fire drill activities. Employees that do not respond to drill activities are documented and reported to their immediate supervisor. Fire drill reports are annotated accordingly.

5 ***All fire drills are critiqued to identify deficiencies and opportunities for improvement.***

Environmental Health and Safety fire safety staff coordinates fire drills, which includes critiques. Fire marshals observe staff reaction and participation. After the drill, the lead fire marshal conducts a debrief with the charge nurse and/or fire warden, advising of any problems or areas for improvements. A report of the drill is maintained identifying what went well and opportunities for improvements and tracks their progress.

6 ***The effectiveness of fire response training according to the fire plan is evaluated at least annually.***

Environmental Health and Safety completes an annual evaluation of the Environment of Care. Included in the report is a summary of the past years drill results indicating how well each department does during the fire drills. A score is utilized to rate compliance to the main elements of the EOC Standards.

7 ***During fire drills, staff knowledge is evaluated including the following:***

- ***a) When and how to sound fire alarms (where such alarms are available)***
- ***b) When and how to transmit for off site fire responders***
- ***c) Containment of smoke and fire***
- ***d) Transfer of patients to areas of refuge***
- ***e) Fire extinguishment***
- ***f) Specific fire response duties***
- ***g) Preparation for building evacuation***

Elements of the fire response plan including RACE and PASS are evaluated and educated during drill activities. The initiation of the alarm system is completed by staff and the fire marshals quiz participants on what they would do under certain circumstances.

EC 5.40 FIRE PREVENTION MANAGEMENT

The organization maintains fire-safety equipment and building features.

1 ***Initiating devices, fire detection and alarm equipment is tested as follows:***

- ***a) All supervisory signal devices (except valve tamper switches) are tested at least quarterly***
- ***b) All valve tamper switches and water flow devices are tested at least semiannually***
- ***c) All duct detectors, electromechanical releasing devices, heat detectors, manual fire alarm boxes, and smoke detectors are tested at least annually***

Environmental Health and Safety coordinates and documents the testing of the fire detection and alarm system through a contract with Simplex. Records are maintained and reviewed for deficiencies and corrective action. Tampers and flow switches are tested by the fire marshals with documentation maintained by that office.

2 ***Occupant alarm notification devices, including all audible devices, speakers, and visible devices, are tested at least annually.***

Environmental Health and Safety coordinates and documents the testing of the fire detection and alarm system through a contract with Simplex. Records are maintained and reviewed for deficiencies and corrective action. Devices are also observed during drill activities. Documentation is maintained by Environmental Health and Safety.

3 ***Off-premises emergency forces notification transmission equipment is tested at least quarterly.***

Fire alarm transmission from the Hospital, Ambulatory Surgery, Ambulatory Care Pavilion are received at the University Police Department, who notifies the local fire department. Transmission of the alarm notification is tested quarterly. Documentation is maintained by Environmental Health and Safety.

4 ***For water-based automatic fire-extinguishing systems, all fire pumps are tested at least weekly under no flow condition.***

The Physical Plant oversees the weekly no flow testing of the fire pumps at the Hospital, Ambulatory Surgery, Ambulatory Care Pavilion. Documentation is maintained by the Physical Plant HVAC department.

5 ***For water-based automatic fire-extinguishing systems, all water-storage tank high- and low-water level alarms are tested at least semiannually.***

Not Applicable

6 ***For water-based automatic fire-extinguishing systems, all water-storage tank low-water temperature alarms (during cold weather only) are tested at least monthly.***

Not Applicable

7 ***For water-based automatic fire-extinguishing systems, main drain tests are conducted at least annually at all system risers.***

The main drain test is conducted annually on both the Hospital, Ambulatory Surgery, Ambulatory Care Pavilion risers, even though they are fed by fire pumps which are flow tested annually. Documentation is maintained by Environmental Health and Safety.

8 ***For water-based automatic fire-extinguishing systems, all fire department connections are inspected quarterly.***

Environmental Health and Safety conducts the quarterly inspection and maintains the documentation. Any repairs are conducted by the Physical Plant Plumbing shop

9 ***For water-based automatic fire-extinguishing systems, all fire pumps are tested at least annually under flow***

Environmental Health and Safety conducts the annual fire pump testing for all three buildings. Documentation is maintained by Environmental Health and Safety

10 ***Kitchen automatic fire-extinguishing systems are inspected for proper operation at least semiannually (actual discharge of the fire-extinguishing system is not required).***

A third party provider is contracted to conduct the semiannual fire suppression system inspection and test, coordinated by Environmental Health and Safety. Documentation is maintained by both Dietary and Environmental Health and Safety

11 ***Carbon dioxide and other gaseous automatic fire-extinguishing systems are tested for proper operation at least annually (actual discharge of the fire-extinguishing system is not required).***
Not applicable

12 ***Documentation is available that all portable fire extinguishers are clearly identified, inspected at least monthly, and maintained at least annually.***

All Hospital, Ambulatory Surgery, Ambulatory Care Pavilion, and off-site fire extinguishers are inspected and maintained by Environmental Health and Safety. Documentation is maintained electronically with a bar coding system. A third party provider does recharging and any other servicing on an as needed basis.

13 ***Documentation is available that all standpipe occupant hoses are hydrostatically tested five years after installation and at least every three years thereafter; and systems receive water-flow tests at least every five years.***

There are no class II hoses in any of the facilities. The class I, fire department system is flow tested every five years by Environmental Health and Safety. Documentation is maintained by Environmental Health and Safety.

14 ***Documentation is available that all fire and smoke dampers are operated at least every four years (with fusible links removed where applicable) to verify that they fully close.***

A third party provider is contracted every four years to conduct the fire and smoke damper inspections. Documentation is maintained by the Physical Plant HVAC shop.

15 ***Documentation is available that all automatic smoke-detection shutdown devices for air-handling (AHU) equipment are tested at least annually.***

The Physical Plant HVAC shop, in conjunction with Environmental Health and Safety tests all air handler automatic shutdowns annually. Documentation is maintained by both the Physical Plant HVAC shop and Environmental Health and Safety

16 ***Documentation is available that all horizontal and vertical sliding and rolling fire doors are tested for proper operation and full closure at least annually.***

The Physical Plant Structural shop, in conjunction with Environmental Health and Safety tests all rolling fire doors annually. Documentation is maintained by the Structural shop

EC 5.50 FIRE PREVENTION MANAGEMENT

The organization develops and implements activities to protect occupants during periods when a building does not meet the applicable provisions of the Life Safety Code.

1 ***Each organization develops a policy for using Interim Life Safety Measures (ILSMs).***
An ILSM policy has been developed by Environmental Health and Safety which incorporates a decision making matrix for various deficiencies that could result from either construction activity or other life safety deficiencies.

2 ***The policy includes written criteria for evaluating various deficiencies and construction hazards to determine when and to what extent one or more of the 11 measures listed in the Environment of Care Standard apply***

The policy addresses all listed ILSM's which are acted on and monitored by Environmental Health and Safety. It is EH&S which will determine which measures need to be addressed and what corrective or monitoring plans need to be put into force.

3 ***Each hospital implements ILSMs as defined in its policy.***

All renovation and construction projects are reviewed during a PreConstruction Review (PCRA) process with Infection Control, Facilities, and Fire Safety to determine any life safety deficiencies being introduced, and the appropriate interim measures, based on the NFPA 2000 Life Safety Code, that need to be utilized until the deficiencies no longer exist. Documentation of activities is kept with the project paperwork as well as posted at the work site.