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1. Program Description

The Fire Safety Program is essential in protecting the campus community from injuries, deaths, business interruption, and property damage resulting from fires and related perils. The Fire Safety Program is intended to ensure reasonable and consistent protection for persons and property in or on South Carolina State University administered properties, including all housing units.

2. Scope

This program is applicable to all University faculty, staff, students, visitors, and contractors, as well as, all South Carolina State University properties. The International Fire Code along with National Fire Protection Association (NFPA) standards are the primary sources used in development of this program.

3. Definitions and Acronyms

Area of Refuge - Any area, room or section of a building, which, by virtue of its construction, will provide a safe area for persons to enter during a fire situation until rescue is performed.

Authority Having Jurisdiction (AHJ) - The Authority Having Jurisdiction (or his/her authorized representative) determines the interpretation and application of fire protection requirements as adopted by the Office of State Fire Marshal (OSFM). At South Carolina State University, the OSFM has delegated the Designated Campus Fire Marshal (DCFM) as the AHJ for plan review and construction inspections.

Automatic - Refers to equipment that will function without human intervention. Examples of automatic equipment include automatic detection or suppression systems, automatic alarms, and emergency shutdown devices.

International Building Code (IBC) – The IBC has been adopted by the State of South Carolina.

International Fire Code (IFC) - The IFC has been adopted by the State of South Carolina.

Campus Fire Marshal (CFM) – The CFM is a campus representative who has the responsibility and authority to enforce fire and life-safety requirements in all South Carolina State University facilities.

Combustible Material - This term applies to solid materials that are capable of igniting and burning.

Combustible Liquid - Liquids with a flash point of 100° Fahrenheit or above, which are capable of ignition and require a higher degree of heat to produce a fire.



Exit - The portion of a means of egress that is separated from all other spaces of the building to provide a protected way of travel to the exit discharge.

Exit Discharge – A means of egress that is separated between the termination of an exit and a public way.

Emergency Device - A general type of emergency safety device or equipment. This may include items such as fire alarm pull stations, fire extinguishers, fire alarms, smoke detectors, fire hydrants, and fire department connections.

Egress Corridor - A space within a building that is enclosed by fire barriers on all sides (including the ceiling and floor), which will withstand the passage of fire and/or smoke for a limited time.

Fireworks – Any device containing chemical elements and chemical compounds capable of burning independently of the oxygen of the atmosphere, and producing audible, visual, mechanical, or thermal effects which are useful as pyrotechnic devices or for entertainment.

Flammable Liquid – A liquid that has a flash point of less than 100° Fahrenheit and will ignite at a low temperature and continue to burn.

Hazardous Products/Area - A flammable, combustible, toxic, corrosive, noxious, heat-producing product or appliance which could cause ill effects to humans if released in an uncontrolled amount or manner. A hazardous area is any room or structure in which these products are processed, stored, or used.

Listed - All equipment or materials that are accepted by the OSFM as conforming to the provisions of the OSFM's regulations and are included in a list published by the OSFM.

Luminaries – Objects or bodies that emit or reflect light while creating a bright and lighted area.

Means of Egress – The direction or way a person would evacuate a building in an emergency.

Maximum Allowable Quantity—The amount of hazardous materials allowed with an control area.

National Fire Protection Association (NFPA) - A nationally recognized fire protection association that develops fire protection codes and standards.

Occupant Load - The maximum number of people which can occupy any given space with sufficient room to move about, complete a function, and/or safely evacuate the building.

Pyrotechnics – Any combination of materials, including pyrotechnic composition, which, by the agency of fire, produce an audible, visual, mechanical, or thermal effect designed and intended to be useful for industrial, agricultural, personal safety, or educational purposes.



The term “pyrotechnic device” includes, but is not limited to, agricultural and wildlife fireworks, model rockets, exempt fireworks, emergency signaling devices, and special effects.

Self-closing - A device which will ensure that a door or required enclosure will, when opened, return to the closed and latched position without human intervention.

Surge Protector - A listed multi-plug extension cord device which incorporates an on/off switch, built-in fuse, and is Underwriter's Laboratory (UL).

Acronyms:

- AHJ – Authority Having Jurisdiction
- AVP – Associate Vice President
- CFM – Campus Fire Marshal
- PC – Planning & Construction
- FM – Facilities Management
- GFCI – Ground Fault Circuit Interrupter
- IC – Incident Commander
- NEC – National Electric Code
- NFPA – National Fire Protection Association
- SFS – State Fire Marshal
- UL – Underwriters' Laboratory

4. Responsibilities

4.1 The **President** has ultimate responsibility for the campus, and designates appropriate resources for campus safety and fire protection.

4.2 The **Associate Vice Presidents** are responsible for ensuring that all units under their direction are accountable for specific and applicable elements of the Fire Safety Program.

4.3 The **Deans, Department Heads, and Department Chairs** are responsible for ensuring that all proposed facilities, facility alterations/remodels, operations, apparatus, equipment, and hazardous materials within their area(s) of responsibility are reviewed for compliance to all applicable protection requirements and by the Campus Fire Marshal (CFM).

4.4 Within the Fire Safety Division, the **Campus Fire Marshal (CFM)** carries out plan review and construction inspections for all South Carolina State University facilities. The CFM is designated as the AHJ in the interpretation and application of fire protection codes and regulations and is authorized to enforce applicable fire and life-safety codes, laws, and regulations for all construction projects on campus, and in all South Carolina State University facilities. The CFM is authorized to suspend unsafe construction operations or construction



activities, and has the responsibility for ensuring compliance with all fire protection requirements, including, but not limited to:

- The review and approval of all campus construction and alteration plans and specifications including fire protection and alarm systems, buildings, structures, and utilities.
- The inspection of all campus construction projects prior to use or occupancy.
- The issuance of “stop orders” when construction work is done contrary to the provisions of the building or fire protection codes, standards, or regulations.

4.5 Within the Fire Safety Division, the **Campus Fire Marshal (CFM)**, is responsible for the interpretation and application of fire protection codes and regulations, and is authorized to enforce applicable fire and life-safety codes, laws, and regulations, in South Carolina State University facilities. The CFM has responsibility for ensuring compliance with all fire protection requirements including, but not limited to:

- The storage, handling, and use of explosive, flammable, combustible, toxic, corrosive, and other hazardous materials.
- The maintenance of exits, fire resistive construction and assemblies, fire alarm systems, and fire extinguishing systems and equipment.
- The prevention and elimination of fire, life-safety, and panic hazards.

4.6 The **Associate Vice President of Finance and Facilities**, in conjunction with the Campus Fire Marshal, is responsible for hazardous materials management, including spill response. The Ass. Vice President and CFM interprets the requirements placed upon South Carolina State University by the State of South Carolina for the operation of the campus and strives to implement and enforce the Campus Fire Safety Program.

4.7 The **Associate Director of Planning and Construction** has the authority, powers, and duties of a Building Official as described in the IBC, and is responsible, in conjunction with the CFM, for assuring compliance with all fire protection requirements pertaining to the design, erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, equipment, and use of all campus buildings, structures and utilities. The Building Official, in conjunction with the CFM, is authorized to issue “Stop Orders” when work is being done contrary to the provisions of the IBC or any other adopted fire protection code, standard or regulation.

4.8 The **Campus Fire Marshal** is responsible for working with the Director of Facilities Management in maintaining fire alarm and extinguishing systems in accordance with adopted South Carolina state and national fire codes and standards.

4.9 The **Chief of University Police** is responsible for ensuring compliance with nationally recognized standards and practices pertaining to the facility, operations and maintenance of an Emergency Communications Dispatch Center for efficient, safe and rapid dispatch of emergency response units.



4.10 The **Director of Housing** is responsible for working with the CFM, in ensuring that residential students, staff, and employees are provided with required fire and life-safety training and education to maintain awareness of fire safety practices, emergency procedures and recognition of unsafe acts or unlawful acts.

5. Roles for Implementation

5.1 Campus Fire Marshal

- Provide and maintain necessary fire protection staff and resources to develop and maintain the Campus Fire Safety Program.
- Minimize the potential for the occurrence of fire or related perils.
- Strive to ensure the safety of South Carolina State University employees, staff, students, and faculty in the event of fire or related perils.

5.2 Fire Safety Division

- Responds to fire-related emergency calls received by the Emergency Dispatch Center.
- Coordinates fire-related emergency response activities, procedures, and protocol with local fire agencies.
- Coordinates investigations with the SCSUPD, Orangeburg Public Safety Department / South Carolina Law Enforcement Division (SLED) for the cause, origin and circumstances of fires and explosions.
- Coordinates with local fire agencies on Pre-Incident Plans to ensure that proper firefighting tactics and strategies are employed at designated target hazards on campus.
- Trains campus employees, staff, faculty, and students in fire and life-safety and fire extinguisher operation.
- Assists departments with emergency evacuation drills.
- Responds to requests from Felton Laboratory & Pre-School to conduct fire safety inspections of student facilities in accordance with applicable federal, state, and university standards, rules, and regulations.
- Reviews tests and inspections of all fire protection suppression systems and standpipes.
- Reviews tests and inspections of all campus fire pumps in accordance with *NFPA 25*.
- Reviews tests for fire alarm systems, fire suppression systems, portable fire extinguishers, and all campus fire alarm systems testing reports including, but not limited to, automatic and manual initiating devices, flow and tamper switches, horns and/or bells, circuitry, supervising and monitoring panels, and devices in accordance with frequency and procedures as prescribed in *NFPA 72*.
- Provides periodic reviews of buildings to verify types of fire extinguishers and their locations.
- Maintains all campus fire pumps.
- Maintains all fire protection suppression systems.
- Provide general oversight on all University buildings for the following fire safety issues:
 - Evacuation Plans
 - Fire Extinguishers



- Fire Alarms
 - Fire Sprinklers/Fire Pumps
 - Fire Inspections
 - Commercial Kitchen Hood Systems
-
- Reviews and inspects campus operations and activities.
 - Responds to hazardous materials spills and/or releases to manage, control, and mitigate the incident to a safe condition as determined by local responding agencies.
 - Conducts fire and life-safety inspections of laboratories to include hazardous material inventories.

The Fire Safety Division also assists Facilities Management by serving as a technical resource for the aforementioned fire safety issues.

5.3 Planning and Construction (PC)

- Ensures all campus construction projects comply with all applicable fire and life-safety regulations including, but not limited to, fire department access, fire flow requirements, exiting, fire-resistive construction, and fire suppression and alarm systems.
- Ensures that all campus projects are approved by the CFM prior to construction or alteration.
- Ensures that all campus construction projects are inspected and approved by the CFM prior to use or occupancy.

5.4 Facilities Management (FM)

- Ensures that campus construction projects are approved by the CFM prior to construction or alteration.
- Ensures that all campus construction projects are inspected and approved by the CFM prior to use or occupancy.
- Maintains campus exit signs, emergency lights, and stand-by generators in accordance with the frequency and procedures as prescribed in IFC.
- Maintains campus fire access ways to permit fire engine access in undeveloped areas.

5.5 Housing

- Provides safety and emergency notices, information, literature, and/or flyers to student residents and housing staff.
- Conducts safety inspections of residential units in accordance with the Housing Residential Safety Inspection Program.
- Assist with coordinating fire evacuation drills and exercises twice a semester with the Fire Safety Division.



- Ensures training for residential life and facility maintenance staff in fire safety and fire extinguisher use.

5.6 Insurance and Risk Management

- Serves as liaison with insurance carrier(s) relating to fire safety issues in consultation with CFM.
- Participates in selected fire safety and hazard assessments inspections and develops recommendations to mitigate or reduce University liability risks.

5.7 Felton Laboratory Schools & Child Development Center

- Works with the Fire Safety Division to conduct fire safety inspections of student facilities.
- Coordinates fire evacuation drills and exercises monthly with the Fire Safety Division.
- Ensures training for staff in fire safety and fire extinguisher use.

6. General

6.1 General Fire Safety - Fire safety is a matter of common sense, education and training. By following the guidelines and requirements of this program, we can prevent most of the situations that cause fires to start.

6.2 Special Events - Special events that occur on South Carolina State University property must be coordinated with the Fire Safety Division. The Fire Safety Division will assist with an evaluation, and if necessary, make recommendations on any hazards that the event may present. The Fire Safety Division will also assist in coordination with emergency response agencies if needed.

6.3 Smoking Policy – Smoking-related fires are still the most common of all fires in the United States. Smoking is not permitted in any South Carolina State University buildings.

6.3.1 Outdoor areas where smoking is **NOT** permitted:

- Smoking is prohibited within twenty (25) feet of air intake locations.
- Smoking is not permitted in areas where hazardous materials are used or stored.
- Smoking is not permitted within fifty (50) feet of flammable storage tanks or fuel dispensers.
- Where “NO SMOKING” signs are posted.

Deans, Directors, or Department Chairs are responsible for ensuring compliance with the University Smoking Policy in their area of responsibility.



6.4 Electrical Safety - Work on electrical wiring or electrical equipment is permitted only under the oversight of an Authorized Lockout/Tagout Employee. South Carolina State University personnel must comply with the safe use guidelines of this program.

6.4.1 Extension cords, of proper size and according to their use, **are permitted** under the following conditions:

- For temporary use only, not to exceed 90 days.
- On non-heat producing devices (i.e. radios, computers, answering machines, etc.).
- Under specific and written authorization from CFM (for longer term use).
- Cords exist in one continuous length. Cords must not be connected or spliced together.
- As temporary wiring for holiday displays, artwork or vendors at special events provided they meet the requirements above.
- A multi-plug extension cord that incorporates a surge protector and circuit breaker. This form of extension cord is recommended.

6.4.2 Extension cords **are not permitted** under the following conditions:

- Used as permanent wiring.
- For use on heat producing or high voltage devices such as heaters, coffee pots, high wattage lamps, refrigerators, microwave ovens, etc.
- A tripping hazard for normal traffic or emergency evacuation is created.
- The cord shows signs of wear, defects, bulging, exposed wire, or other damage.
- Located in corrosive areas or near any substance which would deteriorate the extension cord.
- Placed through a ceiling or wall opening.

6.5 Electrical Panels - Electrical panels are required to be in a location where a person has easy access to turn off the power to a piece of equipment or area in an emergency. Security may be required to prohibit the inadvertent shutdown of critical equipment. It must be recognized; however, that **shutting off power to an electrical fire is often the best action to take in a fire emergency.**

6.5.1 Electrical Panels **must** meet the following requirements:

- Be accessible to the occupants in an emergency.
- Be unobstructed 36 inches in front of and in all directions around the panel.
- Have the panel cover and panel door securely in place and closed.
- Have all breakers and main switches clearly marked as to the equipment/area that they control.
- Be identifiable as an electrical panel. Do not cover or paint electrical panels to match the wall, etc.



6.5.2 Electrical Panels **must not**:

- Be locked (except when approved by CFM).
- Have the breakers taped or otherwise secured in the on position (except when approved by CFM).
- Have any work performed on the panel unless the work is approved and monitored by a licensed electrician.
- Have open slots

6.6 Electrical Outlets/Switches - An overload on the electrical system may be possible and cause an outlet to spark. The safety guidelines listed below must be followed.

6.6.1 Outlets **must** meet the following requirements:

- Have the cover plate securely fastened to the outlet box.
- Be replaced when broken.
- Have an approved cover.
- Be protected by a Ground Fault Circuit Interrupter (GFCI) when located within six (6) feet of a water source.
- It is recommended that combustible items such as trash cans, boxes of papers, etc., be kept at least two (2) feet from either side of the outlet, when possible.

6.7 Cooking Safety - Cooking-related fires are the third most common cause of fires in the United States. Cooking can be a safe and enjoyable experience if safety requirements are followed.

6.7.1 Permitted Areas - Cooking is permitted only in areas approved by CFM.

6.7.1.1 Areas where cooking is normally permitted:

- Restaurant style establishments or institutional food production areas.
- Residential buildings in areas designated for cooking (i.e., kitchen).

6.7.1.2 Areas where cooking is **not** normally permitted are:

- Offices, laboratories, classrooms, and storage areas.
- Sleeping areas in dormitories.
- Automotive, industrial, and manufacturing settings.

6.7.2 Special Cooking Areas - Requests for cooking in the areas mentioned above for normal or special occasions must be submitted in writing to the Fire Safety Division. Please try to provide two (2) weeks advance notice of the event.



6.7.2.1 Safety Procedures - Where cooking is permitted, the following safety procedures must be followed:

Residential Electric/Gas Stoves:

- Stoves/ovens must have electric or gas connections installed and maintained by a qualified individual hired by FM or individual departments.
- Stoves/ovens when installed must have a grease filter over the stove. Where a grease filter is not installed, cooking must be limited to foods that will not produce grease-laden vapors.
- Combustible material, such as potholders, paper towels, etc., must be kept at least 18 inches from the stovetop and any burners.
- A dry chemical fire extinguisher shall be installed in or near the kitchen area. The Fire Safety Division will determine the required locations. Contact the Fire Safety Division for assistance.
- When cooking, the stove must not be left unattended for any length of time. If it is necessary to leave the room unoccupied, the stove must be turned off.
- Do not use matches to light gas stoves equipped with electric starters. If the starter is inoperative, the unit must be repaired or replaced.
- Check all burners on the stove before leaving to ensure that all units are turned off.

Gas and Electric Barbecue Grills:

- Barbecue grills are not permitted for use **INSIDE** buildings.
- Barbecue grills must not be used within 15 feet of a building when there is a door, window, air intake vent, or other similar avenue for smoke or uncontrolled flames to enter the building.
- All gas lines, valves and connections on gas grills must be periodically checked to detect leakage. If a leak is detected, the grill will be taken out of service until repaired.
- Do not leave a grill unattended.
- Keep combustible materials at least 15 feet from the grill.
- **DO NOT** use a grill within 50 feet of flammable storage areas.
- A ten (10) pound fire extinguisher must be on-site at all times. (See Section 6.18.2 for information on the different types of fire extinguishers.)
- No deep fat frying or cooking with grease unless protected by a commercial hood system
- Propane tanks shall not be stored inside buildings

Charcoal Barbeque Grills:

These types of grills are not permitted for use at University sponsored functions and activities on campus property unless the specific use is reviewed and approved by the CFM.

For additional information, please contact the Fire Safety Division at 516-4598.



Commercial or Institutional Cooking:

- All cooking equipment must be installed in accordance with *NFPA 96 Standards* for the proper installation, vapor removal and fire protection of people and equipment.
- All commercial cooking equipment in which grease-laden vapors are produced must have a Commercial Kitchen Hood System and a wet chemical or equivalent system installed. Portable fire extinguishers (dry chemical type) must also be installed in or near the kitchen area and a 'K' listed extinguisher.
- The equipment, hood, and grease filters must be cleaned daily.
- Each hood and dry chemical system must be inspected, according to *NFPA Standards and Frequencies*, and checked by a qualified individual hired by FM and the Fire Safety Division.
- All kitchen/staff personnel who are subject to be in the area during operation of the equipment must be trained on the hazards involved, use of the portable and automatic dry chemical systems, fire evacuation, and fire reporting procedures.
- All temperature control devices and thermostats must be inspected and certified by a qualified individual annually. Only a qualified individual will make inspections, testing, adjustments, and repairs.

Coffee Makers/Pots – Due to their high fire risk, all coffee makers must have automatic shut-off features or be plugged into timers that will automatically shut off the unit at the end of the day. Alternatively, coffee makers must be UL approved for shock hazard and fire protection under *UL Standards 1082 or 197*. **Exception: Coffee makers in Cafeterias/Institutional Kitchen areas and Coffee Shops are exempt from this policy.**

6.8 Storage – Storage, in and of itself, does not constitute a fire hazard. The problem begins when items are stored in an improper manner, in a hazardous location where other fire hazards are present, or where storage affects the safe evacuation of occupants.

6.8.1 General Storage - This area pertains to any room or building used for the general storage of ordinary combustibles for temporary, long-term or permanent storage.

6.8.1.1 Combustible materials must be separated from other hazardous materials such as flammables, corrosives, explosives, oxidizers, etc. Contact the Fire Safety Division to assist with evaluations of identified locations.

- Stored materials must be kept at least three (3) feet from any heat source.
- Aisles in any room used for storage must have a minimum three (3) foot width to allow for evacuation and for firefighters to gain access to the most remote area of the room.
- Storage must not block fire extinguishers, fire alarm pull stations, emergency or exit lighting, access to evacuation routes, the exit door, emergency equipment, or entry of emergency personnel.
- Storage under stairs is not permitted unless approved by the Fire Safety Division.



- Doors to storage rooms must remain closed except when entering or leaving the room.
- Smoking must not be permitted in any storage area under any conditions.

6.8.2 Flammable Storage - It is critical that flammables not only be used properly, but also stored safely.

- Storage of flammable materials in a basement is prohibited (includes all lab buildings).
- A "Daily Use" amount of flammable liquids may be stored on open shelves. "Daily Use" refers to a small amount of consumable flammables, whose use is expected to be of a repetitive nature, and the amount used would not constitute more of a hazard than other ordinary combustibles in the room.
- In any location where there is more than a total of 4 liters of flammables, these materials are required to be stored away from combustibles and stored in an approved "flammable storage cabinet." This cabinet must be labeled and must incorporate self-closing doors. It is recommended that all flammable liquids be stored in a "flammable storage cabinet" when not in use.
- Flammable storage must be kept at least fifty (50) feet from open flames or other heat sources.
- Ordinary combustibles must not be stored in flammable storage cabinets.
- Oily or grease-laden rags must be kept in metal self-closing containers.
- Only metal flammable storage cabinets meeting *IFC and NFPA Standards* will be used.
- Rooms used for storage must be constructed to meet the *NFPA* requirements for one (1) hour fire separation, ventilation, heating, electrical systems, and fire detection and/or suppression.

6.8.3 High Stack/In Rack or Rolling File Storage - This type of storage has become increasingly popular for space saving purposes for records and commodities. This also presents a different type of hazard for fire safety and firefighting.

- It is highly recommended that non-combustible materials be used in the construction of storage racks. This can help to reduce the amount of fire spread in an area should a fire occur.
- High rack or rolling file servers, due to their configuration and height, would prevent automatic sprinkler systems from proper operation. "In rack" sprinklers may be required.
- Storage of materials must not be closer than 18 inches to sprinkler heads.
- Aisle widths in high rack storage, which also require the use of mechanical devices such as forklifts or carts, will be of sufficient width (minimum of 36 inches) to allow personnel evacuation if a cart is physically located in the aisle.



6.8.4 Storage of Hazardous Materials - Hazardous products may produce a substantial amount of harmful inhalation hazards, as well as, react with a fire to create a fast moving or explosive situation. Storage of such materials must be strictly controlled.

- Proper storage and handling of these materials will be determined by the CFM.
- Hazardous materials must not be stored within fifty (50) feet of any open flame or heat source.
- Hazardous materials must not obstruct evacuation routes or be stored under stairs.
- Smoking is not permitted within fifty (50) feet of hazardous materials storage.
- Hazardous materials must be stored in separate cabinets or rooms according to their reactive properties.

6.9 Fire Detection, Alarms and Suppression Systems - The requirement to maintain a working fire detection and alarm system is the responsibility of the Fire Safety Division. The Fire Safety Division will review the requirements of type and location for fire detection/suppression and alarm systems. It is the occupants' responsibility to be aware of the type of system in the building and how to react to an alarm.

6.9.1 Tampering - Installed systems must not be tampered with in any way. Tampering is considered a criminal act by the State of South Carolina. Tampering is defined as:

- Any intentional or malicious activation of a system when there is no emergency.
- The intentional deactivation of a system either by disconnecting, breaking or removing devices, wiring, etc.
- Falsely reporting the activation of a system.

6.9.2 Obstructing - No part of the system must be obstructed at any time. Obstruction includes the following conditions:

- There must be a two (2) foot clearance in all directions of fire alarm pull stations.
- Fire alarm bells/horns/strobes must not be visually blocked or muffled.
- Smoke/heat/beam detectors must not be covered unless specifically authorized by the Fire Safety Division during renovations or special operations.
- Storage must not come within 18 inches of sprinkler heads.
- Renovations that affect the operation of any system must be approved by the Fire Safety Division.
- Nothing must be hung from or wrapped around any system device or piping.
- Fire department connections must not be obstructed at any time.

6.9.3 Prevention of False Alarms - Any operation that would activate the alarm system must be coordinated with Fire Safety. Such operations include, but are not restricted to:

- Welding or other heat producing work around sprinklers and/or heat detectors.
- Sanding or other work around smoke detectors, which would create dust.
- Use of smoke producing devices that could potentially set off smoke detectors.



- Steam cleaning or spray painting that could potentially set off detectors.
- Use of open flames near any heat or smoke-sensing device.

6.9.4 Testing - Only authorized Fire Safety personnel, or their designated contractor, may conduct testing, maintenance, or repair of systems.

6.10 Corridors, Egress Routes, Exit Doors - In an emergency, one of the most important requirements is to ensure that all occupants can leave the building safely. To accommodate this, corridors, hallways, and exits are designed and constructed to allow people to leave the building in the safest and quickest method possible. Storage of combustible materials are not allowed in stairwells or egress corridors.

6.10.1 Obstructions:

- No corridor, aisle way, or component of a means of egress may be obstructed.
- Furniture and other items in lobbies must be flame resistant, must not obstruct the minimum width of 44 inches, and must be arranged so there is a direct path of egress through the lobby to the exit.
- Wires, cables, or extension cords must not be laid across corridors, aisles, or pathways.
- Exit doors must remain unlocked during hours in which the building is occupied. All special locking devices must be approved by the Fire Safety Division.

6.10.2 Minimum Widths:

- Minimum widths (which must be increased accordingly with the number of occupants) range from 18 inches between desks, to 44 inches or greater for corridors, and several feet wide for buildings with large crowds. Contact the Fire Safety Division to obtain guidance on minimum width requirements for specific conditions.
- Furniture, art work, wall hangings, statues, etc., which protrude from the walls must not obstruct the minimum width nor present a tripping or other safety hazard
- Minimum aisle widths must be maintained at all times.

6.10.3 Protrusions:

- The minimum ceiling height in exit passageways is seven feet (7'-0") and eight feet (8'-0") for health care facilities. Lights, decorations, signs, or any other item hung from the ceiling may not be lower than six feet, eight inches (6'-8").
- Wires or cables hung from the ceiling must not present a safety hazard. For example, hanging wires must not become entangled in any equipment that is being transported through a corridor.

6.10.4 Items not permitted in corridors include:

- Flammable storage cabinets of any size.



- Compressed gas containers of any size.
 - Carts, cabinets, shelves, or other items on which combustibles or flammables are likely to be stored.
 - Chemicals, munitions, pyrotechnics, or any other hazardous materials.
 - Any items that will impede the normal or emergency flow of traffic or will obstruct any emergency device.
 - Portable heaters, coffee pots, food warmers, or other devices that may present a hazard.
 - Unprotected high voltage, electrical or gas powered equipment of any kind.
- Exceptions to the above list of items will meet one of three criteria:
1. Furniture or equipment constructed of combustible materials or other material of similar combustibility;
 2. When approved by the Fire Safety Division, combustible materials may be permitted in exit foyers and lobbies.

All of these exceptions must be documented with the Fire Safety Division.

6.11 Fire/Smoke Rated Doors – It is our goal that all fire and smoke rated doors are equipped with a self-closing device and are installed to keep fire from spreading throughout a building.

6.11.1 Blocking/Propping Doors – Keeping fire doors open allows smoke and fire to travel through an uncontrolled avenue throughout the building. In order to reduce the spread of fire throughout the building, the following guidelines are provided below:

- Fire/smoke rated doors must **not** be kept open or blocked except with an approved automatic magnetic release device, which will release the door when any emergency alarm device is activated.
- The self-closing devices on doors **must not** be disconnected or rendered inoperable.
- If the door must be held open for movement of furniture, equipment or other large size or number of items, the person responsible for the move will provide an individual at the door to ensure the door is not left open if the building is evacuated.
- "Door chocks" or "foot stops" **must not** be installed on any fire rated door. Furniture, appliances, etc. must not be used to prop the door open.
- Doors that need to be left open for high traffic areas or visual security may be so authorized by two options: 1) The automatic magnetic release device is installed in a facility that ties into the existing fire alarm system or; 2) The facility is a self-contained building. If one of these options is met, the door will require an automatic magnetic release device installed which will release the door when any emergency alarm device is activated.
- Obstructions that will prohibit fire/smoke rated doors from closing and latching without human intervention are not permitted.

6.12 Open Burning - Open burning is defined as any open/exposed flame, whether located indoors or outdoors, that could cause a potential fire hazard (i.e. bonfires, campfires, leaf burning, art work involving flames, pyrotechnics of any kind, etc.).



6.12.1 Approvals - Open burning on any South Carolina State University property must be approved in writing by the Fire Safety Division.

6.12.2 Open Burning Indoors - Open burning indoors (particularly when such burning will activate any type fire alarm detection/suppression system) is normally prohibited. Special exceptions may be authorized under the following conditions:

- Obtain a “Hot Work Permit” from the Fire Safety Division prior to any indoor open flame.
- The proposed burning must not endanger the occupants or facility.
- The proposed burn location must not block any emergency device or access to any exit.
- The event coordinator must be responsible for providing a “Fire Watch” of the entire building during the time of the open burning activity. If any of these activities occur, the safety system must be shut down.
- The event coordinator must contact the Fire Safety Division, Campus Police, and the occupants of the building at least 24 hours in advance of the event or operation for final coordination.
- The event coordinator must be responsible for providing a “Fire Watch” in the area of the open burn.
- The event coordinator must be responsible for completely extinguishing and removing all materials.
- A thirty (30) minute watch must be made of the area to ensure that there is no residual heat remaining in the material that was burned.

6.13 Candles - Candles are not approved for use inside buildings unless the usage is reviewed and approved by the CFM.

6.14 Heaters – Portable space heaters are the most common cause of fire when used under inappropriate circumstances or are not utilized in a safe manner.

6.14.1 Common Cause - The most common causes of fires are unattended heaters, dirty fireplaces, and combustible materials located too close to a heat source. The following requirements address the use of portable heaters.

6.14.2 Authorized Use:

- Only without open elements
- User must ensure that all floor and space heaters are unplugged when not in use.

6.14.3 Type of Heater - If authorized, the following guidelines must be followed:

- The heater must be UL approved, and incorporate a tip-over switch which will turn off the heating element and fan if the unit is knocked over.



- The heater must be in good repair, and have a cord long enough to reach the electrical outlet. **EXTENSION CORDS MUST NOT BE USED ON HEATERS.**
- The heater must be unplugged at the end of the work day or if the building will be left unattended for an extended period.

6.14.4 Use of Heaters:

- The heater must be kept three (3) feet from any combustible materials.
- The heater must not be used within fifty (50) feet of flammable storage.
- The placement of the heater will not create a tripping or evacuation hazard.
- Fire/smoke rated doors must not be propped open in order to better distribute heat.
- All heaters shall be UL listed for their use.
- All combustible materials must be kept ten (10) feet clear from top of heater.
- Do not place heaters under building overhangs or soffits.

6.15 Fireplaces - Due to their high fire risk, the use of fireplaces in University facilities is not allowed.

6.16 Open Burning Outdoors - Open burning outdoors may be authorized under the following conditions:

- A written request is sent to the Fire Safety Division, if possible, allow two (2) weeks, but no less than one week, in advance of the event or operation.
- The proposed burning must not endanger any adjacent buildings, vehicles or vegetation.
- The burn location must not block access for emergency vehicles to any building, street, or emergency device.
- Open flame fires must not be within fifty (50) feet of any flammable storage area (the distance may be increased according to the size of the event), and twenty-five (25) feet of any building, vehicle or vegetation.
- The event coordinator is responsible for providing a "Fire Watch" as required by the Fire Safety Division.
- The event coordinator must contact the Fire Safety Division and Campus Police 24 hours in advance of the event or operation for final coordination.
- The event coordinator of the open burning must be responsible for completely extinguishing and removing all materials used in the open burning activity.
- A five (5) to thirty (30) minute watch must be made (as determined by the Fire Safety Division) to ensure that there is no residual heat left in the material that was burned.

6.17 Pyrotechnics/Fireworks - Pyrotechnics displays must be coordinated through the Fire Safety Division and authorized under the following conditions:

- The individual handling the pyrotechnics must submit a written proposal to the Fire Safety Division as far in advance of the event as possible but at least one week prior to allow adequate planning and CFM review time. The proposal must include the type



of display, type, and amount of materials to be used, current certification by a recognized agency, proof of insurance, and method of transportation and storage and South Carolina license.

- The individual handling the pyrotechnics must be licensed by State Fire Marshal for the material to be used, must be responsible for the proper storage, handling, transportation, use, and disposal of the materials and must hold a permit from the State Fire Marshal.
- The event coordinator must provide a “Fire Watch” (as determined by the Fire Safety Division) for the length of time that the material is handled.
- Further detailed requirements will be made available through coordination with the Fire Safety Division.

6.18 Fire Extinguishers - The number of recorded disastrous fires has been reduced over the years due to the increased awareness of and use of fire extinguishers. A fire extinguisher, when used properly on a fire in its earliest stage, could lessen the chance of injury to people and damage to property.

6.18.1 Responsibility – The Fire Safety Division is responsible for the installation, tracking, maintenance, and replacement of fire extinguishers in South Carolina State University buildings. Extinguishers located inside leased property are the responsibility of the landlord. The Fire Safety Division will assist South Carolina State University departments inside leased facilities by coordinating with the building owner. Building owners may decide to contract with FM or with their own vendor. If an extinguisher needs to be replaced, contact the Fire Safety Division at <http://www.scsu.edu/fire> for assistance.

6.18.2 Types - The type of extinguisher made available in a particular location is determined by the Fire Safety Division using the following factors:

- The type of hazard (combustibles, flammables, electrical hazards, chemicals, etc.).
- The amount of combustibles and/or flammables in the area.
- The best agent to be used on the hazard(s) (i.e., water, dry chemical, carbon dioxide, halotron).
- “ABC” or multiple chemical fire extinguishers are found throughout South Carolina State University campus. ABC fire extinguishers can be used on wood, paper, liquids, and chemical fires. South Carolina State University also uses “D” for reactive metals in machinery areas or “K” for kitchen areas. All fire extinguishers are identified and labeled as type “ABC”, type “D”, or type “K”.

6.18.3 Location - The location of the extinguisher will be determined by the Fire Safety Division, who will coordinate with Facilities Management regarding installation of the fire extinguisher.

- The extinguisher must be located at or near the exits in the normal path of travel to the exit.



- The travel distance required to reach an extinguisher is between 30-75 feet, depending on the type of building.
- The extinguisher must be clearly visible and identifiable. When this is not possible, appropriate signage will be posted directing the occupant to the location.
- The extinguisher must remain located in its designated location. Do not remove the extinguisher to use as a doorstop, to cover a welding operation, for barbecue activities, etc.
- The extinguisher must not be hung higher than five (5) feet from the floor.

6.18.4 Inspection - Extinguishers must be inspected monthly. The building maintenance staff or designated person must check each extinguisher visually at least once per month. This check will include:

- Ensuring that the extinguisher is in its designated location.
- Checking the pressure on the gauge
- Checking to see that the safety pin is in place and sealed.
- Checking the extinguisher for any obvious physical damage.
- Documentation of prior completed inspections.

6.18.5 Maintenance –Will be performed by a hired licensed contractor

- Hydrostatic testing on a periodic basis (6-year cycle).
- Repair of damaged extinguishers.
- Recharging of extinguishers.
- Replacement of unusable extinguishers
- Annual inspection of internal parts.

6.18.6 Misuse of Extinguishers - The following actions will be considered tampering/vandalism of a fire extinguisher.

- Discharging an extinguisher for any reason other than extinguishing a fire.
- Relocating an extinguisher without specific approval of the Fire Safety Division.
- Damaging any part of the extinguisher intentionally or accidentally through carelessness.

6.18.7 Operation of Extinguishers – Employees comfortable using a fire extinguisher on a fire smaller than a wastebasket, must be trained in the operation of a fire extinguisher. Four basic steps to using an extinguisher can be described by using the acronym **PASS**:

- **P**ull the safety pin from the handle. It will be necessary to break the plastic seal.
- **A**im the extinguisher at the base of the flame.
- **S**queeze the handle all the way down to release the agent.
- **S**weep the agent across the fire with a side-to-side motion. Be sure to cover the entire fire.



6.18.8 Reporting of Discharged or Damaged Extinguishers - **NEVER** put an extinguisher back in its place after extinguishing a fire. If an extinguisher is discharged, even for a few seconds, or if it is damaged in any way, report the extinguisher and its location to the Fire Safety Division **IMMEDIATELY**.

6.19 Wall Decorations and Finishes - Interior decorations are a common factor in the spread of fire. Decorations used during the holiday seasons are always a concern. It is necessary to ensure that all interior decorations used meet the requirements of safety and fire resistance.

6.19.1 Wall Finish – When planning a renovation or refinish of wall, ceilings, or floors all new materials must meet the minimum requirements of the IBC and the IFC. The Fire Safety Division is available to assist in determining the fire rating of a material.

6.19.2 Approvals - Normally, specific written approvals for holiday decorations will not be required. Written approval will be required if the decorations may interfere with any safety system or may conflict with one or more of the safety requirements stated in this policy.

6.19.3 Documentation - Any decoration, whether purchased from a store, dealer, catalog, other business, or if made by hand, will require documentation acceptable to the CFM that the materials used meet the fire safety standards of fire resistance and safety.

6.19.4 Decoration Materials - All materials used in decorations must meet the minimum requirements of the IFC. The Fire Safety Division will provide the specific requirements on request. If in doubt, contact the Fire Safety Division for consultation prior to purchasing or installing decorations. General requirements include:

- Live Christmas trees are not allowed
- Decorations must not be attached to, hung from, or obstruct any emergency device.
- Combustible decorations are not allowed.
- Unauthorized items found during inspections will be required to be removed.

6.19.5 Electrical Decorations - Electrical lights, decorations and cords shall comply with and be used in the following conditions:

- Do not use electrical decorations or cords on combustible materials, dry trees, curtains, or any other combustible material, which may be ignited by heat or a potential electrical short in the device.
- Extension cords used for temporary use in decorations are limited to 90 days. The cords must be one (1) continuous length from the device to the electrical outlet.
- Multiple electrical devices may be plugged into an approved "bar outlet" which incorporates a breaker, on/off switch, is surge protected, and can reach the outlet without connection to another "surge protector" or an extension cord. **This does not pertain to heat producing devices that must be plugged directly into an outlet.**
- Electrical decorations must be turned off and should be unplugged at the end of the day or when the building will be unoccupied for an extended period.



- Electrical decorations or cords must not be laid or taped across floors in such a way that they may cause a tripping hazard or interfere in any way with evacuation.
- Any electrical decoration or cord that is damaged, worn, showing signs of overheating, etc. must be taken out of service and repaired or replaced. If not purchased through the Procurement Department, the electrical equipment must be tested and approved by a recognized testing laboratory, such as UL or Factory Mutual. The device must bear the appropriate label, sticker, or tag, supplied by the manufacturer.

6.19.6 Amount of Decorations - This program does not specifically limit the use of decorations; rather, a general rule of thumb by the Life Safety Code limits combustible material to 10% of the existing wall space of an area. The amount of decorations used will be limited by the following criteria:

- Decorations must not obstruct any corridor, exit, exit light or safety device.
- Decorations must not exceed the amount of combustibles that could be contained by any existing extinguishing system or quickly brought under control with a fire extinguisher.
- As determined by the CFM, the amount of combustibles that would aid in the rapid spread of fire, such that it could endanger or entrap the occupants must not be exceeded.
- The amount of decorations may affect the occupant load of the area if such decorations cover any required floor area used in the calculation of the occupant load.

6.19.7 Luminaries/Candles - Under the following conditions, luminaries are permitted for use in both the electrical and candle versions.

- Candle type luminaries must not be used indoors.
- Candle and/or electrical luminaries are permitted outdoors.
- Candle types must not be placed within five (5) feet of combustible material such as leaves or paper decorations.
- An individual must be designated to supervise, control and manage the luminaries and ensure that they are properly extinguished and properly discarded.
- Candles must be extinguished at the end of the night or event unless the area is supervised
- Electrical luminaries must be rated for outdoor use.
- Electrical cords and extension cords must not be placed so as to cause a tripping or fire hazard (i.e., frayed or unrated cords running along a path of dry leaves).
- Ensure that any candles, or other such materials, and holiday decorations are extinguished, turned off or unplugged as necessary.

6.20 Furniture Fire Resistance – All “upholstered furniture” is required to be flame resistant by the CFM.



6.20.1 Requirements - The CFM requires that manufacturers of upholstery for all buildings on campus meet strict fire safety requirements. The Fire Safety Division has developed some guidelines for both sprinklered and non-sprinklered buildings on campus:

Unsprinklered buildings - New seating furniture purchased for use within unsprinklered SCSU-owned/occupied facilities, auditoriums (as defined below), and in the public assembly areas (e.g., lobbies, lounges, etc., having ten (10) or more articles of seating furniture), of housing/dining facilities, shall have been certified by its manufacturer as having met the test requirements set forth by IBC, and bear the prescribed label.

Sprinklered buildings - Seating furniture purchased for use in fully fire sprinklered buildings (as defined in *NFPA 13*), SCSU-owned/occupied facilities, auditoriums, and in public assembly areas (e.g., lobbies, waiting rooms, lounges, etc. having 10 or more articles of seating furniture), and housing/dining facilities, is **STRONGLY** recommended to have been certified by its manufacturer as having met the test requirements set forth in IBC, and bear the prescribed label.

- Note: These standards do not apply to non-upholstered furniture such as wood or plastic chairs or to products such as desks, draperies, wastebaskets, mattresses, case goods, and other “no seating” furniture products.
- Note: These standards do apply to dual purpose furniture products such as sleeper sofas and similar seating devices that can also be used in seated, reclined, and sleeping positions if intended for use in public occupancies. For the purpose of these guidelines, “auditorium” shall be defined to include any room with a maximum occupancy of 50 or more, in which events open to the general public (e.g., plays, shows, concerts, film presentations, etc.), are held. Classrooms and lecture halls not used as described above would not be considered auditoriums, regardless of size.

6.21 Nightly Closing Checks - It is important to ensure that when leaving for the day or shift, no potential fire hazard is left behind. The following is a short list of common items that should be checked before leaving the facility.

6.21.1 Electrical:

- Unplug all heat-producing devices such as coffee pots, toasters, heaters, etc.
- Turn off all electrical equipment that does not require continuous power such as computers, radios, televisions, lab equipment, power equipment in maintenance shops, etc.
- Ensure that all equipment that requires continuous power does not have frayed or worn cords, and is not warm to the touch. Ensure that combustible materials are not stored near motors.
- Turn off all unnecessary lighting. If lighting is required for security, ensure that no combustibles are stored near or attached to the lighting device.



6.21.2 Cooking Equipment:

- If provided, ensure that all stoves, deep fat fryers, and other heat type cooking equipment are turned off.
- If APPROVED, ensure that portable cooking equipment is unplugged (i.e. hotplate or food warmer).

6.22 Filming on Campus – All filming activities must be reported to the Fire Safety Division as far in advance as possible but at least two (2) weeks prior to allow for adequate planning, review time, and so that the proper permits may be obtained. At least one (1) week notice must be provided to the Fire Safety Division to obtain a separate permit for any temporary tent structures. Both of these permits are required by the CFM's office.

7. Reporting Requirements

7.1 Reporting of Fires or Explosions:

The CFM requires that all fires be reported to the Fire Safety Division and the University Police Department. Therefore, **ALL** fires or explosions within South Carolina State University properties or leased properties must be reported **IMMEDIATELY** by calling 911 or the University's Police Department at 536-7188.

8. Training

8.1 Training Frequency and Subjects - The best way to avoid a fire is to be knowledgeable about fire hazards and how to prevent them from occurring. The Fire Safety Division will provide training to any South Carolina State University employee, staff, or faculty member upon request. Each South Carolina State University employee, staff, and faculty member should:

8.1.2 Receive a briefing from their supervisor on the specific hazards of the work area within 30 days from the start of work.

8.1.3 Other specific training requirements may be required, depending on the operation of the employee's work area.

8.1.4 Fire drills

- The Fire Safety Division is responsible for conducting fire drills.
- The Fire Safety Division will assist and serve as a technical resource when requested by the department.

8.1.5 Fire Extinguisher Training – All employees who work in areas that have a moderate to high fire hazard or employees who are interested should attend fire extinguisher training on an annual basis.



8.1.6 Resident Assistant (RA) Fire Safety Awareness

- RA's for each housing facility will be offered a Fire Safety Awareness class during their first week of general RA training. This class is coordinated and taught by the Fire Safety Division on an annual basis.
- RA Fire Safety Awareness training includes a section on Fire Extinguisher use.

9. Information

For Fire Safety information on specific topics, please see the SCSU Fire Marshal's website at <http://www.scsu.edu/fire>.