

DEPARTMENT OF THE ARMY
 Headquarters, United States Army Medical Department Activity
 Fort Leonard Wood, Missouri 65473-8952

USA MEDDAC Regulation
 No. 420-3

28 January 2010

Fire Safety
FIRE PROTECTION AND EVACUATION PLAN

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Chapter 1
Introduction

1-1. History. This issue publishes a revision of this regulation.

1-2. Purpose. The purpose of this regulation is to establish, define, and outline the policy and responsibilities for fire prevention, fire protection, fire fighting, and the orderly evacuation of patients and other personnel.

1-3. References.

- a. AR 385-10, The Army Safety Program.
- b. AR 420-90, Fire and Emergency Services.

*This regulation supersedes USA MEDDAC Reg 420-3, dated 2 June 2009.

- c. AR 600-63, Army Health Promotion.
- d. MEDCOM/OTSG Reg 385-2, US Army Medical Command Safety Program.
- e. FLW Reg 420-2, Fire Prevention and Protection.
- f. MEDDAC Reg 15-1, Authorized Committees.
- g. MEDDAC Reg 385-10, USA MEDDAC/DENTAC/Veterinary Safety Management Program.
- h. MEDDAC Reg 750-2, Medical Care Support Equipment Program Requirements and Reporting System.
- i. MEDDAC Command Policy 17-08, Use of Tobacco Products.
- j. National Fire Code, National Fire Protection Association (NFPA).
- k. Comprehensive Accreditation Manual for Hospitals, current edition.
- l. Part 1910, Title 29, Code of Federal Regulations, Occupational Safety and Health Standards.
- m. Part 1960, Title 29, Code of Federal Regulations, Basic Program Elements for Federal Employee Occupational Safety and Health Programs.

1-4. Abbreviations and Terms.

a. Abbreviations.

- (1) FLW – Fort Leonard Wood.
- (2) GLWACH – General Leonard Wood Army Community Hospital.
- (3) ILSM – Interim Life Safety Measures.
- (4) MEDCOM – U.S. Army Medical Command.
- (5) NFPA – National Fire Protection Association.
- (6) PASS – Pull, Aim, Squeeze (handle), Sweep (the base of the fire).
- (7) POI – Point of Initiation.
- (8) RACE – Rescue, Alarm, Contain, Extinguish/Evacuate.

b. Terms.

- (1) Annunciator – An electronic notification system connected to the fire alarm system.
- (2) Defend in Place – Ability to remain within the hospital during a fire because of the construction and fire protection factor.
- (3) Occupancy – The classification of building type from NFPA based on the usage of the structure.
- (4) POI – The exact point or place where a fire ignites.

1-5. Applicability. This regulation is applicable to all military, civilian, or contract personnel who are assigned, attached, employed, visiting, or in a patient status within the Medical Department Activity (MEDDAC). This regulation is applicable to all organizational elements of MEDDAC and attached and supported units.

1-6. Responsibilities.

a. The Commander, GLWACH, is responsible for the overall GLWACH Fire Prevention and Evacuation Plan.

b. The Safety Manager, GLWACH will:

(1) Serve as the GLWACH Fire Marshal IAW AR 385-10, for all GLWACH structures.

(2) Develop and oversee the Fire Safety Program.

(3) Assist Department Chiefs in the development of fire evacuation plans for their respective work areas.

(4) Ensure that periodic tests of fire evacuation plans are conducted in accordance with the Joint Commission Accreditation Manual and FLW Reg 420-2.

(5) Develop comprehensive instructions and checklists for quarterly fire drills.

(6) Serve as the principle advisor to the GLWACH Commander and staff on all matters pertaining to fire safety.

(7) Conduct periodic fire prevention inspections of all GLWACH buildings and render a report of findings and/or recommendations to the Officer in Charge (OIC) or Noncommissioned Officer in Charge (NCOIC) of the activity.

(8) Train and provide guidance to the Building and Ward/Clinic Fire Marshals as to their specific duties.

(9) Maintain close liaison with the FLW Fire Marshall.

c. Department, division, activity, and separate service chiefs will:

(1) Ensure that fire monitors for wards/clinics/activities/services are appointed as appropriate.

(2) Ensure fire evacuation plans for each separate work area under their supervision are developed.

(3) Ensure that all newly assigned personnel are briefed on the GLWACH Fire Plan and the department/division/activity/service fire evacuation plan.

(4) Ensure that all personnel receive annual refresher training on fire prevention and that the training is documented on MEDDAC Form 649 (Employee Safety and Health Training Record).

(5) Integrate various aspects of fire safety into the in-service training sessions.

d. Fire Monitors:

(1) Building fire monitors/area POC:

(a) Will be appointed on orders.

(b) Ensure that monthly fire safety inspections of each work area are performed, documented on GLWACH fire drill /inservice training evaluation report, and submitted to the Safety Office by the 10th day of the month following the end of each quarter.

(c) Fire/safety monitors ensure fire drills are performed on each shift (quarterly for healthcare occupancies and annually for others), documented on MEDDAC Form 963 (Quarterly Fire Drills and Fire/Safety Inspections), and a copy of the documentation submitted to the GLWACH Safety Office no later than 3 days after the fire drill.

(d) Accompany and assist the Fire Department and/or Safety Office inspectors during inspections.

(2) Ward/clinic/activity/service fire monitors: The Wardmaster/NCOIC, or their designee, will be appointed as the fire monitor and perform the duties listed below:

(a) Ensure that a copy of this regulation is available in the area. A copy should be maintained in the Safety Management Handbook and/or staff should be able to access via the Intranet.

(b) Inspect all fire extinguishers monthly and document the inspections on the tags attached to the extinguishers.

(c) Conduct fire drills on each shift (quarterly for healthcare occupancies and annually for others) and perform monthly inspections, document the results on MEDDAC Form 963, and forward a copy of the documentation to the GLWACH Safety Office by the 10th day following the end of each quarter. Fire emergencies (instances where the fire department responds to an alarm, including false alarms) may be counted as a fire drill if properly evaluated and documented.

(d) Accompany and assist the Fire Department and/or Safety office inspectors during inspections.

(e) Develop and maintain a current fire plan for their area and submit the plan to the GLWACH Safety Office for approval. The fire plan will address appropriate staff response to a fire emergency and appropriate education and training for all personnel in all elements of the fire plan.

(f) Ensure staff knowledge of the use, function, and transmission of the fire alarm system; containment of smoke and fire; transfer to areas of refuge; fire extinguishment; assignment of specific duties; and preparation for building evacuation.

(g) Ensure staff knowledge of the Fire Alarm Annunciators.

(h) Conduct fire safety training and document on MEDDAC Form 963.

1-7. General.

a. Any fire, regardless of size, or suspicion of fire such as unexplained smoke or smell of smoke, will be reported as prescribed in paragraph 2-8.

b. GLWACH's basic plan is based on the RACE concept.

c. The following general policy applies with respect to building occupancy:

(1) Inpatient Care Areas (Healthcare) – Defend in Place.

(2) Ambulatory Care Areas (Healthcare) – Defend in Place.

(3) Outpatient Care Areas (Business) – Evacuate.

(4) Administrative Areas (Business) - Evacuate

NOTE: When fire is noted or suspected, the staff/visitors/patients will respond as indicated in 1-7c above for areas outside the POI. For areas in the POI, respond as appropriate RACE and follow your primary evacuation plan. Announcements will be made to advise staff on current situations. Remember, if any indication of fire, smell of smoke, or flame, immediate action must be taken for that fire/smoke zone.

d. Building 310, Main Hospital, has the following occupancy designations:

- (1) Bed Tower – Healthcare.
- (2) Ancillary – Business.
- (3) Clinics – Business.
- (4) Lower Level – Business, Industrial, Storage.
- (5) Building 311 (Central Energy Plant) – Industrial.
- (6) Building 2399 (Veterinary Clinic) – Business.
- (7) Building 885 (Consolidated Troop Medical Clinic) – Business.
- (8) Roll Dental Clinic, Harper Dental Clinic, and Satellite Pharmacy (Business).

Chapter 2. Procedures.

2-1. Fire Suppression/Engineered Smoke Control System (ESCS) – GLWACH only.

The fire suppression system within Building 310 consists of four primary components: standpipes, fire pump, sprinklers, and fire department connectors. GLWACH is also equipped with an engineered smoke control system in the stairwells and elevator shafts which will convert to positive pressure and keep smoke from entering those zones.

- a. Standpipes: Standpipes are pipes that are attached to the water system to supply the system demand to provide water at hose connections and the sprinkler system. The standpipes systems must receive water flow tests at least every 5 years.
- b. Fire Pump: The pump that is connected to the emergency power system for the delivery of water to standpipes and the sprinkler system should the pressure drop below what is required for normal operation and to ensure adequate pressure to the topmost floors. The fire pumps in water-based automatic fire extinguishing systems must be tested annually under flow conditions and weekly under no-flow conditions.
- c. Sprinklers: The density of the spray of the nozzles is based on occupancy designations and NFPA Code.
- d. Fire Department Connections: Fire department connections allow connection to the standpipe system for augmentation, flushing, and fire fighting.

2-2. Fire Alarm Devices.

- a. The fire alarm devices within GLWACH (Building 310) include pull stations, smoke detectors, audible devices, and visual devices. The entire fire alarm system for GLWACH is a computerized system which monitors the following:
 - (1) Automatic sprinkler water flow switch which indicates when an automatic sprinkler has operated.
 - (2) Sprinkler control valve which may be manually operated by two or more full turns of the handle.
 - (3) Smoke detectors located throughout the building.
 - (4) Duct smoke detectors that are located in the ducts of all air-handling units.
 - (5) Manual pull stations which are located at all exits to include both horizontal and vertical as well as exits to

the outside.

(6) Electromagnetic door holders that hold open smoke compartment doors and are activated by smoke detectors or other fire alarm devices.

(7) Fireman's telephone system which is provided for fire department use only.

(8) Occupant notification system which consists of horn/strobes throughout the building.

b. In addition, the fire alarm system also controls certain other building systems that include the kitchen hood fire system, elevator recall, and the engineered smoke control system (smoke evacuation). Buildings 311, 500, 885, and 1608 are similar but do not contain those specific systems and subsystems that are peculiar to healthcare facilities.

2-3. Fire Extinguishers.

Fire extinguisher cabinets are located throughout the facilities at an approximate distance of one every 75 feet for use by staff personnel. For the most part, ABC fire extinguishers are used within GLWACH.

a. Fire extinguisher types and selection.

(1) Pressurized Water – Class A: Used on wood, paper, and other ordinary combustibles. Not intended for use on flammable liquid or electrical fires.

(2) Carbon Dioxide (CO₂) – Class BC: Used on flammable liquid and on electrical equipment fires.

(3) Multi-purpose Dry Chemical – Class ABC: Used on wood, paper, and other ordinary combustibles; flammable liquid; and electrical fires.

b. Personnel must be initially trained in fire extinguisher use (PASS concept) and annually thereafter. Fire extinguishers are operated using the PASS procedure.

P—Pull the pin.

A—Aim Near the base of the fire.

S—Squeeze the handle.

S—Sweep with the hose to distribute the contents of the extinguisher to the base of the fire.

c. The 10-pound pressurized ABC extinguishers found throughout GLWACH will completely discharge within 10 to 25 seconds.

d. Fire extinguishers will be inspected monthly by staff members who would utilize them in event of a fire and the inspection recorded on the attached tag. The inspection will consist of a visual check of the hose for cracks or other damage, the presence or absence of the safety pin and retainer seal, and the reading of the gauge for correct pressure. If any discrepancies are noted, the GLWACH Fire Marshall will be notified immediately and a replacement extinguisher issued. When the inspection tag is completely signed off (all 12 blocks filled), contact the GLWACH Fire Marshall for further guidance. Specific guidance is provided at Appendix A.

e. The other type of extinguisher you may encounter at GLWACH is the K extinguisher that is located in the Dining Facility. Special training must be provided to the occupants at these locations.

f. The fire extinguishers in the Magnetic Resonance Imaging area are non-ferrous to preclude a potential missile accident with the attraction of the magnet. Other extinguishers will not be used.

2-4. Fire Prevention Rules.

a. Smoking.

(1) Smoking is prohibited in all GLWACH buildings. This policy is applicable to GLWACH staff members, patients, and visitors.

(2) Designated smoking areas are only within the huts located adjacent to the GLWACH buildings. See MEDDAC Policy 17-08.

b. Housekeeping.

(1) All areas will be kept clean and free of trash and excessive combustible material.

(2) Trash not removed from the hospital immediately after collection will be stored in rooms of 1 hour fire-resistant construction. Doors to these rooms must be kept closed at all times except when entering or exiting the room. Trash will not be stored in any location other than appropriate trash rooms. All trash carts will be attended at all times, and the lid will be closed except when removing or inserting trash. Not more than 32 gallons of trash will be left unattended in any area of the hospital at any time. Trash must be disposed of at the end of each workday to avoid the potential for more than 32 gallons accumulation in any 64 square feet or less. This includes any recycle material.

(3) Materials will be stored so as not to interfere with fire lanes nor to inhibit access to fire valves, fire hose, fire extinguishers, fire escapes, fire exits, fire doors, standpipes, sprinkler risers, sprinkler connections, fire alarm boxes, heaters, furnaces, boilers, electrical panels, or fuse boxes.

(4) Dirty linen will be stored in hospital rooms provided for dirty linen. (These rooms were specifically constructed with fire resistant construction.) Dirty Linen will be collected in covered containers that are rated as fire resistant.

(5) A clearance of 18 inches minimum will be maintained between sprinkler heads, ceiling lights, ceiling tiles, and stored materials. Stacks more than 15 feet high or which contain unusually hazardous materials will not be piled closer than 36 inches to sprinkler heads.

(6) Aisles/corridors/means of egress will be kept clear and unobstructed. Nothing will be stored in corridors. Healthcare occupancies must maintain a clear width of 8 feet. Clinic areas must maintain a clear width of 6 feet. Both of these areas must be maintained clear of all impediments to free and instant use in an emergency.

(7) When cleaning patient care rooms, contents will not be stored in the halls. Rooms will be cleaned one side at a time with the contents moved from side-to-side.

c. Handling and storage of flammable and non-flammable gases and liquids.

(1) Oxidizing gases such as nitrous oxide and oxygen shall be stored separately from flammable gases or liquids and in appropriate storage rooms.

(2) Oxidizing gases in excess of operational requirements will be stored in approved storage areas.

(3) Combustible material shall not be stored with flammable gases or liquids.

(4) Open vaporization inside the hospital shall not be used for routine disposal of flammable and combustible liquids.

(5) Flammable liquids or gas cylinders should not be positioned near flame or heat sources.

(6) All refrigerators in areas where flammable liquids are used or stored should be labeled to identify whether or not they are safe for storage of flammable liquids.

(7) The heating of flammable liquids should be performed only in suitable fume hoods on a hot plate, never over an open flame.

(8) A reduction in the use of isopropyl alcohol should be accomplished by substituting a suitable non-flammable disinfectant detergent for many surface-cleaning tasks in the hospital (such as cleaning bedside tables and counter tops).

(9) Once opened, flammable liquids in quantities of one gallon or more, which are stored in the work area, will be transferred to a safety can.

d. Decorations.

(1) Combustible decorations shall be prohibited in any healthcare occupancy unless flame retardant.

(2) Where two or more classes of occupancy occur in the same building or structure and are so intermingled that separate safeguards are impractical, means of egress facilities, construction, protection, and other safeguards shall comply with the most restrictive life safety requirements of the occupants involved.

(3) Detailed guidance is at Appendix F.

e. Electrical.

(1) There will be no changes and/or repairs in the installation of electrical wiring, circuits, fittings, or attachments unless authorized by the Chief, Facilities Management Branch in coordination with the Safety Officer and the FLW Fire Department.

(2) Defective wiring, appliances, and/or fixtures will be reported to the Chief, Facilities Management Branch.

(3) Electrical control panels will be labeled as to what they control. This includes individual breakers/fuses. Doors to the control panel will be kept closed but unlocked. There will be a minimum clearance of 3 feet around the control panel.

(4) Daily inspections will be conducted at the close of business each day to ensure that coffee pots and similar electrical appliances have been disconnected.

(5) The use of extension cords is prohibited except as authorized in FLW Reg 420-2. The Safety Office will not approve the use of electrical appliances in patient care areas.

(6) Space heaters will not be used in hospital occupancies. The Fire Marshal must approve the use of space heaters in other than healthcare occupancies/buildings.

2-5. Fire Safety Equipment/Systems Inspection, Maintenance, and Testing.

a. Portable fire extinguishers. The inspection, maintenance, and testing requirements for portable fire extinguishers are contained in Appendix A.

b. Fire suppression/fire alarm systems. The inspection, maintenance, and testing requirements for the fire suppression and fire alarm systems will be IAW the manufacturer's specifications and NFPA criteria.

2-6. Fire Prevention Briefings and Training.

a. Fire safety training will be provided to newly assigned personnel as part of their initial/newcomers orientation. However, prior to beginning work in their respective areas, newly assigned personnel will be briefed on the specific fire safety plan for that area. Training will include instructions in the use of and response to fire alarms:

- (1) POI – RACE and defend in place, evacuate.
- (2) Outside POI – Listen for announcement and further instructions.
- b. On the spot training will be provided when deficiencies are noted during inspections.
- c. Fire safety in-services should be conducted on fire safety in general (prevention of ignition, detection, fire suppression, fire alarms, reporting), electrical safety, this plan, and changes to the respective ward/clinic/activity/service plans.
- d. After a fire incident (actual fire, false alarm, etc.), lessons learned should be taught.
- e. All training should be documented on MEDDAC Form 963.

2-7. Fire Drills.

- a. The Life Safety Code NFPA 101 requires fire drills be accomplished quarterly for all personnel on all shifts in healthcare occupancies. Stand alone outpatient clinics will conduct annual drills. Annual fire drills are required for administrative and industrial facilities/areas.
- b. Fire drills will test the staff knowledge of:
 - (1) The use and function of the fire alarm system.
 - (2) The transmission of the alarm to FLW Fire Department.
 - (3) Response to alarm.
 - (4) Containment/isolation of fire and smoke.
 - (5) Transfer to areas of refuge, evacuation of area to adjacent zone.
 - (6) Fire extinguishment.
 - (7) Assignment of specific duties.
 - (8) Preparation for building evacuation.
 - (9) General guidance is provided at Appendix B.
 - (10) The quarterly fire drills must be documented on the reverse side of MEDDAC Form 963 with copies submitted to the GLWACH Safety Office within 3 work days.
- c. Evacuation of inpatients will not occur during fire drills without the specific authorization of the Commander, GLWACH.
- d. A sufficient number of drills will be conducted each quarter to ensure a drill is accomplished on each shift. The drills will be conducted randomly and will not be all on the same day. Arrangements will be made to ensure 12-hour shifts get appropriate coverage.
- e. Fire drills will involve all staff except those involved in immediate direct patient care. Drills are intended to test staff, not patients. Patient disruption will be held to an absolute minimum. In areas that are required to evacuate, staff members will alert patients that this is only a drill. One Staff member will get accountability and (without disrupting patient care) will move to the nearest exit and explain fire procedures and assembly points.
- f. Fire alarm pull boxes will not be activated without prior approval from the Fire and Emergency Services

personnel, FLW Fire Department.

g. Quarterly fire drills exercise all primary elements of the fire plan listed below. At least 50% of all required drills are unannounced. All personnel of all shifts in all areas of every building where patients are housed or treated shall participate in drills to the extent called for in the facility fire plan. All fire drills are critiqued for the purpose of identifying deficiencies and opportunities for improvement. All personnel are trained in fire response according to the facility fire plan. The hospital should evaluate the effectiveness of this training at least annually. The training shall include general facility protocols and all aspects of response that may be unique to the individual's duties and work site.

2-8. Reporting a Fire.

a. All fires, regardless of how minor, the presence of smoke, or an unexplained fire smell will be reported immediately by calling 911 and then, time permitting, to the GLWACH Fire Marshal, 596-9471.

b. A fire should also be reported by pulling down the lever of a fire alarm box. For buildings other than 310, when possible and safe to do so, have someone remain in the vicinity of the alarm box until the arrival of the Fire Department to direct them to the exact location of the fire.

c. When calling the Post Fire Department (911), identify yourself and give the location (GLWACH, Fire Zone) of the fire. Remain on the phone until released by the person receiving the call.

d. After notification of the Fire Department, if time permits, report the location to GLWACH Security at 6-1358.

e. Verbal alarms should be used to alert other personnel in the immediate and adjacent vicinity of the fire.

f. Staff will take appropriate actions to ensure safety of patients, visitors, and staff.

2-9. Fire Evacuation Plans.

a. Every ward/clinic/activity/service will develop an evacuation plan. (See appendix E for handicapped evacuation procedures.)

b. Plan contents must include the following:

(1) How to report a fire.

(2) Location of alarm boxes.

(3) Location of fire extinguishers.

(4) RACE procedures as they apply to the specific area.

(5) Designation of primary horizontal and vertical adjacent evacuation zones.

(6) Personnel accountability system.

(7) Assembly point locations outside the building (in event of building evacuation).

c. Update/review. The plans will be kept current and reviewed at least annually. The review and/or changes will be documented.

d. Copies of the plans will be submitted to the GLWACH Safety Office:

e. Assembly points for outside evacuation will be listed in the fire plan and submitted to the Safety Office whenever changes are made. Ensure assembly points are not in an area affected by current construction projects. Assembly points can be visually depicted on the diagram at Appendix C.

- f. The assembly points will be adjusted with respect to the wind direction.

2-10. Central Oxygen System.

a. There should not be a need to totally shut off the Central Oxygen System supplying GLWACH. The exception would be in the event of a major rupture or leak.

b. In the event of a fire within the ward/clinic/activity/service, the OIC/NCOIC, Charge Nurse, or Senior Person on duty should shut off the main area valve only after coordinating with the senior medical person in the affected area to ensure that an alternate supply is available for patients that must be maintained with oxygen for life support.

2-11. RACE Procedures.

- a. If a fire is discovered, implement the RACE concept:

- (1) R – Rescue. Rescue anyone in immediate danger.

- (2) A – Alarm. Activate the fire alarm by pulling the nearest manual alarm box and call 911.

- (3) C – Contain. Contain the fire and/or smoke. Shut all doors, place smoke barriers (wet towels) at the bottom of the doors, keep the doors closed until the “ALL CLEAR” announcement is made. Mark all rooms that have been evacuated/cleared with a one-foot section of surgical tape on the door. Identify the room where the fire is located with a fire extinguisher.

- (4) E – Extinguish/Evacuate. Extinguish the fire if possible by using fire extinguishers (PASS) with the help of the sprinkler system. If it is not possible to extinguish the fire, evacuate to the primary adjacent or vertical zone. Evacuate if the fire is too large to extinguish safely.

- b. If the fire alarm or sprinkler system is automatically activated, perform the following:

- (1) Listen for appropriate announcement.

- (2) Check the area for evidence of fire and/or smoke.

- (3) If fire and/or smoke is/are found, implement the RACE concept.

- (4) If no evidence of fire and/or smoke is found, remain calm, stay alert, stand-by for further instructions, and wait until the “ALL CLEAR” announcement is made.

- (5) In both situations, all doors should be closed and remain so until the “ALL CLEAR” announcement is made.

- c. If your smoke doors close, or if a fire alarm activates in another area of the building, the annunciator should be checked to determine where the fire is located and whether or not you are adjacent to the active area.

- (1) If you are adjacent to an active area, the ventilation system will place your area under positive pressure.

- (2) If you are not adjacent to an active area, locate the active area and cancel all scheduled movements to that location. For example, if radiology is under active alarm, do not send patients from your ward to radiology for X-rays or other procedures.

APPENDIX A

Fire Extinguisher Inspections, Maintenance, and Testing

A-1. Purpose. To describe the inspection procedures for portable fire extinguishers.

A-2. Procedures.

a. Monthly Inspections.

- (1) Hose and nozzle – check that the hose and nozzle does not have cracks, blockage, or other damage.
- (2) Extinguisher shell – check to ensure that the shell is not corroded, dented, or damaged.
- (3) Extinguisher charge – check the gauge to ensure that the extinguisher is not over or under charged (needle should be within the green or black area).
- (4) Extinguisher is located in its designated place.
- (5) Access to the extinguisher is not obstructed or obscured from view.
- (6) Operating instructions on the extinguisher are legible.
- (7) The plastic seal (pin retainer) is not broken, and the pin is in place.
- (8) Extinguishers that are damaged, impaired, leaking, or require maintenance will be turned in to the GLWACH Fire Marshal for exchange.
- (9) Document the inspection by signing the attached tag.

b. Annual Maintenance.

- (1) After the inspection tag is completely filled, notify the GLWACH Fire Marshal and send to GLWACH Safety Office.
- (2) Upon notification, the GLWACH Fire Marshal will provide/install new tags and conduct the maintenance as appropriate.

c. Testing.

- (1) Hydrostatic test must be performed every 12 years for class ABC extinguishers and every 5 years for A and BC extinguishers.
- (2) Ward/Clinic/Activity/Service Fire Marshals will notify the GLWACH Fire Marshal when hydrostatic testing is required.
- (3) Replacement fire extinguishers will be provided during the hydrostatic testing cycle.

d. Use. If a fire extinguisher is used, it should be immediately turned in to the GLWACH Fire Marshal for exchange.

APPENDIX B

Fire Drill Information

B-1. Purpose. To provide general guidance and information concerning fire drills.

B-2. Background.

- a. GLWACH is a fully sprinkled facility and divided into many safety compartments (smoke zones) which serve as

buildings within buildings. Because of this design, as well as the fire suppression and alarm systems, the facility is considered extremely safe; however, the extent of the effectiveness to protect personnel (patients, staff, and visitors) is dependent upon the staff knowing what to do. The effectiveness of sprinkled systems has been well documented over the past 100 years and can best be summed up in the NFPA statement on sprinklers, "NFPA has no record a of a fire killing more than two people in a completely sprinkled building where the system was properly operating, except in an explosion or flash fire or where industrial or fire brigade members or employees were killed during the fire suppression operations."

b. Experience gained from fires in healthcare facilities indicate the two most beneficial actions that can be taken to save lives are early detection of fires with corresponding alarm activation and closing of doors. In many serious loss-of-life fires in healthcare facilities, staff either did not close doors or they reopened them. The spread of fire was sizable and loss of life high.

B-3. Specifics.

a. Fire Evacuation Plans.

(1) Is the fire evacuation plan conspicuously posted?

(2) Are all personnel familiar with the routes of egress?

(3) Is the plan current? The plan must be updated as modifications occur and/or methodologies change. At a minimum, the plan must be reviewed at least annually.

b. Fire Alarm Activation Boxes.

(1) Are the activation boxes annotated on the fire evacuation plan?

(2) Have the personnel been shown the physical location of the boxes?

(3) Do the personnel know how to operate the alarm activation boxes?

(4) If the alarm does not activate after being pulled, do the personnel know what to do?

c. Fire Extinguishers.

(1) Are the locations of the fire extinguishers marked on the Fire Evacuation Plan?

(2) Do the personnel know the locations of fire extinguishers?

(3) Have the fire extinguishers been inspected within the last month?

(4) Do personnel know how to operate the fire extinguishers? Is the training documented?

d. Defend in Place.

(1) Do the personnel understand the concept of Defend in Place?

(2) Do the personnel know why Defend in Place is appropriate?

(3) Do personnel know the basic tenets of Defend in Place and RACE?

(4) Are all doors closed and kept closed?

e. Fire Zones.

(1) Do the personnel know the boundaries of their fire zones and which doors are considered fire doors?
Smoke doors?

(2) Do the personnel know the meaning of horizontal and vertical evacuation?

(3) Do the personnel know which fire zone is considered their primary horizontal evacuation location? Their primary vertical evacuation location?

(4) Do the personnel know what to do if a fire is detected in an adjacent zone?

f. Miscellaneous.

(1) Do the personnel understand how to interpret the fire alarm system and annunciators at the nursing station?

(2) Is there a plan for supplying oxygen to patients requiring oxygen if the main oxygen supply is turned off during a fire?

(3) If building evacuation is an option or when told to do so, do the personnel know the location of the assembly point?

(4) If building evacuation is an option or when told to do so, is there an accounting system for personnel?

(5) Do the personnel know how to contain smoke?

(6) Do the personnel know their respective assignments during a fire?

B-4. Fire Drill Example.

a. Place an indicator of a fire (red handkerchief/cloth/other) in a selected room or on an item such as a chair, table, trash can, equipment, etc. (Note: This will encourage the participants to evaluate the type of fire and take appropriate action – for example, electrical equipment should require circuitry disconnection as well as extinguishment.)

b. The first person to see the fire will initiate the basic fire plan to include RACE.

(1) Rescue patients/staff (if applicable). Never use real patients in a fire drill. Available staff could act as a suitable substitute.

(2) Simulate pulling the fire alarm. Notify the Communications Center (911, 6-1358) that a fire drill is being conducted by saying: "Fire Drill, 4A" (be sure to emphasize that this is a drill.) Give your name, location, telephone number, and exact location of the simulated fire.

(3) Contain the spread of the fire and/or smoke by closing the patient room doors and other doors.

(4) Do one of the following:

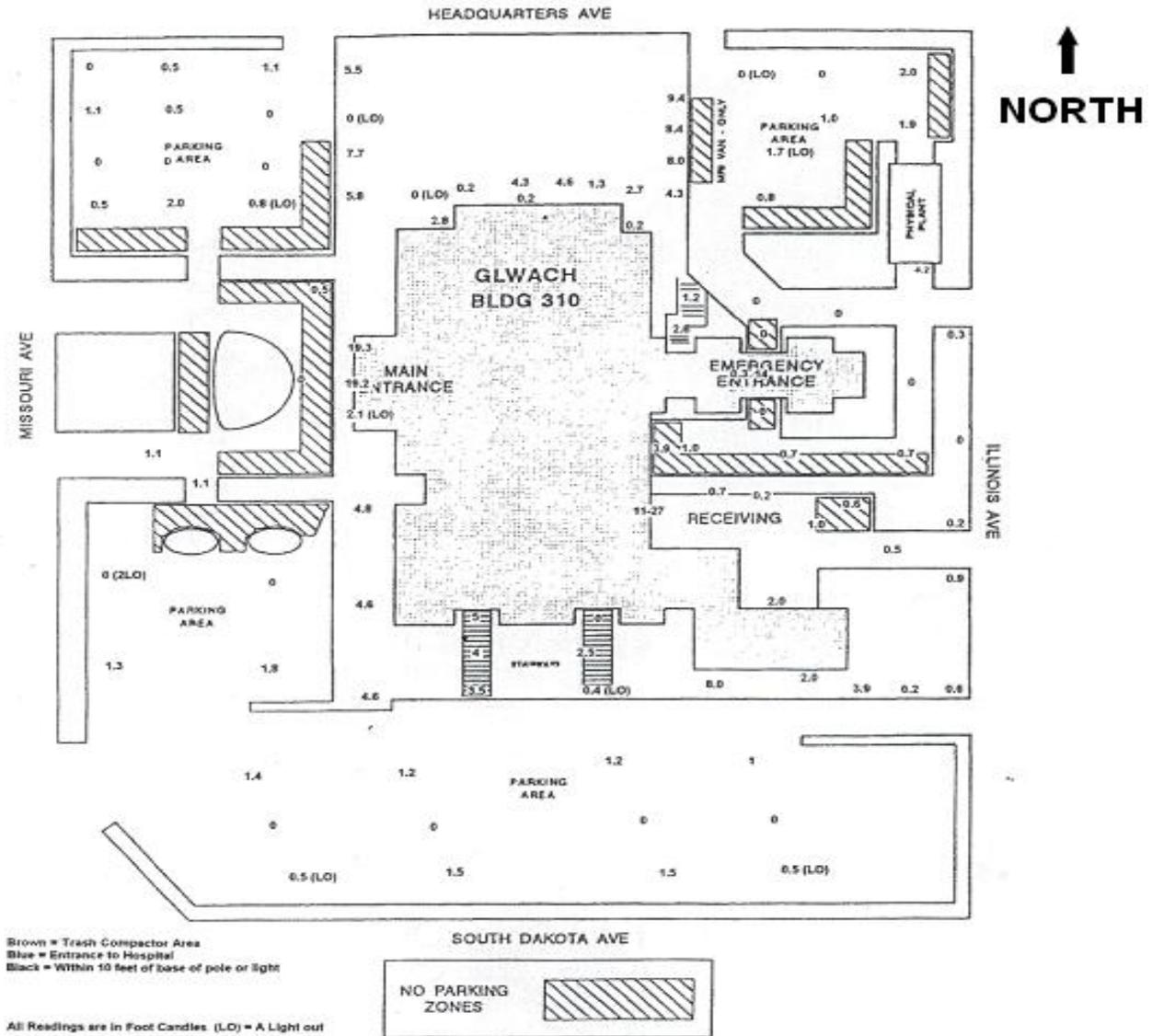
(a) Extinguish the simulated fire without removing the retaining pin or breaking the seal on the fire extinguisher.

(b) Upon creating a scenario whereby the fire cannot be successfully extinguished, prepare for a simulated evacuation to an adjacent fire zone.

c. Complete MEDDAC Form 963.

d. Incorporate lessons learned into the local fire safety plan.

APPENDIX C
Evacuation Rally Point Diagram



APPENDIX D
Interim Life Safety Measures

D-1. Policy. It is the policy of GLWACH to evaluate the need for Interim Life Safety Measures (ILSM) prior to, or during, any construction, renovation, communication, or other project that may create a significant Life Safety Code (NFPA 101) deficiency. In the event of such a deficiency, appropriate ILSM will be implemented and documented as necessary to protect patients, staff, and visitors from fire hazards, code violations, or other life safety deficiencies created by these projects. Additional information in ILSM is available in MEDDACA Reg 385-12.

D-2. Purpose. To establish responsibility, procedures, and guidelines regarding the evaluation and implementation of ILSM during construction, renovation, or other projects.

D-3. Measures.

a. ILSM. The Joint Commission Environment of Care Standard E.C. 2.5 outlines the actions and procedures required to temporarily compensate for significant hazards posed by existing NFPA 101 Life Safety Code deficiencies or construction hazards. These interim life safety measures are as follows:

(1) Ensure free and unobstructed exits. Personnel receive additional training when alternate exits are designated. In buildings or areas under construction, escape routes must be maintained for construction workers at all times. Means of exiting construction areas are inspected daily.

(2) Ensure free and unobstructed access to emergency services and for fire, police, and other emergency responders.

(3) Ensure fire alarm, detection, and suppression systems are in good working order. A temporary but equivalent system shall be provided when any fire system is impaired. Temporary systems must be inspected and tested monthly.

(4) Ensure temporary construction partitions are smoke-tight and built of noncombustible or limited combustible materials that will not contribute to the development or spread of fire.

(5) Provide additional fire-fighting equipment, and train personnel in its use.

(6) Prohibit smoking according to The Joint Commission Environment of Care standard E.C. 1.1.2 throughout the buildings and in and adjacent to construction areas.

(7) Develop and enforce storage, housekeeping, and debris removal practices that reduce the building's flammable and combustible fire load to the lowest feasible level.

(8) Conduct a minimum of two fire drills per shift per quarter.

(9) Increase hazard surveillance of buildings, grounds, and equipment, with special attention to excavations, construction areas, construction storage, and field offices.

(10) Train personnel to compensate for impaired structural or compartmentalization features of fire safety.

(11) Conduct education programs to promote awareness of Life Safety Measures, deficiencies, construction hazards, and ILSM.

b. Large Quantity of Combustibles and Debris.

(1) For purposes of this regulation, a large quantity of combustibles and debris is defined as more than one large non-combustible container of trash left in the project area after the construction crew has left the project site at the end of the work day.

(2) Contractors and employees working on these projects are required to move all other trash and empty all trash containers at the end of each workday in order to minimize the risk of fire and comply with this policy. The one remaining container with trash must not be overflowing and must be covered with a lid.

c. Life Safety Code. The Life Safety Code is a set of minimum guidelines for the construction and operation of buildings intended to provide and ensure a reasonable degree of safety to life during emergency situations. The Life Safety Code is prepared, published, and periodically revised by NFPA.

d. Criteria for Life Safety Assessment.

(1) The Joint Commission Environment of Care standard E.C.2.5 requires facilities to establish written criteria to evaluate various Life Safety Code deficiencies and construction hazards for determining when and to what extent

one or more of the interim life safety measures may be applicable.

(2) GLWACH has established the following life safety assessment criteria:

(a) A preliminary evaluation that receives a "NO" on any item evaluated will require a review of the preliminary life safety assessment score by the person evaluating the area and may result in implementation of ILSM. (See checklist below.)

(b) Significantly compromise the integrity of the building's life safety and "defend in place" structural features (for example, fire barriers, smoke barriers, floor slabs, corridor walls, etc.) For the purpose of this regulation, a significant compromise is defined as any action that results in a penetration of a fire barrier, smoke barrier, floor slab, or corridor wall when the resulting penetration has the potential to be greater than five inches in diameter and will be left unsupervised for any period of time. This is intended to allow essential penetrations during the supervised work shift if those penetrations are sealed before the end of the supervised work shift. Unsealed and unsupervised penetrations of structural life safety features of the building represent a significant life safety hazard to the building occupants.

Interim Life Safety Measures Checklist		
Project Inspector:		
	Y	N
1. Will exits in the construction area be maintained in a free and unobstructed manner?		
2. Will all emergency services to include fire and police have free and unobstructed access to the construction area?		
3. Will fire alarm, detection, and suppression systems be maintained in good working order throughout the construction project? (note-the fire department must be notified and fire watch instituted if the alarm or sprinkler system will be out of service more than 4 hours in any 24-hour period.)		
4. Will temporary construction partitions be smoke tight and built of noncombustible materials?		
5. Is smoking prohibited throughout the building and in/near the construction site?		
6. Does the construction involve other than patient care areas?		
7. If the project is in an occupied area, will staff be provided additional training and fire-fighting equipment?		
8. Will storage, housekeeping, and debris removal practices be instituted to reduce the flammable and combustible fire load to the lowest possible level?		
A "NO" answer to any of the above will necessitate implementation of Interim Life Safety Measures. The following requirements will then be in force:		
1. Additional fire-safety equipment and training in its use will be provided to staff members, if deemed necessary by the Hospital Safety Officer.		
2. A minimum of two fire drills per shift per quarter will be conducted.		
3. Increased surveillance of the building, grounds, and equipment will be implemented with special attention to excavations, storage, and field offices. Twice daily hazard surveillance will be required.		
4. Organization wide safety education to promote awareness of life safety building deficiencies, construction hazards, and Interim Life Safety Measures will be conducted.		
5. Interim Life Safety Measures will continue until completion of the project or such time as the causal factor is corrected or eliminated.		

D-4. Responsibility/Procedures.

a. GLWACH Facilities Branch.

(1) Ensure that contractors review and comply with this regulation.

(2) Develop a Preliminary Life Safety Assessment Score using the risk-based criteria above.

(3) Provide current record drawings for the Safety Office along with a description of the project and its scope. The drawings will address all structural fire protection features, including the proposed impact of the project on those features.

(4) Document the findings of the ILSM Evaluation Record and send a copy to the Safety Officer.

(5) The Safety Officer or designated representative will sign the ILSM Evaluation Record.

(6) Ensure that inspections of the project area are conducted and documented as established by the Safety Officer and that deficiencies are addressed promptly for the continued life safety of the building occupants.

(7) Ensure that all documentation required by Joint Commission is provided to the Safety Officer, and that evaluation and implementation documentation is available at the applicable facility for review by regulatory agencies.

b. ILSM Team.

(1) The ILSM Team will consist of at least the following members:

(a) Project Manager (GLWACH-Facilities)

(b) Infection Control Officer

(c) Contractor, if applicable

(d) Engineering and Maintenance Team Member assigned to project

(e) Additional members of the ILSM Team, if deemed appropriate by the size or complexity of the project, will include the Hospital Safety Manager and the director or manager of units or departments directly affected by the project.

c. General Contractors. Review and comply with this regulation and with the permit and notification requirements of the GLWACH Facilities Manager prior to work involving penetration of the structural features of the building, fire response modification, and/or burning and welding activities.

d. Directors/Managers.

(1) Ensure staff awareness of projects in their immediate or adjacent work area or egress route that may impact the life safety hazards of patients, visitors and staff.

(2) Review and communicate information to staff regarding ILSM.

e. Facilities Manager.

(1) Review documentation on ILSM and maintain permanent records for review by regulatory agencies. Send letters of non-compliance to contractors, and take other actions as deemed appropriate to maintain the integrity of the life safety features of the building during construction, renovation, and other projects.

(2) Establish a process to ensure appropriate reporting to safety committees, as required by Joint Commission.

f. Employees.

(1) Participate in general training sessions on life safety features of the building, hazards of construction, and interim life safety measures.

(2) Participate in specific ILSM training associated with projects impacting the employee's workplace to ensure appropriate response in emergency situations.

D-5. Compliance.

a. Contractors and subcontractors who fail to comply with this regulation may receive a Notice of Non-Compliance from the Facilities Manager. Such notice will require immediate resolution of the problem, and may include a monetary fine, cessation of work until corrections are made, or both, depending upon the severity of the situation.

b. GLWACH employees who fail to comply with this regulation will be subject to the disciplinary process outlined in AR 385-10.

c. The ILSM program will be evaluated annually by members of the Safety Office to ensure program effectiveness and efficiency. Results and recommendations will be reported to the Safety Committee.

D-6. Random Project Audits.

a. Random project audits will be coordinated between the Facilities Management Branch and the Hospital Safety Officer to ensure that essential personnel understand the scope and implications of the program and that the intent of this policy is being met.

b. Audit results will be reported to the Safety Committee.

APPENDIX E

Handicapped Evacuation Procedures

E-1. Purpose. To provide guidance for supervisors of handicapped employees of GLWACH by outlining the policy and responsibilities for safe and orderly evacuation of handicapped staff members.

E-2. Introduction. Fire evacuation procedures necessitate implementation of special procedures for sections within the hospital where handicapped staff members are employed. Procedures may vary according to specific location within the facility and are outlined below.

E-3. Responsibilities. The immediate supervisor of a handicapped employee is responsible for developing, practicing, and implementing the special procedures required to ensure safe evacuation. The department/division/service chief is responsible for ensuring a satisfactory plan is developed and tested for all areas of their responsibility where handicapped individuals are employed.

a. Lower Level: Agencies, sections, departments located on the lower level of the hospital need to develop unique methods and procedures to ensure the safe evacuation of handicapped staff members during emergencies.

(1) During fire and other emergencies, the elevators will be off limits to everyone except Fire Department and emergency personnel. Therefore, everyone assigned to the lower level must evacuate using stairs or the loading dock, which also has stairs/ramps.

(2) To facilitate the safe evacuation of handicapped personnel, several other staff members should be assigned the task of getting the handicapped individual to safety. This may require physically carrying the individual up the stairs to the ground level. Thus, it is imperative that the assigned individuals be physically fit and capable of the task.

(3) Alternate teams should be designated in event that the primary individuals responsible for evacuation of the handicapped are not available on that particular occasion.

(4) Teams should rehearse the evacuation procedures on a quarterly basis to ensure competency.

b. Upper Levels. Agencies, sections, departments located on the upper levels of the hospital need to develop unique methods and procedures to ensure the safe evacuation of handicapped staff members during emergencies.

(1) During fire and other emergencies, the elevators in the affected part of the building will be off limits to everyone except Fire Department and emergency personnel. It may be feasible to horizontally evacuate the handicapped person to another portion of the structure and, if necessary, use the elevators there. It could also be necessary to carry the individual down the stairs if horizontal evacuation is not possible.

(2) To facilitate the safe evacuation of handicapped personnel, several other staff members should be assigned to the task of getting the handicapped individual to safety. This may require physically carrying the individual down the stairs to the ground level. Thus, it is imperative that the assigned individuals be physically fit and capable of the task.

(3) Alternate teams should be designated in event that the primary individuals responsible for evacuation of the handicapped are not available on that particular occasion.

(4) Teams should rehearse the evacuation procedures on a quarterly basis to ensure competency.

APPENDIX F

Guidelines for Decorations

F-1. These guidelines for decorating apply year round. It is never permissible to use flammable materials for decorating within the hospital environment.

F-2. All decorations used in the interior or exterior of all buildings belonging to GLWACH shall be either non-combustible or flame-retardant. Maintain the proof of flame retardant or non-combustible properties for all decorations displayed in the area for further evidence in the event questions arise.

F-3. The following items are prohibited for use in displays:

- a. Combustible vegetation such as cornstalks, straw, hay, and leaves.
- b. Ordinary crepe paper, paper coverings on doors, walls, and windows.
- c. Pyroxylin plastic decorations.
- d. Live or cut Christmas trees or non-flame-retardant artificial trees.
- e. Decorations that interfere with visibility through windows, especially fire and smoke doors.
- f. Candles unless used for religious services and specifically approved by the fire marshal.
- g. Lighting on metallic trees.
- h. Cotton.

F-4. The following items are permissible for use in decorations:

- a. Styrofoam completely wrapped with aluminum foil.

- b. Aluminum foil/aluminum/metal ornaments.
- c. Glass ornaments.
- d. UL approved plastic plants and ornaments.
- e. Flame resistant/retardant items.

F-5. Lighted decorations must be approved and labeled by a nationally recognized testing agency such as Underwriter's Laboratories or Factory Mutual . All lighted displays must be approved by the Safety Office prior to use. Lighted displays that are unattended at any time must be unplugged. This is especially important at the end of the work day.

F-6. Extension cords used with lights or lighted displays must be listed 16 gauge or heavier and be equipped with a grounding type plug. IAW FLW Reg 420-2, extension cords may not be longer than 8 feet. Cords will not be wrapped around any post, pole, bump plate, railing, or other such structure. Extension cords may not be used across or near walking surfaces, especially egress corridors.

F-7. Holiday decorations cannot block or restrict corridors (8 feet in the Bed Tower and 6 feet in the remainder of the hospital), aisles, paths of egress, fire extinguishers, overhead sprinklers, pull stations, or electrical panels.

F-8. Limitations on the use of an artificial Christmas tree:

- a. Do not use in elevators, stairways, or corridors.
- b. Do not use in any location that blocks an exit, hallway, or other space leading to an exit.
- c. Do not place near any heat source.

F-9. All decorations to be used for special events (for example, bunting, banners, artificial floral designs, etc.) will be approved by the Fire Marshal and inspected by the Safety Office prior to use.

F-10. These are only skeletal guidelines. If there is any question about whether or not some type of decoration is legal, contact the Safety Office for a decision, or don't use the material.

The proponent of this publication is the Safety Office. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, USA MEDDAC, ATTN: MCXP-S, 126 Missouri Avenue, Fort Leonard Wood, Missouri 65473-8952.

FOR THE COMMANDER:



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