

FIRE CODE Inspector's Guide



**Based on the 2003
International Fire Code®**

INSPECTOR'S GUIDE

PREFACE

This document is intended to be used by people conducting basic fire prevention inspections. However, a comprehensive knowledge of the fire code by everyone may not be possible. This guide will act as a quick reference for fire inspectors.

Inspectors should familiarize themselves with the International Fire Code (IFC) and the International Building Code (IBC). These documents constitute the authority upon which fire inspections are based, and are the basis for the information contained in this guide.

History has proven that properly installed and maintained fire detection and suppression systems have a significant potential for reducing loss of life and property from fire.

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PERMITS

Permits required. Permits required by this code shall be obtained from the fire code official. 105.1.1

Types of permits. There shall be two types of permits. 105.1.2

Operational permit allows the applicant to conduct an operation or a business for which a permit is required. Construction permit allows the applicant to install or modify systems and equipment for which a permit is required.

Posting the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire code official. 105.3.5

Expiration. An operational permit shall remain in effect until reissued, renewed, or revoked or for such a period of time as specified in the permit. 105.3.1
Construction permits shall automatically become invalid unless the work authorized by such permit is commenced within 180 days after its issuance.

Inspection authorized. Before a new operational permit is approved, the fire code official is authorized to inspect the premises to determine compliance with this code. 105.2.2

Required Operational Permits 105.6

1. **Aerosol products:** To manufacture, store or handle 105.6.1
2. **Amusement buildings:** To operate 105.6.2
3. **Aviation facilities:** Aircraft servicing or repair of 105.6.3
4. **Carnivals and fairs:** To conduct 105.6.4
5. **Battery systems:** To install, stationary lead-acid battery 105.6.5
6. **Cellulose nitrate film:** To store, handle, or use in an "A" occ. 105.6.6
7. **Combustible dust-producing operations:** To operate 105.6.7

PERMITS cont.

8.	Combustible fibers: To storage or handle > 100 cu. ft.	105.6.8
9.	Compressed gases: To store, use or handle	105.6.9
10.	Covered mall buildings: Permit required	105.6.10
11.	Cryogenic fluids: To produce, store, transport on site	105.6.11
12.	Cutting and welding: To conduct cutting or welding	105.6.12
13.	Dry cleaning plants: To engage in the business of	105.6.13
14.	Exhibits and trade shows: To operate	105.6.14
15.	Explosives: To manufacture, storage, handling, sale or use	105.6.15
16.	Fire hydrants and valves: To use or operate	105.6.16
17.	Flammable and combustible liquids: To store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside a building. See conditions.	105.6.17
18.	Floor finishing: To finish or surface over 350 sq. ft.	105.6.18
19.	Fruit and crop ripening: To operate	105.6.19
20.	Fumigation and thermal insecticidal fogging: To operate a business of fumigation.	105.6.20
21.	Hazardous materials: To store, transport on site, use or handle	105.6.21
22.	HPM facilities: To store, handle or use	105.6.22
23.	High-piled storage: To use a building or portion thereof	105.6.23
24.	Hot work operations: Welding, cutting, roofing	105.6.24
25.	Industrial ovens: To operate	105.6.25
26.	Lumber yards and woodworking plants > 100,000 bd. ft.	105.6.26
27.	Liquid or gas-fueled vehicles: To operate in a Group A occ.	105.6.27
28.	LP-gas: Storage, use, and operation of cargo tankers that transport.	105.6.28
29.	Magnesium: To melt, cast, heat treat or grind > 10 lbs.	105.6.29
30.	Misc. combustible storage: To store in any building	105.6.30
31.	Open burning: For kindling or maintaining an open fire	105.6.31
32.	Open flames and torches: Use of (ie: paint removal)	105.6.32
33.	Open flames and candles: Use of in connection with assembly areas, dining areas of restaurants, or drinking establishments	105.6.33
34.	Organic coating: Producing more than 1 gallon per day	105.6.34
35.	Places of assembly: To operate a place of assembly	105.6.35
36.	Private fire hydrants: To use or remove from service	105.6.36
37.	Pyrotechnic special effects material: To use	105.6.37
38.	Pyroxylin plastics: To store or handle	105.6.38
39.	Refrigeration equipment: To operate	105.6.39
40.	Repair garages and motor fuel-dispensing facilities: To operate	105.6.40
41.	Rooftop heliports: To operate	105.6.41
42.	Spraying or dipping: To conduct	105.6.42
43.	Storage of scrap tires and tire byproducts.	105.6.43
44.	Temporary membrane structures, tents and canopies: To operate a tent over 200 sq. ft. or canopy over 400 sq. ft.	105.6.44
45.	Tire-rebuilding plants: To operate	105.6.45
46.	Waste handling: For the operation of wrecking yards, junk yards and waste material handling facilities.	105.6.46
47.	Wood products: To store chips	105.6.47

PERMITS cont.

	Required Construction Permits	105.7
1.	Automatic fire-extinguishing systems: For installation of or modification to. Maintenance is exempt.	105.7.1
2.	Compressed gases: To install, repair damage to system	105.7.2
3.	Fire alarm and detection system and related equipment: For installation or for modification to	105.7.3
4.	Fire pumps and related equipment: For installation of or modification to	105.7.4
5.	Flammable and combustible liquids:	105.7.5
6.	Hazardous material: To repair or modify storage	105.7.6
7.	Industrial ovens: To install	105.7.7
8.	LP-gas: For installation of or modification to a LP-gas system	105.7.8
9.	Private fire hydrants: To install or modification of	105.7.9
10.	Spraying or dipping: To install or modify spray room or booth	105.7.10
11.	Standpipe systems: For the installation of or modification to	105.7.11
12.	Temporary membrane structures, tents and canopies: To erect a tent over 200 sq. ft., canopy over 400 sq. ft.	105.7.12

DEFINITIONS

Chapter 2 page 13

ACCESSIBLE MEANS OF EGRESS: A continuous and unobstructed way of egress travel from any point in a building or facility that provides an accessible route to an area of refuge, a horizontal exit or a public way. See 1002.1

AIR-SUPPORTED STRUCTURE: A structure wherein the shape of the structure is attained by air pressure, and occupants of the structure are within the elevated pressure area. See 2402.1

ALARM SIGNAL: A signal indicating an emergency requiring immediate action, such as a signal indicative of fire. See 902.1

APPROVED: Acceptable to the fire code official.

AREA OF REFUGE: An area where persons unable to use stairways can remain temporarily to await instructions or assistance during emergency evacuation. See 1002.1

AUTOMATIC FIRE-EXTINGUISHING SYSTEM: An approved system of devices and equipment which automatically detects a fire and discharges an approved fire-extinguishing agent onto or in the area of a fire. See 902.1

AUTOMATIC SPRINKLER SYSTEM: A sprinkler system for fire protection purposes, is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply. 902.1

AUTOMOTIVE MOTOR FUEL DISPENSING FACILITY: That portion of property where flammable or combustible liquids or gases used as motor fuels are stored and dispensed from fixed equipment into the fuel tanks of motor vehicle. See 2202.1

BATTERY: Valve-Regulated Lead-Acid (VRLA) battery is a lead-acid battery consisting of sealed cells furnished with a valve that opens to vent the battery whenever the internal pressure of the battery exceeds the ambient pressure by a set amount. In VRLA batteries, the liquid electrolyte in the cells is immobilized in an absorptive glass mat (AGM cells or batteries) or by the addition of a gelling agent (gel cells or gelled batteries).

Vented (Flooded) Lead-Acid battery is a lead-acid battery consisting of cells that have electrodes immersed in liquid electrolyte. Flooded lead-acid batteries have a provision for the user to add water to the cell and are equipped with a flame-arresting vent which permits the escape of hydrogen and oxygen gas from the cell in a diffused manner such that a spark, or other ignition source, outside the cell will not ignite the gases inside the cell

BONFIRE: An outdoor fire utilized for ceremonial purposes. See 302.1

CANOPY: A structure, enclosure or shelter constructed of fabric or pliable materials supported by any manner, except by air or the contents it protects, and is open without sidewalls or drops on 75 percent or more of the perimeter. See 2402.1

COMMERCIAL COOKING APPLIANCES: Appliances used in a commercial food service establishment for heating or cooking food and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers; upright broilers; griddles; broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens; barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food service establishment shall include any building or portion thereof used for the preparation and serving of food. See 602.1

DEFINITIONS cont.

CONSTANTLY ATTENDED LOCATION: A designated location at a facility staffed by trained personnel on a continuous basis where alarm or supervisory signals are monitored and facilities are provided for notification of fire department or other emergency services.

CONTROL AREA: Spaces within a building which are enclosed and bounded by exterior walls, fire walls, fire barriers and roofs, or a combination thereof, where quantities of hazardous materials not exceeding the maximum allowable quantities per control area are stored, dispensed, used or handled. See 2702.1

CORRIDOR: An enclosed exit access component that defines and provides a path of egress travel to an exit. See 1002.1

DETECTOR, HEAT: A fire detector that senses heat produced by burning substances. Heat is the energy produced by combustion that causes substances to rise in temperature.

DISPENSING: is the pouring or transferring of any material from a container, tank or similar vessel whereby vapors, dusts, fumes, mists or gases are liberated to the atmosphere. See 2702.1

DRY CLEANING: The process of removing dirt, grease, paints and other stains from such items as wearing apparel, textiles, fabrics and rugs by use of solvent liquids. 1202.1

DRY CLEANING PLANT: A facility in which dry cleaning and associated operations are conducted, including the office, receiving area and storage rooms. See 1202.1

DRY CLEANING ROOM: An occupiable space within a building used for performing dry cleaning operations, the installation of solvent-handling equipment or the storage of dry cleaning solvents. See 1202.1

DRY CLEANING SYSTEM: Machinery or equipment in which textiles are immersed or agitated in solvent or in which dry cleaning solvent is extracted from textiles. See 1202.1

EGRESS COURT: A court or yard which provides access to a public way for one or more exits. See 1002.1

EMERGENCY EVACUATION DRILL: An exercise performed to train staff and occupants and to evaluate their efficiency and effectiveness in carrying out emergency evacuation procedures. See 402.1

EXISTING: Buildings, facilities or conditions which are already in existence, constructed or officially authorized prior to the adoption of this code. See 202

EXTENSION CORD: A portable flexible cord of any length which has one male connector on one end and one or more female connectors on the other, and no built-in overcurrent protection.

EXIT: That portion of a means of egress system which is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives as required to provide a protected path of egress travel between the exit and the exit discharge. See 1002.1

EXIT ACCESS: That portion of a means of egress system that leads from any occupied portion of a building or structure to an exit. See 1002.1

EXIT DISCHARGE: That portion of a means of egress system between the termination of an exit and a public way. See 1002.1

EXIT ENCLOSURE: An exit component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protective, and provides for a protected path of egress travel in a vertical or horizontal direction to the exit discharge or the public way. See 1002.1

DEFINITIONS cont.

FACILITY: A building or use in a fixed location including exterior storage areas for flammable and combustible substances and hazardous materials, piers, wharves, tank farms and similar uses. This term includes recreational vehicles, mobile home and manufactured housing parks, sales and storage lots. See 202

FALSE ALARM: The willful and knowing initiation or transmission of a signal message or other notification of an event of fire when no such danger exists. See 902.1

FIRE ALARM: The giving, signaling or transmission to any public fire station, or company or to any officer or employee there of, whether by telephone, spoken word or otherwise, of information to the effect that there is a fire at or near the place indicated.

FIRE APPARATUS ACCESS ROAD: A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane and access roadway. See 502.1

FIRE CHIEF: The chief officer of the fire department serving the jurisdiction, or a duly authorized representative. See 202

FIRE CODE OFFICIAL: The fire chief or other designated authority charged with the administration and enforcement of the code, or a duly authorized representative.

FIRE DEPARTMENT MASTER KEY: A limited issue key of special or controlled design to be carried by fire department officials in command which will open key boxes on specified properties. See 502.1

FIRE DOOR ASSEMBLY: Any combination of a fire door, frame, hardware, and other accessories that together provide a specific degree of fire protection to the opening.

FIRE LANE: A road or other passageway developed to allow the passage of fire apparatus. A fire lane is not necessarily intended for vehicular traffic other than fire apparatus. See 502.1

FIRE WATCH: A temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals for the purpose of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department. See 1404.5

FLOOR AREA, GROSS: The floor area within the inside perimeter of the exterior walls of the building under consideration. See 1002.1

FLOOR AREA, NET: The actual occupied area not including unoccupied accessory areas such as corridors, stairways, toilet rooms, mechanical rooms and closets. See 1002.1

HAZARDOUS PRODUCTION MATERIAL (HPM): A solid, liquid or gas associated with semiconductor manufacturing that has a degree of hazard rating in health, flammability or reactivity. See 1802.1

HI-BOY: A cart used to transport hot roofing materials on a roof. See 302.1

HIGH PILED COMBUSTIBLE STORAGE: Storage of combustible materials in closely packed piles or combustible materials on pallets, in racks or on shelves where the top of storage is greater than 12 feet in height. High hazard commodities is 6 feet. See 2302.1

HIGH-PILED STORAGE AREA: An area within a building which is designated, intended, proposed or actually used for high-piled combustible storage. See 2302.1

HOOD, TYPE 1: A kitchen hood for collecting and removing grease vapors and smoke. An air-intake device used to capture by entrainment, impingement, adhesion or similar means, grease and similar contaminants before they enter a duct system. See 602.1

DEFINITIONS cont.

HOT WORK: Operations including cutting, welding, Thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, installation of torch-applied roof systems or any other similar situation. See 2602.1

IMMEDIATELY DANGEROUS TO LIFE AND HEALTH: The concentration of air-borne contaminants which pose a threat of death, immediate or delayed permanent adverse health effects that could prevent escape from such an environment. See 2702.1

KEY BOX: A secure, tamperproof device with a lock operable only by a fire department master key, and containing building entry keys and other keys that may be required for access in an emergency. See 502.1

LISTED: Equipment or materials included on a list published by an approved testing laboratory, inspection agency or other organization concerned with current product evaluation that maintains periodic inspection of production of listed equipment or materials, and whose listing states that equipment or materials comply with approved nationally recognized standards and have been tested or evaluated and found suitable for use in a specified manner. See 202

MEANS OF EGRESS: A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a public way. A means of egress consists of three separate and distinct parts: the exit access, the exit and the exit discharge. See 1002.1.

NUISANCE ALARM: An alarm caused by mechanical failure, malfunction, improper installation, or lack of proper maintenance, or an alarm activated by a cause that cannot be determined. See 902.1

MULTIPLUG ADAPTER: A device that plugs into a receptacle and allows that receptacle to supply power to more appliances or fixtures than that for which it was originally designed, such as cube adapters, strip plugs, and multiplug extension cords.

OCCUPANCY: Is the purpose for which a building or part thereof is used or intended to be used.

OCCUPANT LOAD: The number of persons for which the means of egress of a building or portion thereof is designed. See 1002.1

OVERCROWDING: A condition that exists when either there are more people in a building, structure or portion thereof than have been authorized or posted by the fire code official, or when the fire code official determines that a threat exist to the safety of the occupants due to persons sitting and/or standing in locations that may obstruct or impede the use of aisles, passages, corridors, stairways, exits or other components of the means of egress. See 107.6

PANIC HARDWARE: A door-latching assembly incorporating a device that releases the latch upon the application of a force in the direction of egress travel. See 1002.1

POWER TAP: Relocatable power taps is a device for indoor use consisting of an attachment plug on one end of a flexible cord and two or more receptacles on the opposite end. Its wiring is polarized and grounded, and it has overcurrent protection. (Surge protector)

PUBLIC WAY: A street, alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet.

RAMP: A walking surface that has a running slope steeper than one unit vertical in 20 units horizontal (5% slope). See 1002.1

DEFINITIONS cont.

RECREATIONAL FIRE: An outdoor fire burning materials other than rubbish where the fuel being burned is not contained in an incinerator, outdoor fireplace, barbecue grill or barbecue pit and has a total fuel area of 3 feet or less in diameter and 2 feet or less in height for pleasure, religious, ceremonial, cooking, warmth or similar purposes. 302.1

REPAIR GARAGE: A building, structure or portion thereof used for servicing or repairing motor vehicles. See 2202.1

RUBBISH (TRASH): Combustible and noncombustible waste materials, including residue from the burning of coal, wood, coke or other combustible material, paper, rags, cartons, tin cans, metals, mineral matter, glass crockery, dust and discarded refrigerators, and heating, cooking or incinerator-type appliances. See 202

SAFETY CAN: An approved container of not more than 5 gallon capacity having a spring-closing lid and spout cover so designed that it will relieve internal pressure when subjected to fire exposure. See 2702.1

SELF-SERVICE MOTOR FUEL DISPENSING FACILITY: That portion of a motor fuel dispensing facility where liquid motor fuels are dispensed from fixed approved dispensing equipment into the fuel tanks of motor vehicles by persons other than a motor fuel-dispensing facility attendant. See 2202.1

SMOKE ALARM: A single or multiple-station alarm responsive to smoke and not connected to a system. See 702.1

SMOKE DETECTOR: A listed device that senses visible or invisible particles of combustion. See 902.1

SPRAY AREA: Is an area in which dangerous quantities of flammable vapors or combustible residues, dusts or deposits are present due to the operation of spraying processes. See 1502.1

SPRAY ROOM: Is a room designed to accommodate spraying operations constructed in accordance with the IBC and separated from the remainder of the building by a minimum 1-hour fire barrier. See 1502.1

SPRAY BOOTH: A mechanically ventilated appliance of varying dimensions and construction provided to enclose or accommodate a spraying operation and to confine and limit the escape of spray vapor and residue and to exhaust it safely. See 1502.1

STAIRWAY: One or more flights of stairs, either exterior or interior, with the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one level to another. See 1002.1

TANK: A vessel containing more than 60 gallons. See 202

TENT: A structure, enclosure or shelter constructed of fabric or pliable material supported by any manner except by air or the contents that it protects. See 2402.1

GROUP "A-1" OCCUPANCY

202 p. 17

Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering together of persons for purposes such as civic, social or religious functions, recreation, food or drink consumption or awaiting transportation. A room or space used for assembly purposes by less than 50 persons and accessory to another occupancy shall be included as a part of that occupancy. Assembly areas with less than 750 sq. Ft. and which are accessory to another occupancy are not assembly occupancies. Assembly occupancies which are accessory to Group E are not considered assembly occupancies. Religious education rooms and religious auditoriums which are accessory to churches and which have occupant loads of less than 100 shall be classified as A-3. A building or tenant space used for assembly purposes by less than 50 persons shall be considered a Group B occupancy.

Note: Operational permit required.

105.6.35

A-1 A-1 Assembly uses, usually with fixed seating, intended for the Production and viewing of the performing arts or motion pictures including, but not limited to: motion picture theaters, television and radio studios admitting an audience, theaters.

202 p. 17

I. EXITS (A-1)

- A. Minimum of four exits required for more than 1000 occupant load. Tbl 1018.1
- B. Minimum of three exits required for 501-1000 occupant load. Tbl 1018.1
- C. Minimum of two exits required for 1-500 occupant load. Tbl 1018.1
- D. Buildings with only one exit and under 50 occupants allowed in some occupancies. Tbl 1018.2
- E. Doors shall swing in direction of egress travel where serving an occupant load of 50 or more. 1008.1.2
- F. Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. See exceptions. 1008.1.8
- G. Each door in a means of egress from an A-1 occupancy having an occupant load of 100 or more **shall not** be provided with a latch or lock unless it is panic hardware or fire exit hardware. 1008.1.9
- H. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. See exceptions. 1006.1
- I. Exit signs shall be internally or externally illuminated or shall be of approved self-luminous type. 1026.3
- J. Exit signs shall be visible under emergency illumination conditions. Approved signs that provide continuous illumination independent of external power sources are not required to be connected to an emergency electrical system. Batteries or generator may be required. 1026.4

GROUP "A-1" OCCUPANCY cont.

- K. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from a sign. 1011.1
- L. Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. 1011.5.3
- M. Obstructions shall not be placed in the required width of a means of egress. Exits shall not be obstructed in any manner. 1003.6
- N. The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel. 1003.6
- O. Exit doorways shall not be less than 32" in clear width. 1008.1.1
- P. The width of exit passageways shall be determined by the occupant load but such width shall not be less than 44 inches, 36 inches where serving an occupant load of less than 50. 1020.2
- Q. Minimum corridor width shall be determined by the occupant capacity but not less than 44 inches, 36 inches when less than 50 occupant capacity and 24 inches for access to and utilization of electrical, mechanical or plumbing systems or equipment. 1016.2
- R. In the event of a power failure, power photoelectric-actuated exit doors shall be capable of being fully opened manually. The force required to open these doors shall not exceed 50 lbs to set the door in motion. 1008.1.3.2
- S. Where panic hardware is installed it shall unlatch with a maximum of 15 lbs. force applied to the panic bar. The door shall be set in motion when subjected to a 30-pound force applied to the latch side of the door. 1008.1.2
1008.1.9
- T. When two exits are required from a room or space, they must be separated so many feet apart. See design requirements. 1014.2.1
- U. Manually operated flush bolts or surface bolts on exit doors are not permitted. 1008.1.8.4
- V. In the event of a power supply failure, an emergency system shall automatically illuminate all exit access corridors, passageways, exit stairways, rooms, exit discharge areas if 2 or more exits are required. 1006.3

GROUP "A-1" OCCUPANCY cont.

- W. Access-controlled entrance egress doors are permitted within Group A occupancies. The system must be approved. The doors shall be arranged to unlock by a signal from or loss of power to the sensor. There should be a manual unlocking device (button) located 40-48 inches above the floor within 5 feet of the secured doors. There shall be a sign that reads: **PUSH TO EXIT**. Activation of the fire alarm system or the automatic sprinklers shall unlock the doors. Entrance doors in Group A occupancies shall not be secured from the egress side during period that the building is open to the general public. 1008.1.3.4
- X. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. 1001.2
- ## II. FIRE PROTECTION SYSTEMS (A-1)
- A. One 2A fire extinguisher per 6000 sq. ft. in low hazard (offices) and one 2A per 3000 sq. ft. in a moderate hazard. Group A occupancy with quick-response sprinklers, fire extinguishers shall be required only in special-hazard areas. Must show proof of sprinkler head type. Tbl 906.3(1)
906.1.
- B. Maximum travel distance to a fire extinguisher is 75 feet. Tbl 906.3(1)
- C. Fire extinguishers shall be located in a conspicuous and readily available locations immediately available for use. 906.5
- D. Fire extinguishers shall not be obstructed or obscured from view. 906.6
- E. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. 906.7
- F. Fire extinguishers shall be installed so that its top is no more than 5 ft. above the floor if less than 40 pounds. For fire extinguishers over 40 pounds, the top no more than 3.5 ft. above the floor. 906.9
- G. See Table 906.1 for additional required portable fire extinguishers. 906.1
- H. Cooking equipment involving vegetable or animal oils and fats shall be protected by a Class K rated portable fire extinguisher provided within 30 feet travel distance of commercial-type cooking equipment. 904.11.5
- I. Automatic fire extinguishing systems of commercial cooking equipment shall be serviced at least every 6 months and after activation of the system. Maintain records and show proof. 904.11.6.4
- J. The actuation of commercial cooking equipment fire suppression systems shall automatically shut down the fuel or electrical power supply to the cooking equipment. Reset shall be manual. 904.11.2
- K. Commercial cooking equipment fusible links and automatic sprinkler heads shall be replaced at least annually. Show proof. 904.11.6.5
- L. A manual actuation device shall be located at or near a means of egress from the cooking area, 4-5 feet above floor, 10-20 feet away from the kitchen exhaust system. 904.11.1

GROUP "A-1" OCCUPANCY cont.

M.	TYPE 1 commercial kitchen exhaust hood and duct systems shall be protected by an approved automatic fire-extinguishing system.	904.2.1
N.	Fire extinguishers shall be serviced annually and shall have a current service tag attached.	901.6
O.	All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures, and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads.	903.4
P.	Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13, 6.2.6.1)	901.8
Q.	Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times.	901.6
R.	Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years and made available to the fire code official upon request. Show proof.	901.6.2
S.	A 3-foot clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.	508.5.5
T.	The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition at all times.	907.20.5

III. HOUSEKEEPING (A-1)

A.	Storage of combustible materials in buildings shall be orderly.	315.2
B.	Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below.	315.2
C.	Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas of buildings or a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings.	315.2.1
D.	Combustible materials shall not be stored in exits or exit enclosures.	315.2.2
E.	Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms.	315.2.3
F.	Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire-resistive construction. Exception is if the area is protected by an approved automatic sprinkler system.	315.2.4
G.	Outside storage of combustible materials shall not be located within 10 feet of a property line. See exceptions.	315.3
H.	Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material.	304.3.2
I.	Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cu. ft.) or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings, or under roof eave lines.	304.3.3

GROUP "A-1" OCCUPANCY cont.

- J. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily. 304.3.1
- K. Liquid or gas fueled vehicles, boats or other motorcraft, shall not be located indoors except: battery disconnected, fuel in tank not to exceed 1/4 tank or 5 gallons (whichever is least), fuel tanks and fill openings are closed and sealed to prevent tampering. 314.4
- L. Hoods, grease-removal devices, fans, ducts shall be cleaned to prevent the accumulation of grease. Cleaning shall be recorded and such records shall be maintained on the premises. Records kept. 904.11.6.3
- M. Portable unvented fuel-fired heating equipment shall be prohibited. 603.4
- N. A Type 1 hood shall be installed at or above all commercial food cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors. 610.2

IV. ELECTRICAL (A-1)

- A. Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed. 605.4.1
- B. Relocatable power taps shall be directly connected to a permanently installed receptacle. 605.4.2
- C. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage. 605.4.3
- D. Extension cords shall not be a substitute for permanent wiring. 605.5
- E. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors. 605.5
- F. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. 605.5.1
- G. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. 605.5.1
- H. Extension cords shall not contain splices or damage. 605.5.3
- I. Extension cords shall be grounded when serving grounded portable appliances. 605.5.4
- J. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. 605.5.2
- K. A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. 605.3
- L. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. 605.6
- M. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. 605.8
- N. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Exception: Longer for construction, remodeling, repair or demolition of buildings. 605.9

GROUP "A-1" OCCUPANCY cont.

- O. Temporary wiring attached to a structure shall be attached in an approved manner. 605.9.1
- P. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited. 605.4
- Q. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "**ELECTRICAL ROOM.**" 605.3.1
- R. Portable electric lamps shall not be used in spraying areas during spraying operations unless approved for hazardous locations. 1504.5.4

MISCELLANEOUS (A-1)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured openings or where immediate access is required. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2.1
- E. Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place and maintained by the owner. 1004.3
- F. An operational permit is required to operate a place of assembly. 105.6.35
- G. Candles and other open flame decorative devices shall not be used in places of assembly unless they comply with IFC. Permit required. 308.3.7
- H. An approved fire safety and evacuation plan shall be prepared and maintained. Exception: Churches less than 2000 occupant load. 404.2
- I. Emergency evacuation drills shall be conducted in Group "A" occupancies quarterly by all employees. Maintain records. 405.2
- J. Group A buildings with an atrium must have an approved fire safety and evacuation plan. Plan to be maintained and available to the fire department on request. 404.2.

VI. HAZARDOUS MATERIALS (A-1)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. 105.6.17
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. See how to separate. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be permitted in basements. 3404.3.5.1
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4

GROUP "A-1" OCCUPANCY cont.

- F. Except for cylinders not exceeding 250 cubic feet each, used for maintenance purposes, patient care or operation of equipment, flammable gases shall not be stored or used in Group A occupancies. 3503.1.1

VII. FIRE PROTECTION (A-1)

- A. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. 703.2
- B. Fire door assemblies shall not be modified. 703.2
- C. Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. 703.2.3
- D. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. 703.4
- E. Magnetic hold-open devices and automatic door closers, where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position. 703.2.2
- F. Natural cut trees shall be prohibited in Group A occupancies unless protected by an automatic sprinkler system. 804.1.1
- G. Curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall be flame resistant. 805.1
- H. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly. **NO DOOR WEDGES OR FOLD DOWN FEET.** Many newer buildings built since 1026.17.1 2000 may not be required to have rated corridors if fully sprinklered. Tbl 1016.1

GROUP "A-2 to A-5" OCCUPANCIES

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- Note: Operational permit required.** 105.6.34
- A-2** Assembly uses intended for food and/or drink consumption including, but not limited to: banquet halls, night clubs, restaurants, taverns and bars. 202 p. 17
- A-3** Assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A, including, but not limited to: amusement arcades, art galleries, auditoriums, bowling alleys, churches, courtrooms, dance halls, exhibition halls, gymnasiums, indoor swimming pools, libraries. 202 p. 17
- A-4** Assembly uses intended for viewing of indoor sporting events and activities with spectator seating, including but not limited to: arenas, skating rinks, swimming pools, tennis courts. 202 p.17
- A-5** Assembly uses intended for participation in or viewing outdoor activities including, but not limited to: amusement park structures, bleachers. 202 p. 17

I. EXITS (A 2-5)

- A.** Minimum of four exits required for more than 1000 occupant load. Tbl 1018.1
- B.** Minimum of three exits required for 501-1000 occupant load. Minimum of two exits required for 1-500 occupant load. Tbl 1018.1
- C.** Buildings with only one exit and under 50 occupants allowed in some occupancies. See requirements. Tbl 1018.2
- D.** Doors shall swing in direction of egress travel where serving an occupant load of 50 or more. 1008.1.2
- E.** Exit doors in "A" occupancies shall be openable from the egress side without the use of a key or special knowledge or effort. With an occupant load under 300, and in churches (A-3), the main exterior door is permitted to have a key lock on the egress side provided a sign stating "**This door to remain unlocked when building is occupied**" is posted adjacent to the door. The locking device must be readily distinguishable as locked. 1008.1.8.3
- F.** Each door in a means of egress from an occupancy of Group A having an occupant load of 100 or more shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware. 1008.1.9
- G.** The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. 1006.1
- H.** Exit signs required where more than one exit is required. 1011.1
- I.** Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from the nearest visible exit sign. 1011.1
- J.** Main exterior exit doors or gates which obviously and clearly are identifiable as an exit need not have exit signs. 1011.1

GROUP "A-2 to A-5" OCCUPANCIES cont.

- K. Obstruction to exits shall not be placed in the required width and exits shall not be obstructed in any manner. 1003.6
- L. The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel. 1003.6
- M. Doorways shall not be less than 32" in clear width or 28" in existing buildings. 1008.1.1
1026.7
- N. The width of exit passageways shall not be less than 44 inches except that exit passageways serving an occupant load of less than 50 shall not be less than 36 inches in width. 1020.2
- O. Where panic hardware or fire exit hardware is installed it shall unlatch with a maximum of 15 lbs. force applied to the panic bar. The door shall be set in motion when subjected to a 30-pound force applied to the latch side of the door. 1008.1.2
1008.1.9
- P. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. 1001.2
- Q. Minimum clear aisle width shall be 42" for level or ramped aisles having seating on both sides, 36" where aisle does not serve more than 50 seats or when aisle seating is on one side only. 1024.9.1
- R. Manually operated flush bolts or surface bolts on exit doors are not permitted. 1008.1.8.4
- S. In the event of a power supply failure, an emergency system shall automatically illuminate all exit access corridors, passageways, exit stairways, rooms, exit discharge areas if 2 or more exits are required. 1006.3
- T. In existing Group A buildings a power supply for means of egress illumination shall be automatically provided from an emergency system if two or more means of egress. Note: Churches are exempt if less than 300 occupant load 1026.5
- U. Access-controlled entrance egress doors are permitted within Group A occupancies. The system must be approved. The doors shall be arranged to unlock by a signal from or loss of power to the sensor. There should be a manual unlocking device (button) located 40-48 inches above the floor within 5 feet of the secured doors. There shall be a sign that reads: **PUSH TO EXIT**. Activation of the fire alarm system or the automatic sprinklers shall unlock the doors. Entrance doors in Group A occupancies shall not be secured from the egress side during period that the building is open to the general public. 1008.1.3.4
- V. Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. See exceptions. 1008.1.8

GROUP "A-2 to A-5" OCCUPANCIES cont.

II. FIRE PROTECTION SYSTEMS (A 2-5)

- A. One 2A fire extinguisher per 6000 sq. ft. in low hazard (offices) and one 2A per 3000 sq. ft. in a moderate hazard. Group A occupancy with quick-response sprinkler heads, fire extinguishers shall be required only in special-hazard areas. Must show proof of sprinkler head type. 906.1
Tbl 906.3(1)
- B. Maximum travel distance to a fire extinguisher is 75 feet. Tbl 906.3(1)
- C. Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. 906.5
- D. Fire extinguishers shall not be obstructed or obscured from view. 906.6
- E. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on the hangers or brackets supplied. 906.7
- F. Portable fire extinguishers shall be installed so that its top is not more than 5 feet above the floor if less than 40 pounds. Fire extinguishers exceeding 40 pounds shall be installed so that its top is not more than 3.5 ft. above the floor. 906.9
- G. See Table 906.1 for additional required portable fire extinguishers. 906.1
- H. A 3-foot clear space shall be maintained around the circumference of fire hydrants. 508.5.5
- I. Cooking equipment involving vegetable or animal oils and fats shall be protected by a Class K rated portable fire extinguisher provided within 30 feet travel distance of commercial cooking equipment. 906.1
904.11.5
- J. A manual actuation device shall be located at or near a means of egress from the cooking area, 4-5 feet above floor, 10-20 feet away from kitchen exhaust system. 904.11.1
- K. The actuation of commercial cooking equipment fire suppression systems shall automatically shut down the fuel or electrical power supply to the cooking equipment. Reset shall be manual. 904.11.2
- L. Commercial cooking equipment fusible link and automatic sprinkler head shall be replaced at least annually. Show proof. 904.11.6.5
- M. Fire extinguishers shall be serviced annually and shall have a current service tag attached. 901.6
- N. All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures, and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads. 903.4
- O. Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. 901.6
- P. Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years. Show proof. 901.6.2
- Q. Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13 6.2.6.1) 901.8

GROUP "A-2 to A-5" OCCUPANCIES cont.

III. HOUSEKEEPING (A 2-5)

- A. Storage of combustible materials in buildings shall be maintained in a neat, orderly manner. 315.2
- B. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below. 315.2
- C. Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas of buildings or a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings. 315.2.1
- D. Combustible materials shall not be stored in exits or exit enclosures. 315.2.2
- E. Combustible materials shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms. 315.2.3
- F. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire-resistive construction. Exception is if the area is protected by an approved automatic sprinkler system. 315.2.4
- G. Outside storage of combustible materials shall not be located within 10 feet of a property line. See exceptions. 315.3
- H. Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material. 304.3.2
- I. Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cu. ft.) or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings or under roof eave lines. 304.3.3
- J. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents of such containers shall be removed and disposed of daily. 304.3
- K. Liquid or gas fueled vehicles or boats shall not be located indoors except: battery disconnected, fuel in tank not to exceed 1/4 tank or 5 gallons (whichever is least). Fuel tanks and fill openings are closed and sealed to prevent tampering. 314.4
- L. Portable unvented fuel-fired heating equipment shall be prohibited. 603.4
- M. A Type 1 hood shall be installed at or above all commercial food cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors. 610.2

IV. ELECTRICAL (A 2-5)

- A. Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed. 605.4.1
- B. Relocatable power taps shall be directly connected to a permanently installed receptacle. 605.4.2
- C. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage. 605.4.3
- D. Extension cords shall not be a substitute for permanent wiring. 605.5

GROUP "A-2 to A-5" OCCUPANCIES cont.

- E. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors. 605.5
- F. Extension cords shall be plugged directly into an approved receptacle, power tap, or multiplug adapter. 605.5.1
- G. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. 605.5.1
- H. Extension cords shall not contain splices or damage. 605.5.3
- I. Extension cords shall be grounded when serving grounded portable appliances. 605.5.4
- J. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. 605.5.2
- K. A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. 605.3
- L. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. 605.6
- M. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. 605.8
- N. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Exception: Longer for construction, remodeling, repair or demolition of buildings. 605.9
- O. Temporary wiring attached to a structure shall be attached in an approved manner. 605.9.1
- P. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited. 605.4
- Q. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "**ELECTRICAL ROOM.**" 605.3.1
- R. Portable electric lamps shall not be used in spraying areas during spraying operations unless approved for hazardous locations. 1504.5.4

V. MISCELLANEOUS (A 2-5)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured openings or where immediate access is required. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2.1

GROUP "A-2 to A-5" OCCUPANCIES cont.

- E. Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place and maintained by the owner. 1004.3
- F. Candles and other open flame decorative devices shall not be used in places of assembly unless they comply with IFC. Permit required. 308.3.7
105.6.32
- G. The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition at all times. 907.20.5
- H. An approved fire safety and evacuation plan shall be prepared and maintained. Exception: Churches less than 2000 occupant load. 404.2
- I. Emergency evacuation drills shall be conducted in Group "A" occupancies quarterly by all employees. Must keep records. 405.2
- J. Group A buildings with an atrium must have an approved fire safety and evacuation plan. Plan to be maintained. 404.2

VI. HAZARDOUS MATERIALS (A 2-5)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. 105.6.17
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. See how to separate. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be permitted in basements. 3404.3.5.
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4
- F. Except for cylinders not exceeding 250 cubic feet each, used for maintenance purposes, patient care or operation of equipment, flammable gases shall not be stored or used in Group A occupancies. 3503.1.1

VII. FIRE PROTECTION (A 2-5)

- A. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. 703.2
- B. Fire door assemblies shall not be modified. 703.2
- C. Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. 703.2.3
- D. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. 703.4
- E. Magnetic hold-open devices and automatic door closers, where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position. 703.2.2
- F. Curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall be flame resistant. 805.1

GROUP "A-2 to A-5" OCCUPANCIES cont.

- G. Natural cut trees shall be prohibited in Group A occupancies unless protected by an automatic sprinkler system. 804.1.1
- H. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly. **NO DOOR WEDGES OR FOLD DOWN FEET.** Many newer buildings built since 1026.17.1 2000 may not be required to have rated corridors if fully sprinklered. Tbl 1016.1

GROUP "B" OCCUPANCIES

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Business Group B Occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts.

Business occupancies shall include, but not be limited to the following:

- Airport traffic control towers
- Kennels, Pounds
- Barber and beauty shops
- Civic administration
- Electronic data processing
- Motor vehicle showrooms
- Print shops
- Dry cleaning and laundries; pick-up and delivery stations and self-service
- Laboratories; testing and research
- Educational occupancies above the 12th grade (college)
- Professional services (architect, attorney, dentist, physician, engineer, etc.)
- Animal hospitals
- Banks
- Car wash
- Clinic-outpatient
- Fire and police stations
- Post offices
- Radio and television stations

I. EXITS (B)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. 1001.2
- B. Two exits or exit access doorways from any space shall be provided when the occupant load exceeds 50 or the values in Table 1014.1 1014.1
- C. Buildings with one exit maximum travel distance is 75' to an exit. Tbl 1018.2
- D. Exits shall be continuous from the point of entry into the exit to the exit discharge. 1018.3
- E. Exterior exit doors shall lead directly to the exit discharge or the public way. 1017.2.2
- F. Doors shall swing in direction of exit travel where serving an occupant load of 50 or more. 1008.1.2
- G. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. 1006.1
- H. Exit signs are required in rooms or areas which require two or more exits. Main exterior exit door sign may be exempt. 1011.1
- I. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from the nearest visible exit sign. 1011.1
- J. Exit signs shall be internally or externally illuminated at all times. 1011.2
- K. Obstruction to exits shall not be placed in the required width and exits shall not be obstructed in any manner. 1003.6
- L. The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel. 1003.6
- M. Doorways shall not be less than 32" in clear width. 1008.1.1
- N. The minimum corridor width shall be not less than 44 inches. When occupant capacity is 50 or less, 36" is the minimum width. 1016.2

GROUP "B" OCCUPANCY cont.

- O. Where panic hardware is installed it shall unlatch with a maximum of 15 lbs. force applied to the panic bar. The door shall be set in motion when subjected to a 30-pound force applied to the latch side of the door. 1008.1.2
1008.1.9
- P. Manually operated flush bolts or surface bolts on exit doors are not permitted. 1008.1.8.4
- Q. Key locking hardware may be used on the main exit if there is a readily visible, durable sign on, or adjacent to, the door stating **"This door to remain unlocked when building is occupied."** The locking device must be readily distinguishable as locked. 1008.1.8.3
- R. Emergency power illumination shall be automatically provided from an emergency system for Group B buildings 3 or more stories in height, buildings with 100 or more occupants above or below the level of exit discharge or buildings with 1000 or more total occupants. 1026.5
- S. In Group B occupancies the minimum clear aisle width shall not be less than 36." May be wider depending on occupant load. 1013.4.1
- T. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving Group B occupancies. Building must be fully sprinklered or an approved automatic smoke or heat detection system installed. Door lock must release upon sprinkler or smoke alarm activation or loss of power. A 15 lb. force against the door will release the door in 15 seconds (30 seconds if approved). There must be a sign located above and within 12 inches of the door stating: **PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 (30) SECONDS.** 1008.1.8.6
- U. Access-controlled entrance egress doors are permitted within Group B occupancies. The system must be approved. The doors shall be arranged to unlock by a signal from or loss of power to the sensor. There should be a manual unlocking device (button) located 40-48 inches above the floor within 5 feet of the secured doors. There shall be a sign that reads: **PUSH TO EXIT.** Activation of the fire alarm system or the automatic sprinklers shall unlock the doors. Entrance doors in Group B occupancies shall not be secured from the egress side during period that the building is open to the general public. 1008.1.3.4
- V. Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. See exceptions. 1008.1.8

GROUP "B" OCCUPANCY cont.

II. FIRE PROTECTION SYSTEMS (B)

- A. One 2A fire extinguisher per 6000 sq. ft. in low hazard (offices) and one 2A per 3000 sq. ft. in a moderate hazard. A Group B occupancy with quick-response sprinkler heads, fire extinguishers shall be required only in special-hazard areas. Must show proof of sprinkler head type. 906.1
Tbl 906.3(1)
- B. Maximum travel distance to a fire extinguisher is 75 feet. Tbl 906.3(1)
- C. Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. 906.5
- D. Fire extinguishers shall not be obstructed or obscured from view. 906.6
- E. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. 906.7
- F. Portable fire extinguishers shall be installed so that its top is not more than 5 feet above the floor if less than 40 pounds. Fire extinguishers exceeding 40 pounds, shall be installed so that its top is not more than 3.5 ft. above the floor. 906.9
- G. Fire extinguishers shall be serviced annually and shall have a current service tag attached. 901.6
- H. See Table 906.1 for additional required portable fire extinguishers. 906.1
- I. All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads. 903.4
- J. Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. 901.6
- K. Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years. Show proof. 901.6.2
- L. A 3-foot clear space shall be maintained around the circumference of fire hydrants. 508.5.5
- M. Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13 6.2.6.1) 901.8
- N. The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition. 907.20.5

III. HOUSEKEEPING (B)

- A. Storage of combustible materials in buildings shall orderly. 315.2
- B. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below. 315.2
- C. Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas of buildings and a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings. 315.2.1
- D. Combustible materials shall not be stored in exits or exit enclosures. 315.2.2
- E. Combustible materials shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms. 315.2.3

GROUP "B" OCCUPANCY cont.

- F. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1- hour fire-resistive construction. Exception is if the area is protected by an approved automatic sprinkler system. 315.2.4
- G. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lid) Contents shall be removed and disposed of daily. 304.3.1
- H. Floors shall be kept clean in hot work areas. 2604.1.3
- I. Outside storage of combustible materials shall not be located within 10 feet of a property line. See exceptions. 315.3
- J. Hoods, grease-removal devices, fans, ducts shall be cleaned to prevent the accumulation of grease. Cleaning shall be recorded and such records shall be maintained on the premises. Records kept. 904.11.6.3
- K. Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material. 304.3.2
- L. Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cu. ft.) or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings, or under roof eave lines. 304.3.3
- M. Liquid or gas fueled vehicles or boats shall not be located indoors except: battery disconnected, fuel in tank not to exceed 1/4 tank or 5 gallons (whichever is least), fuel tanks and fill openings are closed and sealed to prevent tampering. 314.4
- N. Shelf storage of flammable and combustible liquids shall be maintained in an orderly manner. 3404.3.3.5.3

IV. ELECTRICAL (B)

- A. Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed. 605.4.1
- B. Relocatable power taps shall be directly connected to a permanently installed receptacle. 605.4.2
- C. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage. 605.4.3
- D. Extension cords shall not be a substitute for permanent wiring. 605.5
- E. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors. 605.5
- F. Extension cords shall only be plugged directly into an approved receptacle, power tap. or multiplug adapter. 605.5.1
- G. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. 605.5.1
- H. Extension cords shall not contain splices or damage. 605.5.3
- I. Extension cords shall be grounded when serving grounded portable appliances. 605.5.4
- J. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. 605.5.2

GROUP "B" OCCUPANCY cont.

- K. A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. 605.3
- L. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. 605.6
- M. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited. 605.4
- N. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Exception: Longer for construction, remodeling, repair or demolition of buildings. 605.9
- O. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating: "**ELECTRICAL ROOM.**" 605.3.1
- P. Portable electric lamps shall not be used in spraying areas during spraying operations unless approved for hazardous locations. 1504.5.4
- Q. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. 605.8

V. MISCELLANEOUS (B)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured openings or where immediate access is required. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2.1
- E. Emergency Fire Safety and evacuation plan is required for high rise buildings. 404.2

VI. HAZARDOUS MATERIALS (B)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. 105.6.17
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. See how to separate. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be permitted in basements. 3404.3.5.1
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4

GROUP "B" OCCUPANCY cont.

- F. Except for cylinders not exceeding 250 cubic feet each, used for maintenance purposes, patient care or operation of equipment, flammable gases shall not be stored or used in Group B occupancies. 3503.1.1
- G. Rooms or cabinets containing compressed gases shall be labeled: **COMPRESSED GAS** when in quantities requiring a permit. 2703.5.1
- H. Buildings storing hazardous materials must display placard. 2703.5

VII. FIRE PROTECTION (B)

- A. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. 703.2
- B. Fire door assemblies shall not be modified. 703.2
- C. Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. 703.2.3
- D. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. 703.4
- E. Magnetic hold-open devices and automatic door closers, where provided, shall be maintained. If fire doors are out of service the door shall remain in the closed position. 703.2.2
- F. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly. **NO DOOR WEDGES OR FOLD DOWN FEET.** Many newer buildings built since 1026.17.1 2000 may not be required to have rated corridors if fully sprinklered. Tbl 1016.1

GROUP "E" OCCUPANCY 202 p.17

Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade. **REMEMBER:** educational uses above the 12th grade is a Group B Occupancy.

DAY CARE: The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than five children older than 2 1/2 years of age shall be classified as a Group E occupancy.

I. EXITS (E)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. 1001.2
- B. Two exits or exit access doorways from any space shall be provided when the occupant load exceeds 50 or the values in Table 1014.1 1014.2.1
- C. Each door in a means of egress from an occupancy of Group E having an occupant load of 100 or more shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware. 1008.1.9
- D. Where panic hardware is installed it shall unlatch with a maximum of 15 lbs. force applied to the panic bar. The door shall be set in motion when subjected to a 30-pound force applied to the latch side of the door. 1008.1.2
1008.1.9
- E. Manually operated flush bolts or surface bolts on exit doors are not permitted. 1008.1.8.4
- F. Exits shall be continuous from the point of entry into the exit to the exit discharge. 1018.3
- G. Exterior exit doors shall lead directly to the exit discharge or the public way. 1017.2.2
- H. Doors shall swing in direction of exit travel when serving an occupant load of 50 or more. 1008.1.2
- I. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. 1006.1
- J. Exit signs are required in rooms or areas which require two or more exits. Main exterior exit door sign may be exempt. 1011.1
- K. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from the nearest visible exit sign. 1011.1
- L. Exit signs shall be internally or externally illuminated at all times. 1011.2
- M. Obstruction to exits shall not be placed in the required width and exits shall not be obstructed in any manner. 1003.6
- N. The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel. 1003.6
- O. Doorways shall not be less than 32" in clear width. 1008.1.1
- P. The minimum corridor width shall be not less than 44 inches. 1016.2
When occupant capacity is 50 or less, 36" is the minimum width.

GROUP "E" OCCUPANCY cont.

- Q. In the event of a power supply failure, an emergency system shall automatically illuminate all interior stairs, corridors, windowless areas with student occupancy, shops and laboratories.. 1026.5
- R. Access-controlled entrance egress doors are permitted within Group E occupancies. The system must be approved.. The doors shall be arranged to unlock by a signal from or loss of power to the sensor. There should be a manual unlocking device (button) located 40-48 inches above the floor within 5 feet of the secured doors. There shall be a sign that reads: **PUSH TO EXIT**. Activation of the fire alarm system or the automatic sprinklers shall unlock the doors. Entrance doors in Group E occupancies shall not be secured from the egress side during period that the building is open to the general public. 1008.1.3.4

II. FIRE PROTECTION SYSTEMS (E)

- A. One 2A fire extinguisher per 6000 sq. ft. in low hazard (offices) and one 2A per 3000 sq. ft. in a moderate hazard. Group E occupancy with quick-response sprinkler heads, fire extinguishers shall be required only in special-hazard areas. Must show proof of sprinkler head type. 906.1
Tbl 906.3(1)
- B. Maximum travel distance to a fire extinguisher is 75 feet. Tbl 906.3
- C. Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. 906.5
- D. Fire extinguishers shall not be obstructed or obscured from view. 906.6
- E. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. 906.7
- F. Portable fire extinguishers shall be installed so that its top is not more than 5 feet above the floor if less than 40 pounds. Fire extinguishers exceeding 40 pounds, shall be installed so that its top is not more than 3.5 ft. above the floor. 906.9
- G. Fire extinguishers shall be serviced annually and shall have a current service tag attached. 901.6
- H. See Table 906.1 for additional required portable fire extinguishers. 906.1
- I. Portable fire extinguisher to be installed within 30 feet of commercial cooking equipment. 906.1
- J. Automatic fire extinguishing systems of commercial cooking equipment shall be serviced at least every 6 months and after activation of the system. Check tag. 904.11.6.4
- K. Commercial cooking equipment fusible link and automatic sprinkler head shall be replaced at least annually. Records to be maintained. 904.11.6.5
- L. All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads. 903.4

GROUP "E" OCCUPANCY cont.

- M. An automatic sprinkler system shall be provided for every portion of educational buildings below the level of exit discharge. See exception. 903.2.2
- N. Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. 901.6
- O. Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years. Show proof. 901.6.2
- P. Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13 6.2.6.1) 901.8
- Q. A manual actuation device shall be located at or near a means of egress from the cooking area, 4-5 ft. above floor, 10-20 feet away. 904.11.1
- R. Commercial kitchen exhaust hood and duct systems shall be protected by an approved automatic fire-extinguishing system. 904.2.1
- S. A 3-foot clear space shall be maintained around the circumference of fire hydrants. 508.5.5

III. HOUSEKEEPING (E)

- A. Class 1 flammable liquids shall not be permitted in basements. 3404.3.5.1
- B. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below. 315.2
- C. Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas of buildings a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings. 315.2.1
- D. Combustible material shall not be stored in exits or exit enclosures. 315.2.2
- E. Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms. 315.2.3
- F. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire-resistive construction. Exception is if the area is protected by an approved automatic sprinkler system. 315.2.4
- G. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lid) Contents shall be removed and disposed of daily. 304.3.1
- H. Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material. 304.3.2
- I. Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cu. ft.) or more shall not be stored in buildings or placed within 5 feet of combustible walls openings or under roof eave lines. 304.3.3
- J. Hoods, grease-removal devices, fans, ducts shall be cleaned to prevent the accumulation of grease. Cleaning shall be recorded and such records shall be maintained on the premises. Show proof. 904.11.6.3

GROUP "E" OCCUPANCY cont.

- K. A Type 1 hood shall be installed at or above all commercial food cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors. 610.2
- L. Clothing and personal effects shall not be stored in corridors and lobbies unless the corridors and lobbies are protected by a smoke detection and/or automatic sprinkler system. 803.3.1
- M. Portable unvented fuel-fired heating equipment shall be prohibited. 603.3.3

IV. ELECTRICAL (E)

- A. Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed. 605.4.1
- B. Relocatable power taps shall be directly connected to a permanently installed receptacle. 605.4.2
- C. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage. 605.4.3
- D. Extension cords shall not be a substitute for permanent wiring. 605.5
- E. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors. 605.5
- F. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. 605.5.1
- G. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. 605.5.1
- H. Extension cords shall not contain splices or damage. 605.5.3
- I. Extension cords shall be grounded when serving grounded portable appliances. 605.5.4
- J. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. 605.5.2
- K. A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. 605.3
- L. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. 605.6
- M. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited. 605.4
- N. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "**ELECTRICAL ROOM.**" 605.3.1
- O. Portable electric lamps shall not be used in spraying areas during spraying operations unless approved for hazardous locations. 1504.5.4
- P. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Exception: Longer for construction, remodeling, repair or demolition of buildings. 605.9

GROUP "E" OCCUPANCY cont.

V. MISCELLANEOUS (E)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured openings or immediate access is required. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2.1
- E. The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition. 907.20.5
- F. A manual fire alarm system shall be installed when over 50 occupants. See exceptions for smoke detectors and room size. 907.3.1.1
907.2.3
- G. An approved fire safety and evacuation plan shall be prepared and maintained. The plan shall be reviewed or updated annually. 404.4
- H. All occupants must participate in monthly fire and evacuation drills. 405.2
- I. Group E buildings with an atrium must have an approved fire safety and evacuation plan. Show proof. 404.2.11

VI. HAZARDOUS MATERIALS (E)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gal. inside a building or 10 gal. outside. 105.6.17.2
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. See how to separate. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be permitted in basements. 3404.3.5.1
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4
- F. Except for cylinders not exceeding 250 cubic feet each, used for maintenance purposes, patient care or operation of equipment, flammable gases shall not be stored or used in Group E occupancies. 3503.1.1

VII. FIRE PROTECTION (E)

- A. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. 703.2
- B. Fire door assemblies shall not be modified. 703.2
- C. Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. 703.2.3

GROUP "E" OCCUPANCY cont.

- D. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. 703.4
- E. When magnetic hold open devices on fire doors are out of service the door shall remain in the closed position. 703.2.2
- F. Curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall be flame resistant. 805.1
- G. Natural cut trees shall be prohibited in Group E occupancies unless protected by an automatic sprinkler system. 804.1.1
- H. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly. **NO DOOR WEDGES OR FOLD DOWN FEET.** Many newer buildings built since 1026.17.1 2000 may not be required to have rated corridors if fully sprinklered. Tbl 1016.1

GROUP "F" OCCUPANCIES

Factory Industrial Group F occupancy includes, among others, the use of a building or structure, or a portion thereof, for assembling, disassembling, fabricating, finishing, manufacturing, packaging, repair or processing operations that are not classified as a Group H hazards.

F-1 Moderate-Hazard Occupancy. Factory industrial uses which are not classified as F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:

- Aircraft , Appliance
- Athletic equipment
- Automobiles and other motor vehicles
- Bakeries
- Beverages (> than 12% alcohol)
- Bicycles
- Boats
- Brooms or brushes
- Business machines
- Cameras and photo equipment
- Canvas or similar fabric
- Carpet and rugs (includes cleaning)
- Clothing
- Construction and agricultural machinery
- Disinfectants
- Distillation
- Dry cleaning, and dyeing
- Electronics
- Engines (includes rebuilding)
- Electric generation plants
- Food processing
- Furniture
- Hemp products
- Laundries
- Leather products
- Machinery
- Metals, Millwork (sash and door)
- Motion picture and television filming
- Musical instruments
- Optical goods
- Paper mills or products
- Photographic film
- Plastic products
- Printing or publishing
- Recreational vehicles
- Refuse incineration
- Shoes
- Soaps and detergent
- Textiles
- Tobacco
- Upholstering
- Trailers
- Upholstering
- Wood; distillation
- Woodworking (cabinet)
- Jute products

F-2 Low Hazard Occupancy. Factory industrial uses that involve the fabrication or manufacturing of noncombustible materials which during finishing, packing or processing do not involve a significant fire hazard shall be classified as F-2 occupancies and shall include, but not be limited to, the following:

- Beverages (nonalcoholic and < 12%)
- Brick and masonry
- Ceramic products
- Foundries
- Glass products
- Gypsum
- Ice
- Metal products (fab. and asbly)

GROUP "F" OCCUPANCIES cont.

I. EXITS (F)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. 1001.2
- B. Two exits or exit access doorways from any space shall be provided when the occupant load exceeds 50 or the values in Table 1014.1. 1014.1
- C. Exits shall be continuous from the point of entry into the exit to the exit discharge. 1018.3
- D. Exterior exit doors shall lead directly to the exit discharge or the public way. 1017.2.2
- E. Exit doors shall swing in direction of exit travel when serving an occupant load of 50 or more. 1008.1.2
- F. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. 1006.1
- G. Exit signs are required in rooms or areas which require two or more exits. Main exterior exit door sign may be exempt. 1011.1
- H. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from the nearest visible exit sign. 1011.1
- I. Exit signs shall be internally or externally illuminated at all times 1011.2
- J. Obstruction to exits shall not be placed in the required width and exits shall not be obstructed in any manner. 1003.6
- K. The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel. 1003.6
- L. Doorways shall not be less than 32" in clear width. 1008.1.1
- M. Where panic hardware is installed it shall unlatch with a maximum of 15 lbs. force applied to the panic bar. The door shall be set in motion when subjected to a 30-pound force applied to the latch side of the door. 1008.1.2
1008.1.9
- N. Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. See exceptions. 1008.1.8
- O. Key locking hardware may be used on the main exit if there is a readily visible, durable sign on, or adjacent to, the door stating: **"This door to remain unlocked when building is occupied."** The locking device must be readily distinguishable as locked. 1008.1.8.3
- P. The minimum corridor width shall be not less than 44 inches. When occupant capacity is 50 or less, 36" is the minimum width. 1016.2
- Q. Buildings with only one exit, and less than 50 occupant load, maximum travel distance to an exit is 75 feet. Tbl 1018.2
- R. Manually operated flush bolts or surface bolts on exit doors are not permitted. 1008.1.8.4

GROUP "F" OCCUPANCIES cont.

- S. In the event of a power supply failure, an emergency system shall automatically illuminate the means of egress in Group F having more than 100 occupants. Exception: Buildings used only during daylight hours which are provided with windows. 1026.5

II. FIRE PROTECTION SYSTEMS (F)

- A. F-1 Occupancies require one 2-A fire extinguisher per 3000 sq. ft. F-2 Occupancies require one 2-A fire extinguisher per 6000 sq. ft. Tbl 906.3(1)
- B. Maximum travel distance to a fire extinguisher is 75 feet. Tbl 906.3(1)
- C. Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. 906.5
- D. Fire extinguishers shall not be obstructed or obscured from view. 906.6
- E. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. 906.7
- F. Portable fire extinguishers shall be installed so that its top is not more than 5 feet above the floor if less than 40 pounds. Fire extinguishers exceeding 40 pounds, shall be installed so that its top is not more than 3.5 ft. above the floor. 906.9
- G. Fire extinguishers shall be serviced annually and shall have a current service tag attached. 901.6
- H. See Table 906.1 for additional required portable fire extinguishers. 906.1
- I. All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads. 903.4
- J. Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. 901.6
- K. Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years. Show proof. 901.6.2
- L. A minimum of one 2-A:20-B:C required within 30' of welding area. 2604.2.6
- M. Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13 6.2.6.1) 901.6
- N. A 3-foot clear space shall be maintained around the circumference of fire hydrants. 508.5.5
- O. The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition. 907.20.5

III. HOUSEKEEPING (F)

- A. Class 1 Flammable liquids shall not be permitted in basements. 3404.3.5.1
- B. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below. 315.2

GROUP "F" OCCUPANCIES cont.

- C. Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas of buildings and a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings. 315.2.1
- D. Combustible material shall not be stored in exits or exit enclosures. 315.2.2
- E. Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms. 315.2.3
- F. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1- hour fire-resistive construction. Exception is if the area is protected by an approved automatic sprinkler system. 315.2.4
- G. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily. 304.3.1
- H. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. 605.8
- I. Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material. 304.3.2
- J. Dumpsters and containers with an individual capacity of 1.5 cubic yards or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings or under roof eave lines. 304.3.3
- K. Shelf storage of flammable and combustible liquids shall be maintained in an orderly manner. 3404.3.3.5.3
- L. Liquid or gas fueled vehicles or boats shall not be located indoors except: battery disconnected, fuel in tank not to exceed 1/4 tank or 5 gallons (whichever is least). Fuel tanks and fill openings are closed and sealed to prevent tampering. 314.4

IV. ELECTRICAL (F)

- A. Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed. 605.4.1
- B. Relocatable power taps shall be directly connected to a permanently installed receptacle. 605.4.2
- C. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage. 605.4.3
- D. Extension cords shall not be a substitute for permanent wiring. 605.5
- E. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors. 605.5
- F. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. 605.5.1
- G. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. 605.5
- H. Extension cords shall not contain splices or damage. 605.5.3
- I. Extension cords shall be grounded when serving grounded portable appliances. 605.5.4

GROUP "F" OCCUPANCIES cont.

- J. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. 605.5.2
- K. A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. 605.3
- L. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. 605.6
- M. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited. 605.4
- N. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "**ELECTRICAL ROOM.**" 605.3.1
- O. Portable electric lamps shall not be used in spraying areas during spraying operations unless approved for hazardous locations. 1504.5.4
- P. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Exception: Longer for construction, remodeling, repair or demolition of buildings. 605.9

V. MISCELLANEOUS (F)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured openings or where immediate access is required. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2.1
- E. Rooms or cabinets containing compressed gases shall be labeled: **COMPRESSED GAS** when in quantities requiring a permit. 2703.5.1

VI. HAZARDOUS MATERIALS (F)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gal. inside a building or 10 gal. outside. 105.6.17.2
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. See how to separate. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be permitted in basements. 3404.3.5.1
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4

GROUP "F" OCCUPANCIES cont.

- F. Tank cars and tank vehicle shall not be used as storage tanks of flammable and combustible materials. 3404.2.2
- G. Signs shall be posted in storage areas prohibiting open flames and smoking. 3404.2.3.1
- H. Tanks more than 100 gallons capacity, which are permanently installed or mounted and used for storage of Class I, II, IIIA liquids, shall bear a label and placard identifying the material therein. Tanks located underground and under 300 gallons on private property used for heating or cooking fuel are exempt. 3404.2.3.2
- I. Buildings storing hazardous materials must display placard. 2703.5

VII. FIRE PROTECTION (F)

- A. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. 703.2
- B. Fire door assemblies shall not be modified. 703.2
- C. Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. 703.2.3
- D. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. 703.4
- E. When magnetic hold open devices on fire doors are out of service the door shall remain in the closed position. 703.2.2
- F. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly. **NO DOOR WEDGES OR FOLD DOWN FEET.** Many newer buildings built since 1026.17.1 2000 may not be required to have rated corridors if fully sprinklered. Tbl 1016.1

GROUP "H" OCCUPANCIES 202 p. 18

Hazardous Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in excess of the maximum allowable quantities. **Exception:** Occupancies as provided for in the IBC shall not be classified in Group H, but shall be classified in the occupancy which they most nearly resemble.

See Tbl
2703.1.1
(1) to (4)

Group H-1 buildings and structures which contain materials that pose a detonation (explosion) hazard.

Group H-2 buildings and structures which contain materials, that pose a deflagration hazard or a hazard from accelerated burning.

Group H-3 buildings and structures which contain materials that readily support combustion or pose a physical hazard.

Group H-4 buildings and structures which contain materials that are health hazards.

Group H-5 semiconductor fabrication facilities and comparable research and development areas in which hazardous production materials (HPM) are used and the aggregate quantity of materials is in excess of those listed in Tables 2703.1.1.(1) and 307.7(2) of the IBC.

I. EXITS (H)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. 1001.2
- B. Two exits or exit access doorways from any space in a H-1, H-2, H-3 occupancy when the occupant capacity is 3 or more. H-4, H-5 occupancy capacity is 10 or more. Tbl 1014.1
- C. Maximum exit access travel distance for buildings with two exits is: H-1=75', H-2=100', H-3=150', H-4=175', and H-5=200'. These figures are for fully sprinklered buildings. Tbl 1015.1
- D. Exits shall be continuous from the point of entry into the exit to the exit discharge. 1018.3
- E. Exterior exit doors shall lead directly to the exit discharge or the public way. 1017.2.2
- F. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. 1006.1
- G. Exit signs are required in rooms or areas which require two or more exits. Main exterior exit door may be exempt. 1011.1

GROUP "H" OCCUPANCIES cont.

H.	Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from the nearest visible exit sign.	1011.1
I.	Exit signs shall be internally or externally illuminated at all times or shall be of the self-luminous type.	1011.2
J.	Obstruction to exits shall not be placed in the required width and exits shall not be obstructed in any manner.	1003.6
K.	The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel.	1003.6
L.	Doorways shall not be less than 32" in clear width.	1008.1.1
M.	Where panic hardware is installed it shall unlatch with a maximum of 15 lbs. force applied to the panic bar. The door shall be set in motion when subjected to a 30 pound force applied to the latch side of the door.	1008.1.2 1008.1.9
N.	The minimum corridor width shall be not less than 44 inches. When occupant capacity is 50 or less, 36" is the minimum width.	1016.2
O.	Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.	1008.1.8
P.	Manually operated flush bolts or surface bolts on exit doors are not permitted.	1008.1.8.4
Q.	Each door in a means of egress from a Group H-1, H-2, H-3, H-5 occupancy shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware.	1008.1.9
R.	Maximum travel distance for 1 exit in Group H-1, H-2, H-3, occupancies for 3 occupants maximum is 25 feet.	Tbl 1018.2
S.	Maximum travel distance for 1 exit in Group H-4, and H-5 occupancies for 10 occupants maximum is 75 feet.	Tbl 1018.2
T.	Doors shall swing in the direction of egress travel where serving the occupants of a Group H occupancy.	1008.1.2

II. FIRE PROTECTION SYSTEMS (H)

A.	An automatic sprinkler system shall be installed in H occupancies.	903.2.4.1
B.	One 2A fire extinguisher per 6000 sq. ft. in low hazard (offices) and one 2A per 3000 sq. ft. in a moderate hazard. High hazard requires a 4A extinguisher or two 2A extinguisher per 4000 sq. ft.	Tbl 906.3(1) Tbl 906.3(1)
C.	Maximum travel distance to a fire extinguisher is 75 feet.	Tbl 906.3(1)
D.	Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use.	906.5
E.	Fire extinguishers shall not be obstructed or obscured from view.	906.6
F.	Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied.	906.7
G.	Portable fire extinguishers shall be installed so that its top is not more than 5 feet above the floor if less than 40 pounds. Fire extinguishers exceeding 40 pounds, shall be installed so that its top is not more than 3.5 ft. above the floor.	906.9

GROUP "H" OCCUPANCIES cont.

H.	See Table 906.1 for additional required portable fire extinguishers.	906.1
I.	Fire extinguishers shall be serviced annually and shall have a current service tag attached.	901.6
J.	All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads.	903.4
K.	Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times.	901.6
L.	Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13 6.2.6.1)	901.6
M.	Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years. Show proof.	901.6.2
N.	A 3-foot clear space shall be maintained around the circumference of fire hydrants.	508.5.5
O.	Emergency alarms for notification of emergency conditions in an HPM facility shall be provided.	908.2
P.	A continuous gas detection system shall be provided for HPM gases.	908.2

III. HOUSEKEEPING (H)

A.	Class 1 flammable liquids shall not be permitted in basements.	3404.3.5.1
B.	Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below.	315.2
C.	Storage shall be maintained 18 inches below sprinkler head deflectors in sprinklered areas of buildings.	315.2.1
D.	Combustible material shall not be stored in exits or exit enclosures.	315.2.2
E.	Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms.	315.2.3
F.	Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lid) Contents shall be removed and disposed of daily.	304.3.1
G.	Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material.	304.3.2
H.	Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cu. ft.) or more shall not be stored in buildings or placed within 5 ft. of combustible walls, openings or under roof eave lines.	304.3.3
I.	Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris.	605.8
J.	Shelf storage of flammable and combustible liquids shall be maintained in an orderly manner.	3404.3.3.5.3
K.	Storage of combustible materials in buildings shall be maintained in a neat, orderly manner.	315.2

GROUP "H" OCCUPANCIES cont.

- L. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire-resistive construction. Exception is if the area is protected by an approved automatic sprinkler system. 315.2.4

IV. ELECTRICAL (H)

- A. Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed. 605.4.1
- B. Relocatable power taps shall be directly connected to a permanently installed receptacle. 605.4.2
- C. Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage. 605.4.3
- D. Extension cords shall not be a substitute for permanent wiring. 605.5
- E. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors. 605.5
- F. Extension cords shall only be plugged directly into an approved receptacle, power tap, or multiplug adapter. 605.5.1
- G. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. 605.5
- H. Extension cords shall not contain splices or damage. 605.5.3
- I. Extension cords shall be grounded when serving grounded portable appliances. 605.5.4
- J. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. 605.5.2
- K. A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (Panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. 605.3
- L. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. 605.6
- M. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited. 605.4
- N. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating: "**ELECTRICAL ROOM.**" 605.3.1
- O. Portable electric lamps shall not be used in spraying areas during spraying operations unless approved for hazardous locations. 1504.5.4
- P. All electrical equipment and devices within 5 feet of workstations (H5) in which flammable or pyrophoric gases or flammable liquids are used shall comply with the ICC Electrical Code. See exception. 1803.7.2
- Q. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Exception: Longer for construction, remodeling, repair or demolition of buildings. 605.9

GROUP "H" OCCUPANCIES cont.

V. MISCELLANEOUS (H)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured openings or where immediate access is required. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2.1
- E. The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition. 907.20.5
- F. An approved fire safety and evacuation plan shall be prepared and maintained. The plan shall be reviewed or updated annually. 404.4
404.2
- G. In Group H-5 occupancies, emergency drills of the on-site emergency response team shall be conducted on a regular basis but not less than once every three months. Show proof. 408.4.4

VI. HAZARDOUS MATERIALS (H)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside 105.6.17.2
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. See how to separate. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be permitted in basements. 3404.3.5.1
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4
- F. Tank cars and tank vehicles shall not be used as storage tanks of flammable and combustible materials. 3404.2.2
- G. Signs shall be posted in storage areas prohibiting open flames and smoking. 3404.2.3.1
- H. Tanks more than 100 gallons capacity, which are permanently installed or mounted and used for storage of Class I, II, IIIA liquids, shall bear a label and placard identifying the material therein. 3404.2.3.2
- I. Rooms or cabinets containing compressed gases shall be labeled: **COMPRESSED GAS** when in quantities requiring a permit. 2703.5.1
- J. Buildings storing hazardous materials must display placard. 2703.5

GROUP "H" OCCUPANCIES cont.

VII. FIRE PROTECTION (H)

- | | | |
|----|---|---------------------|
| A. | Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. | 703.2 |
| B. | Fire door assemblies shall not be modified. | 703.2 |
| C. | Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. | 703.2.3 |
| D. | Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. | 703.4 |
| E. | When magnetic hold open devices on fire doors are out of service the door shall remain in the closed position. | 703.2.2 |
| F. | Wooden or rubber door wedges and fold down feet that block open fire rated doors in the open position shall be removed and the door allowed to protect the opening in fire rated corridors. | 703.1
Tbl 1016.1 |

GROUP “I” OCCUPANCIES

202 p.19

Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which people having physical limitations because of health or age are harbored for medical treatment or other care or treatment, or in which people are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

Group I-1. This occupancy shall include a building or part thereof housing more than 16 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment but which provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following: residential board and care facilities, assisted living facilities, half-way houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug centers and convalescent facilities. **A facility such as the above with five or less persons shall be classified as a Group R-3. A facility such as above, housing at least six and not more than 16 persons shall be classified as a Group R-4.**

Group I-2. This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a 24-hour basis of more than five persons who are **not** capable of self-preservation. This group shall include, but not be limited to the following: hospitals, nursing homes (both intermediate care facilities and skilled nursing facilities), mental hospitals, and detoxification facilities. **A facility such as the above with five or less persons shall be classified as Group R-3.**

Child care facility. A child care facility which provides care on a 24 hour basis to more than five children 2 1/2 years of age or less shall be classified as **Group I-2.**

Group I-3. This occupancy shall include buildings and structures which are inhabited by more than five persons who are under restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupant's control. This group shall include, but not be limited to, the following: prisons, jails, reformatories, detention centers, correction centers and prerelease centers.

Group I-4, Day care facilities. This group shall include buildings and structures occupied by persons of any age who receive custodial care for less than 24-hours by individuals other than parents or guardians, relatives by blood, marriage, or adoption, and in a place other than the home of the person cared for. **A facility such as the above with five or fewer persons shall be classified as Group R-3.** Places of worship during religious functions are not included

Adult care facility. A facility that provides accommodation for less than 24 hours for more than five unrelated adults and provides supervision and personal care services.

GROUP "I" OCCUPANCIES cont

Child care facility. A facility that provides supervision and personal care on less than a 24-hour basis for more than five children 2 1/2 years of age or less shall be classified as **Group I-4**.

Exception: A child day care facility which provides care for more than five but no more than 100 children 2 1/2 years or less of age, when the rooms where such children are cared for are located on the level of exit discharge and each of these child care rooms has an exit door directly to the exterior, shall be classified as **Group E**.

I. EXITS (I)

- | | | |
|----|--|----------------------|
| A. | A minimum of two exits required if over 10 occupant load. | 1014.1 |
| B. | Egress doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons. | 1008.1.2 |
| C. | Egress doors shall be openable from the egress side without the use of a key or special knowledge or effort. See exceptions. | 1008.1.8 |
| D. | The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. | 1006.1 |
| E. | Exit signs shall be internally or externally illuminated. Existing buildings may have approved self-luminous signs. | 1026.3 |
| F. | Exit signs are not required in sleeping room areas in occupancies in Group I-3. | 1011.1 |
| G. | Obstructions shall not be placed in the required width of a means of egress. Exits shall not be obstructed in any manner. | 1003.6 |
| H. | The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel. | 1003.6 |
| I. | Doorways shall not be less than 32" in clear width. In I-2 occupancies, the minimum egress doors used for the movement of beds shall provide a clear width of not less than 41 1/2 inches. | 1008.1.1 |
| J. | Where panic hardware is installed it shall unlatch with a maximum of 15 lbs. force applied to the panic bar. The door shall be set in motion when subjected to a 30-pound force applied to the latch side of the door. | 1008.1.9
1008.1.2 |
| K. | When two exits are required from a room or space, they must be separated so many feet apart. See design requirements. | 1014.2.1 |
| L. | Manually operated flush bolts or surface bolts on exit doors are not permitted. | 1014.2.1 |
| M. | In the event of power supply failure in Group I occupancies the power supply for means of egress illumination shall automatically be provided from an emergency system if two or more exits. | 1026.5 |
| N. | Exit signs are required in rooms or areas which require two or more exits. Main exterior exit door may be exempt. | 1011.1 |
| O. | Exit signs shall be illuminated at all times. | 1011.5.3 |

GROUP “P” OCCUPANCIES cont.

- P. The minimum corridor width shall be not less than 44.” Corridors serving surgical Group I, health-care centers for ambulatory patients receiving outpatient medical care which causes the patient to be not capable of self-preservation, minimum corridor width shall be 72.” 1016.2
- Q. The minimum corridor width shall be 96” in Group +I-2 in a area where required for bed movement. 1016.2
- R. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from the nearest visible exit sign. 1011.1
- S. Door openings to resident sleeping rooms in occupancies in Group I-3 shall have a clear width of not less than 28 inches. 1008.1.1
- T. Group I-2 and I-4 are no longer required to have a 1-hour rated corridor. Group I-1 and I-3 are required to have a 1-hour rated corridor. All Group I occupancies must be fully sprinklered. Tbl 1016.1
- U. Locks and latches shall be permitted to prevent operation of doors where people are detained or restrained. Group I-3. 1008.1.8.3

II. FIRE PROTECTION SYSTEMS (I)

- A. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area. Group I-1 facilities may install 13D or 13R systems. See exception. 903.2.5
- B. One 2A fire extinguisher per 6000 sq. ft. in low hazard (offices) and one 2A per 3000 sq. ft. in a moderate hazard. High hazard requires a 4A extinguisher or two 2A extinguishers per 4000 sq. ft. Tbl 906.3(1)
- C. Maximum travel distance to a fire extinguisher is 75 feet. Tbl 906.3(1)
- D. Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. 906.5
- E. Fire extinguishers shall not be obstructed or obscured from view. 906.6
- F. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. 906.7
- G. Portable fire extinguishers shall be installed so that its top is not more than 5 feet above the floor if less than 40 pounds. Fire extinguishers exceeding 40 pounds, shall be installed so that its top is not more than 3.5 ft. above the floor. 906.9
- H. Fire extinguishers shall be installed within 30 feet of commercial cooking equipment. 906.1(2)
- I. Cooking equipment involving vegetable or animal oils and fats shall be protected by a Class K rated portable fire extinguisher provided within 30 feet travel distance. 904.11.5
- J. Automatic fire extinguishing systems of commercial cooking equipment shall be serviced at least every 6 months and after activation of the system. Show proof. 904.11.6.4
- K. The actuation of commercial cooking equipment fire suppression system shall automatically shut down the fuel or electrical power supply to the cooking equipment. Reset shall be manual. 904.11.2

GROUP "I" OCCUPANCIES cont

L.	Commercial cooking equipment fusible links and automatic sprinkler heads shall be replaced at least annually. Show proof.	904.11.6.5
M.	The automatic fire-extinguishing system for commercial cooking systems shall have a manual actuation device that shall be located at or near a means of egress from the cooking area, 4 to 5 feet above floor, 10 to 20 feet away.	904.11.1
N.	Commercial kitchen exhaust hood and duct systems shall be protected by an approved automatic fire-extinguishing system.	904.2.1
O.	Fire extinguishers shall be serviced annually and shall have a current service tag attached.	901.6.1
P.	All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads.	903.4
Q.	See Table 906.1 for additional required portable fire extinguishers.	906.1
R.	Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times.	901.6
S.	Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13 6.2.6.1)	901.8
T.	Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years. Show proof.	901.6.2
U.	Hoods, grease-removal devices, fans, ducts shall be cleaned to prevent the accumulation of grease. Cleaning shall be recorded and such records shall be maintained on the premises. Show proof.	904.11.6.3
V.	A 3-foot clear space shall be maintained around the circumference of fire hydrants.	508.5.5
W.	The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition at all times.	907.20.5

III. HOUSEKEEPING (I)

A.	Storage of combustible materials in buildings shall be maintained in a neat, orderly manner.	315.2
B.	Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below.	315.2
C.	Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas of buildings and a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings.	315.2.1
D.	Combustible material shall not be stored in exits or exit enclosures.	315.2.2
E.	Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms.	315.2.3
F.	Outside storage of combustible materials shall not be located within 10 feet of a property line. See exceptions.	315.3
G.	Combustible waste containers more than 40 gallons shall have lids and must be made of metal or approved combustible material.	304.3.2

GROUP "I" OCCUPANCIES cont

- H. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1- hour fire-resistive construction. Exception is if the area is protected by an approved automatic sprinkler system. 315.2.4
- I. Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cu. ft.) or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings or under roof eave lines. 304.3.3
- J. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in listed disposal containers. (Self-closing lids) Contents shall be removed and disposed of daily. 304.3.1
- K. Portable unvented fuel-fired heating equipment shall be prohibited. 603.4
- L. A Type 1 hood shall be installed at or above all commercial food cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors. 610.2
- M. Shelf storage of flammable and combustible liquids shall be maintained in an orderly manner. 3404.3.3.5.3

IV. ELECTRICAL (I)

- A. Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed. 605.4.1
- B. Relocatable power taps shall be directly connected to a permanently installed receptacle. 605.4.2
- C. Relocatable power tap cords shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage. 605.4.3
- D. Extension cords shall not be a substitute for permanent wiring. 605.5
- E. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors. 605.5
- F. Extension cords shall be plugged directly into an approved receptacle, power tap, or multiplug adapter. 605.5.1
- G. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. 605.5.1
- H. Extension cords shall not contain splices or damage. 605.5.3
- I. Extension cords shall be grounded when serving grounded portable appliances. 605.5.4
- J. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. 605.5.2
- K. A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. 605.3
- L. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. 605.6
- M. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. 605.8

GROUP "I" OCCUPANCIES cont

- N. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Longer for construction, remodeling, repair or demolition of buildings. 605.9
- O. Temporary wiring attached to a structure shall be attached in an approved manner. 605.9.1
- P. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited. 605.4
- Q. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "**ELECTRICAL ROOM.**" 605.3.1
- R. Power-operated sliding doors or power-operated locks for swinging doors in Group I-3 occupancies shall be operable by a manual release mechanism at the door, and either emergency power or a remote mechanical operating release shall be provided. 604.2,16

V. MISCELLANEOUS (I)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured openings or immediate access is required. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2.1
- E. An approved fire safety and evacuation plan shall be prepared and maintained in all Group I occupancies. 404.2
- F. Emergency evacuation drills shall be conducted in Group "I" occupancies quarterly on each shift. All employees must participate. Group I-2, patient evacuation not required. 405.2
408.6.1
- G. Buildings storing hazardous materials must display placard. 2703.5

VI. HAZARDOUS MATERIALS (I)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. 105.6.17.2
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. See how to separate. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be stored in basements. 3404.3.5.1
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4

GROUP "I" OCCUPANCIES cont.

- F. Toxic or highly toxic compressed gases shall not be stored or used within Group I occupancies. 20 cu. ft. is allowed in gas cabinets. 3704.1.1.1
- G. Unstable (reactive) materials shall not be permitted in basements. 4304.1.5
- H. Except for cylinders not exceeding 250 cubic feet each, used for maintenance purposes, patient care or operation of equipment, flammable gases shall not be stored or used in Group I occupancies. 3503.1.1
- I. **"NO SMOKING"** signs shall be posted in areas containing flammable or combustible hazardous materials are stored, dispensed or used. 2703.7.1
- J. Medical gases shall be stored in areas dedicated to the storage of such gases without other storage or uses. 3006.2
- K. Static-producing equipment located in flammable gas storage areas shall be grounded. 3503.1.4
- L. Compressed gas systems conveying flammable gases shall be provided with approved emergency shutoff valves that can be activated at each point of use and each source. 3503.1.3
- M. Rooms or cabinets containing compressed gases shall be labeled: **COMPRESSED GAS** when in quantities requiring a permit. 2703.5.1

VII. FIRE PROTECTION (I)

- A. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. 703.2
- B. Fire door assemblies shall not be modified. 703.2
- C. Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. 703.2.3
- D. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. 703.4
- E. When magnetic hold open devices on fire doors are out of service the door shall remain in the closed position. 703.2.2
- F. Curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall be flame resistant. 805.1
- G. In I-1 and I-3 occupancies openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly. **NO DOOR WEDGES OR FOLD DOWN FEET.** 703.1
Many newer I-2 and I-4 buildings built since 2000 may not be required to have rated corridors if fully sprinklered. Tbl 1016.1
1026.17.1
- H. Natural cut trees shall be prohibited in Group I-1, I-2, I-3, and I-4 occupancies. No exception for automatic sprinklers. 804.1.1
- I. Wastebaskets and other waste containers shall be of noncombustible material or other approved materials in Group I-3 occupancies. 803.7.5

GROUP “I” OCCUPANCIES cont.

- J. In Group I-1 and I-2, combustible decorations shall be flame retardant unless the decorations, such as photographs and paintings, are of such limited quantities that a hazard of fire development or spread is not present. In Group I-3, combustible decorations are prohibited.

805.1

GROUP "M" OCCUPANCIES 202 p. 20

Mercantile Group M occupancy includes, among others, building and structures or a portion thereof, for the display and sale of merchandise, and involves stock or goods, ware, or merchandise incidental to such purpose and accessible to the public.

Mercantile occupancies shall include, but not be limited to, the following:

- Department stores
- Drug stores
- Markets
- Motor vehicle service stations
- Retail or wholesale stores
- Sales rooms

I. EXITS (M)

- | | | |
|----|---|----------|
| A. | It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. | 1001.2 |
| B. | Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons. | 1008.1.2 |
| C. | Egress doors shall be openable from the egress side without the use of a key or special knowledge or effort. See exceptions. | 1008.1.8 |
| D. | When two or more exits are required they shall be separated by a distance apart formula. See design. | 1014.2.1 |
| E. | Exits shall be continuous from the point of entry into the exit to the exit discharge. | 1018.3 |
| F. | Exterior exit doors shall lead directly to the exit discharge or the public way. | 1017.2.2 |
| G. | The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. | 1006.1 |
| H. | Exit signs are required in rooms or areas which require two or more exits. Main exterior exit door sign may be exempt. | 1011.1 |
| I. | Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from the nearest visible exit sign. | 1011.1 |
| J. | Exit signs shall be internally or externally illuminated at all times. | 1011.2 |
| K. | Obstruction to exits shall not be placed in the required width and exits shall not be obstructed in any manner. | 1003.6 |
| L. | The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel. | 1003.6 |
| M. | Doorways shall not be less than 32" in clear width. | 1008.1.1 |

GROUP "M" OCCUPANCY cont.

- N. Key locking hardware may be used on the main exit if there is a readily visible, durable sign on, or adjacent to, the door stating **"This door to remain unlocked when building is occupied."** The locking device must be readily distinguishable as locked. 1008.1.8.3
- O. In public areas of Group M occupancies, the minimum clear aisle width shall be 36". Wider depending on occupant load. 1013.4.1
- P. Buildings with only one required exit the maximum travel distance to an exit is 75 feet. Tbl 1018.2
- Q. In the event of a power failure, power photoelectric-actuated exit doors shall be capable of being opened manually. 50 lb. push. 1008.1.3.2
- R. Manually operated flush bolts or surface bolts on exit doors are not permitted. 1008.1.8.4
- S. Fixtures and displays of goods for sale to the public shall be arranged so as to maintain free, immediate and unobstructed access to an exit. 314.2
- T. Access-controlled entrance egress doors are permitted within Group M occupancies. The system must be approved. The doors shall be arranged to unlock by a signal from or loss of power to the sensor. There should be a manual unlocking device (button) located 40-48 inches above the floor within 5 feet of the secured doors. There shall be a sign that reads: **PUSH TO EXIT**. Activation of the fire alarm system or the automatic sprinklers shall unlock the doors. Entrance doors in Group M occupancies shall not be secured from the egress side during periods that the building is open to the general public. 1008.1.3.4

II. FIRE PROTECTION SYSTEMS (M)

- A. One 2A fire extinguisher per 6000 sq. ft. in low hazard (offices) and one 2A per 3000 sq. ft. in a moderate hazard. High hazard requires a 4A extinguisher or two 2A extinguishers per 4000 sq. ft. 906.1
Tbl 906.3(1)
- B. Maximum travel distance to a fire extinguisher is 75 feet. Tbl 906.3(1)
- C. Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. 906.5
- D. Fire extinguishers shall not be obstructed or obscured from view. 906.6
- E. Portable fire extinguishers shall be installed so that its top is not more than 5 feet above the floor if less than 40 pounds. Fire extinguishers exceeding 40 pounds, shall be installed so that its top is not more than 3.5 ft. above the floor. 906.9
- F. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. 906.7
- G. Fire extinguishers shall be serviced annually and shall have a current service tag attached. 901.6
- H. See Table 906.1 for additional required portable fire extinguishers. 906.1

GROUP "M" OCCUPANCY cont.

- I. All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads. 903.4
- J. Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times. 901.6
- K. Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13 6.2.6.1) 901.8
- L. Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years. Show proof. 901.6.2
- M. A 3-foot clear space shall be maintained around the circumference of fire hydrants. 508.5.5
- N. The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition at all times. 907.20.5
- O. An automatic sprinkler system shall be provided in all buildings of Group M where storage of combustible merchandise is in high-piled or rack storage > 12 ft. in height (high hazard > 6 ft.). 2302
903.2.6

III. HOUSEKEEPING (M)

- A. Storage of combustible materials in buildings shall be maintained in a neat, orderly manner. 315.2
- B. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below. 315.2
- C. Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas of buildings and a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings. 315.2.1
- D. Combustible material shall not be stored in exits or exit enclosures. 315.2.2
- E. Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms. 315.2.3
- F. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1- hour fire-resistive construction. Exception is if the area is protected by an approved automatic sprinkler system. 315.2.4
- G. Outside storage of combustible materials shall not be located within 10 feet of a property line. See exceptions. 315.3
- H. Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material. 304.3.2
- I. Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cu. ft.) or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings or under roof eave lines. 304.3.3
- J. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids) Contents shall be removed and disposed of daily. 304.3.1

GROUP "M" OCCUPANCY cont.

K.	Floors shall be kept clean in hot work areas.	2604.1.3
L.	Shelf storage of flammable and combustible liquids shall be maintained in an orderly manner.	3404.3.3.5.3
M.	Liquid or gas fueled vehicles or boats shall not be located indoors except: battery disconnected, fuel in tank not to exceed 1/4 tank or 5 gallons (whichever is least). Fuel tanks and fill openings are closed and sealed to prevent tampering	314.4

IV. ELECTRICAL (M)

A.	Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed.	605.4.1
B.	Relocatable power taps shall be directly connected to a permanently installed receptacle.	605.4.2
C.	Relocatable power taps shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage.	605.4.3
D.	Extension cords shall not be a substitute for permanent wiring.	605.5
E.	Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors.	605.5
F.	Extension cords shall be plugged directly into approved receptacle, power tap, or multiplug adapter.	605.5.1
G.	Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance.	605.5.1
H.	Extension cords shall not contain splices or damage.	605.5.3
I.	Extension cords shall be grounded when serving grounded portable appliances.	605.5.4
J.	The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord.	605.5.2
K.	A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment.	605.3
L.	Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes.	605.6
M.	Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris.	605.8
N.	Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Exception: Longer for construction, remodeling, repair or demolition of buildings.	605.9
O.	Temporary wiring attached to a structure shall be attached in an approved manner.	605.9.1
P.	Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited.	605.4

GROUP "M" OCCUPANCY cont.

- Q. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "**ELECTRICAL ROOM.**" 605.3.1

V. MISCELLANEOUS (M)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured opening or immediate access is required. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2
- E. An approved fire safety and evacuation plan shall be prepared and maintained for Group M buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge. 404.2
- F. Group M buildings with an atrium must have an approved fire safety and evacuation plan. Show proof. 404.2.
- G. Employees in Group M occupancies shall be trained annually in the fire emergency procedures in the fire evacuation and fire safety plans. Show proof. 406.2

VI. HAZARDOUS MATERIALS (M)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. 105.6.17.2
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be permitted in basements. 3404.3.5.1
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4
- F. Buildings storing hazardous materials must display placard. 2703.5

VII. FIRE PROTECTION (M)

- A. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. 703.2
- B. Fire door assemblies shall not be modified. 703.2
- C. Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. 703.2.3

GROUP "M" OCCUPANCY cont.

- D. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. 703.4
- E. When magnetic hold open devices on fire doors are out of service the door shall remain in the closed position. 703.2.2
- F. Natural cut trees shall be prohibited in Group M occupancies unless protected by an automatic sprinkler system. 804.1.1
- G. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly. **NO DOOR WEDGES OR FOLD DOWN FEET.** Many newer buildings built since 2000 may not be required to have rated corridors if fully sprinklered. 1026.17
Tbl 1016.1

GROUP "R" OCCUPANCIES 202 p. 20

Residential Group R occupancy includes, among other, the use of a building or structure, or a portion thereof, for sleeping accommodations when not classed as an Institutional Group I. Residential occupancies shall include the following:

- R-1** Residential occupancies where the occupants are primarily transient in nature (less than 30 days) including: Boarding houses, Hotels and Motels (transient) .
- R-2** Residential occupancies containing more than two dwelling units where the occupants are primarily permanent in nature, including: Apartment houses, Boarding houses(not transient), Convents, Dormitories, Fraternities and sororities, Monasteries, Hotels and motels (nontransient), Vacation Timeshare properties.
- R-3** Residential occupancies where the occupants are primarily permanent in nature and not classified as R-1, R-2 or I, and where buildings do not contain more than two dwelling units or adult and child care facilities, that provide accommodations for five or fewer persons of any age for less than 24 hours shall be classified as Group R-3.

Note: Group R-3 occupancies are primarily covered under the International Residential Code (IRC) unless the IRC is not adopted within the jurisdiction.

- R-4** Residential occupancies shall include buildings arranged for occupancy as Residential Care/Assisted Living Facilities including more than five but not more than 16 occupants, excluding staff.

Note: Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 except for the height and area limitations provided in Section 503 of the International Building Code.

I. EXITS (R)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. 1001.2
- B. Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons. 1008.1.2
- C. Egress doors shall be openable from the egress side without the use of a key or special knowledge or effort. See exceptions. 1008.1.8
- D. In a Group R-2 occupancy the maximum travel distance to an exit is 50 feet. All other R occupancies is 75 feet. Tbl 1018.2
- E. Exits shall be continuous from the point of entry into the exit to the exit discharge. 1018.3
- F. Exterior exit doors shall lead directly to the exit discharge or the public way. 1017.2.2

GROUP "R" OCCUPANCIES cont.

- G. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. 1006.1
- H. Exit signs are required in rooms or areas which require two or more exits. Main exterior exit door sign may be exempt. Exit signs are not required in individual sleeping units or dwelling units in Group R-1, R-2, or R-3. 1011.1
- I. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from the nearest visible exit sign. 1011.1
- J. Exit signs shall be internally or externally illuminated at all times. In existing buildings approved self-luminous signs may be used. 1026.3
- K. Obstruction to exits shall not be placed in the required width and exits shall not be obstructed in any manner. 1003.6
- L. The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel. 1003.6
- M. Doorways shall not be less than 32" in clear width. This does not apply to door openings that are not part of the required means of egress in Group R-2, and R-3 occupancies. 1008.1.1
- N. Two exits or exit access doorways from any space in Group R shall be provided if the occupant load of the space exceeds 10 persons. Tbl 1014.1
- O. Access-controlled entrance egress doors are permitted within Group R-1, R-2 occupancies. The system must be approved. The doors shall be arranged to unlock by a signal from or loss of power to the sensor. There should be a manual unlocking device (button) located 40-48 inches above the floor within 5 feet of the secured doors. There shall be a sign that reads: **PUSH TO EXIT**. Activation of the fire alarm system or the automatic sprinklers shall unlock the doors. Entrance doors in Group R-1, R-2 occupancies shall not be secured from the egress side during period that the building is open to the general public. 1008.1.3.4
- P. Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. See exceptions. 1008.1.8
- Q. In the event of power supply failure, exit illumination shall be automatically provided from an emergency system except where the guest room or living unit has direct access to the outside at grade level. Applicable to R-1, R-2 and R-4 only. R-3 exempt. 1026.5

GROUP "R" OCCUPANCIES cont.

II. FIRE PROTECTION SYSTEMS (R)

- A. An automatic sprinkler system shall be provided throughout all buildings with a Group R fire area. One and two family dwellings (R-3) and townhouses not over 3 stories in height are exempt. 903.2.7.
- B. One 2A fire extinguisher per 6000 sq. ft. in low hazard (offices) and one 2A per 3000 sq. ft. in a moderate hazard (R-1, R-2, and R-4 only). R-3 exempt. Tbl 906.3(1)
- C. Maximum travel distance to a fire extinguisher is 75 feet. Tbl 906.3(1)
- D. Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. 906.5
- E. Fire extinguishers shall not be obstructed or obscured from view. 906.6
- F. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. 906.7
- G. See Table 906.1 for additional required portable fire extinguishers. 906.1
- H. Fire extinguishers shall be serviced annually and shall have a current service tag attached. 901.6
- I. All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads. 903.4
- J. Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13 6.2.6.1). 901.8
- K. Group R-1 Hotel kitchens must provide extinguishers and protection same as Group A-1 for commercial cooking areas. 904.11
- L. Portable fire extinguishers shall be installed so that its top is not more than 5 feet above the floor if less than 40 pounds. Fire extinguishers exceeding 40 pounds, shall be installed so that its top is not more than 3.5 ft. above the floor. 906.9
- M. Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years. Show proof. 901.6.2
- N. A 3-foot clear space shall be maintained around the circumference of fire hydrants. 508.5.5
- O. Smoke alarms shall be installed in existing dwelling units, congregate residences, and hotel and lodging house guestrooms. 907.3.2
- P. A fire alarm system shall be installed in existing Group R-1 hotels and motels more than three stories or with more than 20 guestrooms. 907.3.1.5
- Q. A fire alarm system shall be installed in existing Group R-1 boarding and rooming houses. See exceptions. 907.3.1.6
- R. A fire alarm system shall be installed in existing Group R-2 apartment buildings with more than three stories or with more than 16 dwelling or sleeping units. 907.3.1.7
- S. In Group R-4 a fire alarm system shall be installed in existing Group R-4 residential care/assisted living facilities. See exceptions. 907.3.1.8

GROUP "R" OCCUPANCIES cont.

III. HOUSEKEEPING (R)

- A. Storage of combustible materials in buildings shall be maintained in a neat, orderly manner. 315.2
- B. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below. 315.2
- C. Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas of buildings and a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings. 315.2.1
- D. Combustible material shall not be stored in exits or exit enclosures. 315.2.2
- E. Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms. 315.2.3
- F. Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material. 304.3.2
- G. Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cu. ft.) or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings or under roof eave lines. 304.3.3
- H. Portable unvented fuel-fired heating equipment shall be prohibited. Exception: Listed and approved unvented fuel-fired heaters in one and two family dwellings.. 603.4
- I. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (Self-closing lids). Contents shall be removed and disposed of daily. 304.3.1
- J. Shelf storage of flammable and combustible liquids shall be maintained in an orderly manner. 3404.3.3.5.3

IV. ELECTRICAL (R)

- A. Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed. 605.4.1
- B. Relocatable power taps shall be directly connected to a permanently installed receptacle. 605.4.2
- C. Relocatable power tap cords shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage. 605.4.3
- D. Extension cords shall not be a substitute for permanent wiring. 605.5
- E. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors. 605.5
- F. Extension cords shall be plugged directly into an approved receptacle, power tap, or multiplug adapter. 605.5.1
- G. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. 605.5
- H. Extension cords shall not contain splices or damage. 605.5.3
- I. Extension cords shall be grounded when serving grounded portable appliances. 605.5.4

GROUP "R" OCCUPANCIES cont.

- J. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. 605.5.2
- K. A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. .605.3
- L. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. 605.6
- M. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris. 605.8
- N. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 days. Exception: Longer for construction, remodeling, repair or demolition of buildings. 605.9
- O. Temporary wiring attached to a structure shall be attached in an approved manner. 605.9.1
- P. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited. 605.4
- Q. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "**ELECTRICAL ROOM.**" 605.3.1

V. MISCELLANEOUS (R)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured opening or immediate access is required. Group R-3 Exempt. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2.1
- E. The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition. 907.20.5
- F. An approved fire safety and evacuation plan shall be prepared and maintained for Group R-1 and R-4 buildings. 404.2(5)(6)
- G. Employees in Group R-1 and R-4 occupancies shall be trained in the fire emergency procedures described in the fire evacuation and fire safety plans. Training is annual. 406.1
- H. Emergency evacuation drills shall be held in Group R-1 occupancies quarterly on each shift by employees only. Show proof. Tbl 405.2

GROUP "R" OCCUPANCIES cont.

- I. Fire and evacuation drills in residential care assisted living facilities (R-4) shall be held quarterly on each shift and shall include the complete building evacuation. 405.2
- J. In Group R-1 occupancies, a diagram depicting two evacuation routes shall be posted on or immediately adjacent to every required egress. 408.8.1
- K. In Group R-2 occupancies, each tenant shall be given a copy of the emergency guide prior to occupancy. 408.9
- L. In Group R-4 occupancies, a fire safety and evacuation plan shall include special staff actions, including fire protection procedures for residents. 408.10.1

VI. HAZARDOUS MATERIALS (R)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. 105.6.17.2
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. See how to separate. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be permitted in basements. 3404.3.5.1
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4
- F. LP Gas containers shall not be used in basements or in above grade under floor spaces unless location is provided with an approved means of ventilation. 3803.2.1.1
- G. Explosives are prohibited in Group R occupancies with the exception of the storage of smokeless propellant, black powder and small arms primers for personal use only and not for resale. 3301.2.1
- H. Except for cylinders not exceeding 250 cu. ft. each, used for maintenance purposes, patient care or operation of equipment, flammable gases shall not be stored or used in Group R occupancies. 3503.1.1

VII. FIRE PROTECTION (R)

- A. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. 703.2
- B. Fire door assemblies shall not be modified. 703.2
- C. Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. 703.2.3
- D. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. 703.4
- E. When magnetic hold open devices on fire doors are out of service the door shall remain in the closed position. 703.2.2
- F. Natural cut trees shall be prohibited in Group R-4 occupancies. 804.1.1

GROUP "R" OCCUPANCIES cont.

- | | | |
|----|--|--------------------|
| G. | Natural cut trees shall be prohibited in Group R-1 and R-2 occupancies unless protected by an automatic sprinkler system. | 804.1.1 |
| H. | Wooden or rubber door wedges and fold down feet that block open fire rated doors in the open position shall be removed and the door allowed to protect the opening in fire rated corridors. | 703.2
1026.17.1 |
| I. | Curtains, draperies, hangings and other decorative materials shall be flame resistant or be noncombustible in Group R-1 and dormitories in Group R-2. Ask to see certificate of treatment or test small piece outside. | 805.1 |
| J. | Fire door fusible links shall be replaced promptly whenever fused. | 703.2 |

GROUP "S" OCCUPANCIES

202 p. 21

Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, the storage that is not classified as a hazardous occupancy.

S-1 Moderate-hazard storage. Buildings occupied for storage uses which are not classified as Group S-2 including, but not limited to, storage of the following:

- Aircraft hanger
- Books and paper in rolls
- Boots and shoes
- Bulk storage of tires
- Cardboard and cardboard boxes
- Clothing, woolen
- Furniture
- Furs
- Grain
- Leather
- Linoleum
- Lumber
- Mattress
- Motor vehicle repair garages
- Petroleum warehouses
- Silk, Soap, Sugar, Tobacco products
- Upholstering

S-2 Low-hazard storage. Includes, among others, buildings used for the storage of noncombustible materials, such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products may have negligible amount of plastic trim such as knobs, handles, or film wrapping. Storage uses include, but are not limited to, storage of the following:

- Cement in bags
- Dairy products in nonwaxed coated paper
- Dry cell batteries
- Electrical coils and motors
- Empty cans
- Food products
- Frozen Foods
- Food in noncombustible containers
- Glass
- Fresh fruits and vegetables in nonplastic trays
- Gypsum board
- Glass bottles, empty or filled, noncombustible
- Meats, Metal desks with plastic tops and trim
- Metals
- Mirrors
- Parking garages (open or enclosed)
- Stoves
- Washers and dryers

GROUP "S" OCCUPANCIES cont.

I. EXITS (S)

- A. It shall be unlawful to alter a building or structure in a manner that will reduce the number of exits or the capacity of the means of egress to less than required by this code. 1001.2
- B. Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons. 1008.1.2
- C. Egress doors shall be openable from the egress side without the use of a key or special knowledge or effort. See exceptions. 1008.1.8
- D. Exits shall be continuous from the point of entry into the exit to the exit discharge. 1018.3
- E. Exterior exit doors shall lead directly to the exit discharge or the public way. 1017.2.2
- F. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. 1006.1
- G. Exit signs are required in rooms or areas which require two or more exits. Main exterior exit door sign may be exempt. 1011.1
- H. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet from the nearest visible exit sign. 1011.1
- I. Exit signs shall be internally or externally illuminated at all times. 1011.2
- J. Obstruction to exits shall not be placed in the required width and exits shall not be obstructed in any manner. 1003.6
- K. The required capacity of means of egress shall not be diminished (reduced) along the path of egress travel. 1003.6
- L. Two exits are required when the occupant load is over 30. Tbl 1014.1
- M. Maximum travel distance to an exit in a one story Group S occupancy is 100 feet. Two story Group S occupancy is 75 ft. Tbl 1018.2
- N. Open parking structures shall not have less than two exits from each parking tier. Unenclosed vehicle ramps shall not be considered as required exits unless pedestrian facilities are provided. 1018.1.1

II. FIRE PROTECTION SYSTEMS (S)

- A. One 2A fire extinguisher per 6000 sq. ft. in low hazard (offices) and one 2A per 3000 sq. ft. in a moderate hazard. 2205.5
- B. S-1 Motor fuel-dispensing facility requires a 2-A:20-B:C fire extinguisher within 75' of the pumps, dispensers or storage tank fill-pipe openings. 2205.5
- C. Maximum travel distance to a fire extinguisher is 75 feet. Tbl 906.3(1)
- D. Fire extinguishers shall be located in conspicuous locations where they will be readily accessible and immediately available for use. 906.5
- E. Fire extinguishers shall not be obstructed or obscured from view. 906.6
- F. Hand-held portable fire extinguishers, not housed in cabinets, shall be installed on hangers or brackets supplied. 906.7

GROUP "S" OCCUPANCIES cont.

G.	See Table 906.1 for additional required portable fire extinguishers.	906.1
H.	Fire extinguishers shall be serviced annually and shall have a current service tag attached.	901.6
I.	All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electronically supervised when system has 20 or more sprinkler heads.	903.4
J.	Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times.	901.6
K.	A minimum of one 2-A:20-B:C required within 30' of welding area.	2604.2.6
L.	Painted sprinkler heads or cover plates are prohibited unless painted at the factory. They cannot be cleaned of paint. They must be replaced. (NFPA 13 6.2.6.1)	901.8
M.	Portable fire extinguishers shall be installed so that its top is not more than 5 feet above the floor if less than 40 pounds. Fire extinguishers exceeding 40 pounds, shall be installed so that its top is not more than 3.5 ft. above the floor.	906.9
N.	Records of all system inspections, tests and maintenance shall be maintained on the premises for a minimum of 3 years. Show proof.	901.6.2
O.	A 3-foot clear space shall be maintained around the circumference of fire hydrants.	508.5.5
P.	The building owner shall be responsible for ensuring that the fire and life safety systems are maintained in an operable condition at all times.	907.20.5

III. HOUSEKEEPING (S)

A.	Storage of combustible materials in buildings shall be maintained in a neat, orderly manner.	315.2
B.	Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur. See "E" below.	315.2
C.	Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas of buildings and a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings.	315.2.1
D.	Combustible material shall not be stored in exits or exit enclosures.	315.2.2
E.	Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms.	315.2.3
F.	Combustible waste containers larger than 40 gallons shall have lids and must be made of metal or approved combustible material.	304.3.2
G.	Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cu. ft.) or more shall not be stored in buildings or placed within 5 feet of combustible walls, openings or under roof eave lines.	304.3.3

GROUP "S" OCCUPANCIES cont.

- H. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in listed disposal container. (Self-closing lids)
Contents shall be removed and disposed of daily. 304.3.1
- I. Items shall not be placed or kept near fire hydrants, fire department inlet connections (FDC) in a manner that would prevent such equipment or fire hydrants from being immediately discernible and from gaining immediate access to the fire protection equipment or fire hydrants. 508.5.4
- J. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1- hour fire-resistive construction. Exception is if the area is protected by an approved automatic sprinkler system. 315.2.4
- K. Shelf storage of flammable and combustible liquids shall be maintained in an orderly manner. 3404.3.3.5.3

IV. ELECTRICAL (S)

- A. Relocatable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed. 605.4.1
- B. Relocatable power taps shall be directly connected to a permanently installed receptacle. 605.4.2
- C. Relocatable power tap cords shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to damage. 605.4.3
- D. Extension cords shall not be a substitute for permanent wiring. 605.5
- E. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings or floors. 605.5
- F. Extension cords shall be plugged directly into: approved receptacle, power tap, or multiplug adapter. 605.5.1
- G. Except for approved multiplug extension cords, each extension cord shall serve only one portable appliance. 605.5.1
- H. Extension cords shall not contain splices or damage. 605.5.3
- I. Extension cords shall be grounded when serving grounded portable appliances. 605.5.4
- J. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord. 605.5.2
- K. A working space and clearance of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment (panel). Where electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. 605.3
- L. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and outlet boxes. 605.6
- M. Temporary wiring attached to a structure shall be attached in an approved manner. 605.9.1

GROUP "S" OCCUPANCIES cont.

- N. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the ICC Electrical Code shall be prohibited. 605.4
- O. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating "**ELECTRICAL ROOM.**" 605.3.1
- P. Portable electric lamps shall not be used in spraying areas during spraying operations unless approved for hazardous locations. 1504.5.4

V. MISCELLANEOUS (S)

- A. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background. 505.1
- B. A key box may be required where access to or within a structure is unduly difficult because of secured openings. 506.1
- C. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. 503.4
- D. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, minimum height is 13 feet 6 inches. 503.2.1

VI. HAZARDOUS MATERIALS (S)

- A. An operational permit is required to store, handle or use Class I liquids in excess of 5 gallons inside a building or 10 gallons outside. 105.6.17(2)
- B. Storage of incompatible materials shall be separated if in containers having a capacity over 5 lbs. or .5 gallon. See how to separate. 2703.9.8
- C. Shelf storage of flammable and combustible liquids shall be orderly. 3404.3.3.5.3
- D. Class I flammable liquids shall not be permitted in basements. 3404.3.5.1
- E. Flammable and combustible liquids used for maintenance and the operation of equipment exceeding 10 gallons shall be stored in a liquid storage cabinet. 3404.3.4.4
- F. LP Gas containers shall not be used in basements or in above grade under floor spaces unless location is provided with an approved means of ventilation. 3803.2.1.1
- G. Buildings storing hazardous materials must display placard. 2703.5
- H. Rooms or cabinets containing compressed gases shall be labeled: **COMPRESSED GAS** when in quantities requiring a permit. 2703.5.1

VII. FIRE PROTECTION (S)

- A. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. 703.2
- B. Fire door assemblies shall not be modified. 703.2
- C. Swinging fire doors shall close from the full open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position. 703.2.3

GROUP "S" OCCUPANCIES cont.

- D. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and available. 703.4
- E. When magnetic hold open devices on fire doors are out of service the door shall remain in the closed position. 703.2.2
- F. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly.
NO DOOR WEDGES OR FOLD DOWN FEET. Many newer buildings built since 2000 may not be required to have rated corridors if fully sprinklered. 703.1
1026.17.1
Tbl 1016.1

GROUP "U" OCCUPANCY 202 p. 21

Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

- Agricultural building
 - Barns, carports, fences over 6'
 - Grain silos, accessory to R-3
 - Green houses, livestock shelters
 - Private garages
 - Retaining walls, sheds, stables
 - Tanks, towers
- A. The code official is authorized to increase the distance of fire apparatus access roads beyond 150 ft. if there are not more than two Group U occupancies or buildings have automatic sprinklers. 503.1.1
- B. No requirement for portable fire extinguisher. 906.1
- C. Only one exit required up to 50 occupant load. Tbl 1018.2

COMMON HAZARDS BY OCCUPANCY

The following are hazards particular to different occupancies, and ones you frequently find violated.

MULTI-UNIT RESIDENCES

1. Blocked exits
2. Unserviced or missing fire extinguishers
3. Excessive storage in basement or corridors
4. Cluttered attic, garage, under stairs, heating room
5. Lack of (and/or not visible) exit signs
6. Accumulation of dust and lint in laundry room
7. Combustibles stored next to water heater or furnace
8. Lack of fire department access
9. Fire protection equipment not working or serviced
10. Faulty, untested standpipes
11. Penetrations in fire separations
12. Incomplete or missing evacuation plans
13. Stairway doors blocked open
14. Lack of smoke detectors and/or record of testing
15. Proof of fire drill training
16. Flammable liquids storage

ASSEMBLY OCCUPANCIES

1. Blocked exits (constant problem)
2. No exit sign; exit lights out
3. Doors locked during hours of occupancy
4. Overcrowded, no occupant load sign posted
5. Aisles not adequate
6. Fire extinguisher not serviced or nonexistent
7. Candles on tables in unsafe holders (permit required)
8. Extension cords and other electrical problems
9. Decorations not flame retardant
10. Non-flame retardant drapes
11. Smoking problems
12. Heating hazards
13. Lack of panic hardware and/or hard to open
14. No emergency lighting, not tested
15. Fire alarm testing, no record of testing
16. Kitchen extinguishing systems not tested
17. Kitchen hood too much grease
18. Deadbolts on exit doors

RESTAURANTS

1. Grease accumulation on filters and in ducts
2. Hood system not serviced, nonexistent, or improperly installed
3. Exiting problems the same as assembly
4. Decoration problems

COMMON HAZARDS BY OCCUPANCY cont.

5. Smoking problems
6. Cluttered storeroom
7. Electrical hazards
8. Heating hazards
9. Extension cords
10. Tables in exit paths
11. Illegal locks on exit doors
12. Permit required for candles
13. Emergency lighting missing or not tested
14. Storage in exit path or tables blocking exit door
15. No Occupant Load signs posted
16. Seating exceeds the posted Occupant Load signs

WAREHOUSES

1. Fire protection equipment not in service
2. Overhead doors obstructed by storage
3. Exits obstructed
4. Electrical machinery hazards
5. Extension cards
6. Flammable liquid storage
7. Oily rags storage

8. Trash and debris
9. Poor storage practices
10. Poor smoking practices
11. Stock obstructing sprinklers
12. Fire separations violated
13. Propane or gasoline operated lift trucks
14. Separation and isolation of hazardous materials
15. Area separation doors blocked open

HOSPITALS

1. Fire protection equipment not in service
(sprinklers, alarms, and extinguishers)
2. Extension cords
3. Concealed smoking by patients
4. Cafeteria hazards - hood protection
5. Exits locked and/or blocked
6. Area separation doors blocked open
7. Excessive storage of combustibles
8. Emergency generator not tested
9. Sterilizer room cluttered with combustibles
10. Employees smoking in linen storage room
11. Improper storage in linen storage room

COMMON HAZARDS BY OCCUPANCY cont.

12. Improper storage, handling, and use of anesthetics
13. Combustibles next to heating equipment
14. Lack of proper maintenance of heating equipment
15. Evacuation plan outdated, inadequate, or not posted
16. Emergency lighting not tested
17. Lack of fire department access
18. Exit corridors used for storage
19. Lack of fire drills and records proving such
20. Lack of exit signs or exit sign lighting not working
21. Bed storage in exits or corridors
22. Fire doors that do not close and latch
23. Emergency generator not tested or records kept

OFFICE BUILDINGS

1. Exiting problems
2. Extension cords
3. Extinguishers not serviced or missing
4. Poor record storage
5. Wastepaper handling
6. Smoking hazards
7. Heating equipment near combustibles
8. Improper storage of flammable liquids
9. Lack of proper maintenance and testing of fire systems
10. Blocked sprinkler heads

MANUFACTURING

1. Electrical machinery
2. Misuse of extension cords
3. Improper use and storage of flammable liquids
4. Faulty use and storage of chemicals
5. Improper use and storage of gases
6. Blocked and/or obstructed exterior doors, fire doors, etc.
7. Fire protection equipment not serviced
8. Improper maintenance of fire separations
9. Cluttered storerooms
10. Unsafe smoking practices
11. Inadequate aisles and exits
12. Cluttered storage of business records
13. Heating equipment problems
14. Combustibles too close to heating equipment
15. Spontaneous ignition
16. Paint spraying operation - permit required
17. Dip tanks with faulty lids, etc.
18. Paint and chemical storage

COMMON HAZARDS BY OCCUPANCY cont.

19. Inherently hazardous processes
20. Sparks from welding
21. Inadequate exhausting of vapors, dust, etc.
22. Disposal of trash, sawdust, debris
23. Blocked sprinkler heads

SCHOOLS

1. Blocked or chained exits
2. Blocked sprinkler heads
3. Exit lights not functioning
4. Fire protection equipment not maintained/missing
5. Unsafe chemistry lab (storage and equipment)
6. Flammable liquids such as solvents, paints, cleaners, and duplicating fluids stored in offices, shops, and classrooms
7. Shop hazards such as "manufacturing"
8. Excessive combustibles storage
9. Lack of fire drills and/or documentation
10. Non-flame-retardant drapes in auditorium
11. Extension cords used for permanent appliances
12. Combustibles near heating equipment
13. Improper, older electrical equipment
14. Chlorine and acid storage for pool
15. Hazards caused by lab experiments
16. Spray painting in shops and illegal/unapproved booths
17. Dip tanks, fusible links
18. Storage of oily rags
19. Welding hazards - no permit
20. Lack of emergency vehicle access to building
21. Fire alarm testing and documentation

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