

SUBJECT: BASICS OF FIRE SCIENCE

CLASSIFICATION OF BUILDING OCCUPANCIES AS PER NBC -2016

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Presented by

Jitender Narwal
HOD, FTS
GITAM, KABLANA

General Classification

All buildings, whether existing or hereafter erected shall be classified according to use or the character of occupancy in one of the following groups:

Classification of Buildings Based on Occupancy

Group A	Residential
Group B	Educational
Group C	Institutional
Group D	Assembly
Group E	Business
Group F	Mercantile
Group G	Industrial
Group H	Storage
Group J	Hazardous

Group A: Residential Buildings

These shall include any building in which sleeping accommodation is provided for normal residential purposes with or without cooking or dining or both facilities, except any building classified under Group C.

Buildings and structures under Group A shall be further subdivided as follows:

Subdivision A-1	Lodging and rooming houses
Subdivision A-2	One or two family private dwellings
Subdivision A-3	Dormitories
Subdivision A-4	Apartment houses
Subdivision A-5	Hotels
Subdivision A-6	Starred hotels

Group B: Educational Buildings

These shall include any building used for school, college, other training institutions involving assembly for instruction, education or recreation for not less than 20 students.

Buildings and structures under Group B shall be further subdivided as follows:

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| Subdivision B-1 | Schools up to senior secondary level |
| Subdivision B-2 | All others/training institutions |

Group C: Institutional Buildings

These shall include any building or part thereof, which is used for purposes, such as medical or other treatment or care of persons suffering from physical or mental illness, disease or infirmity; care of infants, convalescents or aged persons and for penal or correctional detention in which the liberty of the inmates is restricted. Institutional buildings ordinarily provide sleeping accommodation for the occupants.

Buildings and structures under Group C shall be further subdivided as follows:

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|------------------------|--------------------------------------|
| Subdivision C-1 | Hospitals and sanatoria |
| Subdivision C-2 | Custodial institutions |
| Subdivision C-3 | Penal and mental institutions |

Group D: Assembly Buildings

These shall include any building or part of a building, where not less than 50 persons congregate or gather for amusement, recreation, social, religious, patriotic, civil, travel and similar purposes, for example, theatres; motion picture houses; assembly halls; auditoria; exhibition halls; museums; skating rinks; gymnasiums; restaurants; places of worship; dance halls; club rooms; passenger stations and terminals of air, surface and marine public transportation services; and stadia.

Buildings under Group D shall be further subdivided as follows:

Subdivision D-1 Buildings having a theatrical or motion picture or any other stage and fixed seats for over 1 000 persons

Subdivision D-2 Buildings having a theatrical or motion picture or any other stage and fixed seats up to 1 000 persons

Subdivision D-3 Buildings without a permanent stage having accommodation for 300 or more persons but no permanent seating arrangement

Subdivision D-4 Buildings without a permanent stage having accommodation for less than 300 persons with no permanent seating arrangement

Subdivision D-5 All other structures including temporary structures designed for assembly of people not covered by Subdivisions D-1 to D-4, at ground level

Subdivision D-6 Buildings having mixed occupancies of assembly and mercantile (for example, shopping malls providing facilities such as shopping, cinema theatres, multiplexes and restaurants/food courts)

Subdivision D-7 Underground and elevated mass rapid transit system

Group E: Business Buildings

These shall include any building or part thereof which is used for transaction of business for keeping of accounts and records and similar purposes, professional establishments, service facilities, etc. City halls, town halls, courthouses and libraries shall be classified in this group so far as the principal function of these is transaction of public business and keeping of books and records.

Buildings under Group E shall be further subdivided as follows:

Subdivision E-1 Offices, banks, professional establishments, like offices of architects, engineers, doctors, lawyers, post offices and police stations

Subdivision E-2 Laboratories, outpatient clinics, research establishments, libraries and test houses

Subdivision E-3 Electronic data processing centres, computer installations, information technology parks and call centres

Subdivision E-4 Telephone exchanges **Subdivision E-5** Broadcasting stations, T.V. stations and air traffic control towers

Group F: Mercantile Buildings

These shall include any building or part thereof, which is used as shops, stores, market, for display and sale of merchandise, either wholesale or retail.

Mercantile buildings shall be further subdivided as follows:

Subdivision F-1 Shops, stores, departmental stores, markets (any with covered area up to 500 m²)

Subdivision F-2 Shops, stores, departmental stores, markets (any with covered area more than 500 m²)

Subdivision F-3 Underground shopping centres
Storage and service facilities incidental to the sale of merchandise and located in the same building shall also be included under this group.

Group G: Industrial Buildings

These shall include any building or part of a building or structure, in which products or materials of all kinds and properties are fabricated, assembled, manufactured or processed, for example, assembly plants, industrial laboratories, dry cleaning plants, power plants, generating units, pumping stations, fumigation chambers, laundries, buildings or structures in gas plants, refineries, dairies and saw-mills, etc.

Buildings under Group G shall be further subdivided as follows:

Subdivision G-1 Buildings used for low hazard industries

**Subdivision G-2 Buildings used for moderate
hazard industries**

Subdivision G-3 Buildings used for high hazard industries

Group H: Storage Buildings

These shall include any building or part of a building used primarily for

- the storage or sheltering (including servicing, processing or repairs incidental to storage) of goods,
- ware or merchandise (except those that involve highly combustible or explosive products or materials),
- vehicles or animals, for example,
- warehouses,
- cold storages,
- freight depots,
- transit sheds,
- storehouses,
- truck and marine terminals,
- garages,
- hangars,
- grain elevators,
- barns and
- stables.

Group J: Hazardous Buildings

These shall include any building or part thereof which is used for the storage, handling, manufacture or processing of highly combustible or explosive materials or products which are liable to burn with extreme rapidity and/or which may produce poisonous fumes or explosions for storage, handling, manufacturing or processing which involve highly corrosive, toxic or noxious alkalis, acids or other liquids or chemicals producing flame, fumes and explosive, poisonous, irritant or corrosive gases; and for the storage, handling or processing of any material producing explosive mixtures of dust which result in the division of matter into fine particles subject to spontaneous ignition. Examples of buildings in this class are those buildings which are used for, storage, under pressure of more than 0.1 N/mm² and in quantities exceeding 70 m³, of acetylene, hydrogen, illuminating and natural gases, ammonia, chlorine, phosgene, sulphur dioxide, carbon dioxide, methyl oxide and all gases subject to explosion, fume or toxic hazard, cryogenic gases, etc; storage and handling of hazardous and highly flammable liquids, liquefiable gases like LPG, rocket propellants, etc; storage and handling of hazardous and highly flammable or explosive materials (other than liquids); and manufacture of artificial flowers, synthetic leather, ammunition, explosives and fireworks.

Mixed Occupancy

In case of mixed occupancy, in so far as fire protection is concerned, all the occupancies/the entire building shall be governed by the most restrictive provisions of the Code among those applicable for individual occupancies.

The provisions for life safety given in the Code for individual occupancy shall, however, apply to the respective occupancies. Exits in such mixed occupancy shall be arranged so as to ensure that means of egress is not decreased in the direction of egress travel.

Further, in such mixed occupancies, the occupancies are also required to be separated (horizontally and/or vertically as the case may be) by a 240 min fire resistance rating.

Where change in the occupancy of any building places it in a different group or in a different subdivision of the same group, such building shall be made to comply with the requirements of the Code for the new group or its subdivision.

Where the new occupancy of a building is less hazardous, based on life and fire risk, than its existing occupancy, it shall not be necessary to conform to the requirements of the Code for the new group or its subdivision.

THANKS