FINAL DRAFT

ARUNACHAL PRADESH BUILDING BYELAWS - 2008

GOVERNMENT OF ARUNACHAL PRADESH
DIRECTORATE OF TOWN PLANNING
ITANAGAR

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FORMS

Chapter-1
DEFINITIONS

I GENERAL

1. These Bye laws may be called the **Arunachal Pradesh Building Bye-laws, 2009**.
2. It shall extend to all of the urban areas of the State of Arunachal Pradesh, or as may be notified by the Government from time to time.
3. It shall come into force on the date of their publication in the Arunachal Pradesh Gazette.
4. In these Bye-laws, unless the context otherwise requires, the definition given shall have the meaning indicated against each term.
5. All mandatory Master Plan/Zonal Plan regulations regarding, land use, coverage, FAR, set- back, open space, height, number of stories, number of dwelling units, parking standards etc. for various categories of buildings including modifications made therein from time to time shall be applicable *mutatis mutandis* in the Building Bye-laws under this clause. All amendments /modifications made in the aforesaid regulations shall automatically be deemed to have been included as part of these Bye-laws.

II DEFINITIONS:

1. **"Act"-** The Act means 'The Arunachal Pradesh Urban and Country Planning Act, 2007.'
2. **"Advertising Sign"-** Any surface or structure with characters, letters or illustrations applied thereto and displayed in any manner whatsoever outdoors for the purpose of advertising or giving information or to attract the public to any place, person, public performance, article, or merchandise, and which surface or structure is attached to, forms part of, or is connected with any building, or is fixed to a tree or to the ground or to any pole, screen, fence or hoarding or displayed in space, or in or over any water body included in the jurisdiction of the Authority.

.3. **"Authority"-** The Director of Town Planning, Govt. of Arunachal Pradesh, shall be the Authority referred to in these matters till the Urban Local Bodies having jurisdiction over the matter are constituted

and thereafter, the Chief Town Planner or Town Planner of the said ULB as the case may be shall be the convener of the Municipal building Committee.

4. **“Application”-** An application made in such form as may be prescribed by the Authority from time to time.
5. **“Area”-** In relation to a building means the superficies of a horizontal section thereof made at the plinth level inclusive of the external walls and of such portions of the party walls as belong to the building.
6. **“Air-conditioning”-** A process of treating air to control simultaneously its temperature, humidity, cleanliness and distribution to meet the requirement of an enclosed space.
7. **“Addition and/or Alteration”-** A structural change including an addition to the area or change in height or the removal of part of building, or any change to the structure, such as the construction or removal or cutting into of any wall or part of a wall, partition, column, beam, joist, floor including a mezzanine floor or other support, or a change to or closing of any required means of access ingress or egress or a change to fixtures or equipment" as provided in this Bye-laws.
8. **“Amenity”-** Includes roads, street, open spaces, parks, recreational grounds, play grounds, gardens, water supply, electric supply, street lighting, sewerage, drainage, public works and other utilities, services and conveniences.
9. **“Approved”-** As approved/sanctioned by the chief Municipal Executive office /Municipal Executive office/ under these Bye-laws.
10. **“Balcony”-** A horizontal projection, cantilevered or otherwise including a parapet" handrail, balustrade, to serve as a passage or sit out place.
11. **“Barsati”-** A habitable room not exceeding 30% the covered area on the top floor of the building with toilet and kitchen unit built contiguously.
12. **“Basement or Cellar”-** The lower storey of a building, below or partly below the ground level.
13. **“Building”-** Any structure of erection or part of a structure or erection which is intended to be used for residential, commercial, industrial or

any other proportion whether in actual use or not, an in particular, shall includes:-

(i) Foundation, plinth, walls, floors, roofs, chimneys, plumbing and building services, fixed platforms etc.

(ii) Verandahs, balconies, cornices, projections etc.

(iii) Parts of a building or anything affixed thereto;

(iv) Any wall enclosing or intended to enclose any land or space, sign and outdoor display structures; etc.

(v) Tanks constructed or fixed for storage of chemicals or chemicals in liquid form and for storage of water, effluent, swimming pool, ponds etc.

(vi) All types of buildings as defined in (a) to (r) below, except tents, shamianas and tarpaulin shelters erected temporarily for temporary purposes and ceremonial occasions, shall be considered to be "buildings".

(a) **"Assembly Building"-** A building or part thereof, where groups of people congregate or gather for amusement, recreation, social, religious, patriotic, civil, travel and similar purposes and this includes buildings of drama and cinemas theatres, drive-in-theatres, assembly halls, city halls, town halls, auditoria, exhibition halls, museums, "Mangal karyalayas", skating rinks, gymnasia, restaurants, eating or boarding houses, places of worship, dance halls, clubs, gymkhanas and road, railways, air, sea or other public transportation stations and recreation piers.

(b) **"Business Building"-** Includes any building or part thereof used principally for transaction of business and/or keeping of accounts and records including offices, banks, professional establishments, court houses etc., if their principal function is transaction of business and/or keeping of books and records.

(c) **"Education Building"-** Includes a building exclusively used for a school or college, recognized by the appropriate Board or University, or any other Competent Authority involving assembly for instruction, education or recreation incidental to educational use, and including a building for such other uses as research institution. It shall also include quarters for essential staff required to reside

in the premises, and building used as a hostel captive to an educational institution whether situated in its campus or outside.

(d) **"Hazardous Building"-** Includes a building or part thereof used for:

(i) Storage, handling, manufacture of processing of radioactive substances or highly combustible or explosive materials or of products which are liable to burn with extreme rapidity and/or producing poisonous fumes or explosive emanations;

(ii) Storage, handling, manufacture or processing of which involves highly corrosive, toxic or noxious alkalis, acids, or other liquids, gases or chemicals producing flame, fumes and explosive mixtures etc. or which result in division of matter into fine particles capable of spontaneous ignition.

(e) **"Industrial Building"-** Includes a building or part thereof wherein products or material are fabricated, assembled or processed, such as assembly plants, laboratories, power plants, refineries, gas plants, mills, dairies and factories etc.,

(f) **"Institutional Building"-** Includes a building constructed by Government, Semi- Government Organizations or Registered Trusts and used for medical or other treatment, or for an auditorium or complex for cultural and allied activities or for an hospice, care of persons suffering from physical or mental illness, handicap, disease or infirmity, care of orphans, abandoned women, children and infants, convalescents, destitute or aged persons and for penal or correctional detention with restricted liberty of the inmates ordinarily providing sleeping accommodation and includes dharamshalas, hospitals, sanatoria, custodial and penal institutions such as jails, prisons, mental hospitals, houses of correction, detention and reformatories etc.,

(g) **“Mercantile Building”-** Includes a building or part thereof used as shops, stores or markets for display and sale of wholesale and or retail goods or merchandise, including office, storage and service facilities incidental thereto and located in the same building.

(h) **“Multi-Storied Building or High Rise Building”-** A building above 4 stories, and/or a building exceeding 15 meters or more in height above the average level of front road.

(i) **“Multi Level Car Parking Building”-** A building partly below ground level having two or more basements or above ground level, primarily to be used for parking of cars, scooters or any other type of light motorized vehicle.

(j) **“Office Building (premises)”-** includes a building or premises or part thereof whose sole or principal use is for an office or for official purposes or clerical work. "Official purposes" include the purpose of administration, clerical work, handling money, telephone, telegraph and computer operation; and "clerical work" includes writing, book -keeping, sorting papers, typing, filling, duplicating, punching cards or tapes, machine calculations, drawing of matter for publication and editorial preparation of matter for publication.

(k) **“Special Building”-** Includes assembly, industrial, hazardous buildings, buildings used for wholesale establishments, hotels, hostels, centrally air conditioned buildings and building which exceed 15 meters in height and have a total built up area exceeding 600 sq m.

(l) **“Storage Building”-** A building or part thereof used primarily for storage or shelter of goods, wares, merchandise and includes a building used as a warehouse, cold storage, freight depot, transit shed, store house, public garage, hanger, truck terminal, grain elevator, barn and stables.

(m) **"Wholesale Establishment"-** An establishment wholly or partly engaged in wholesale trade and manufacture, wholesale outlets, including related storage facilities, warehouses and establishments engaged in truck transport, including truck transport booking agencies.

(n) **"Residential Building"-** includes a building in which sleeping and living accommodation is provided for normal residential purposes, with cooking facilities and includes one or more family dwellings, apartment houses, flats, and private garages of such buildings.

(o) **"Detached Building"-** Includes a building with walls and roofs independent of any other building and with open spaces on all sides within the same plot.

(p) **"Semi-detached Building"-** A building detached on three sides with open space as specified in these regulations.

(q) **"Mixed Land Use Building"-** A building partly used for non-residential activities and partly for residential purpose.

(r) **"Unsafe Building"-** Includes a building which:

(i) Is structurally unsafe, or

(ii) Is insanitary, or

(iii) Is not provided with adequate means of ingress or egress or

(iv) Constitutes a fire hazard or

(v) Is dangerous to human life or

(vi) In relation to its existing use, constitutes a hazard to safety or health or public welfare by maintenance, dilapidation or abandonment.

Note: *- All unsafe buildings /structure will require to be restored by repairs, demolition or dealt with as directed by the Authority. The relevant provisions of the Act shall apply for procedure to be followed by the Authority in taking action against such buildings.*

14. "Building Line"- The line upto which the plinth of building adjoining a street or an extension of a street or on a future street may lawfully

extend and includes the lines prescribed, if any, in any scheme and/or development plan.

15. **"Building Height"**- The vertical distance measured

(i) In the case of flat roofs from the average level of the front road and continuance to the highest point of the building.

(ii) In case of pitched roofs upto the point where the external surface of the outer wall intersects the finished surface of the sloping roof and

(iii) In the case of gables facing the road, the mid point between the eaves level and the ridge. Architectural features serving no other function except that of decoration shall be excluded for the purpose of taking heights. The height of the building shall be taken upto the terrace level for the purpose of fire safety requirement.

16. **"Canopy"-**shall mean a cantilevered projection from the face of the wall over an entry to the building at the lintel or slab level provided that:

(i) It shall not project beyond the plot line.

(ii) It shall not be lower than 2.3 m. or 7'- 6" when measured from the ground.

(iii) There shall be no structure on it and the top shall remain open to sky.

17. "**Chajja**"- A sloping or horizontal structural overhang provided over openings on external walls for protection from the weather.

18. **"Cabin"**- A non-residential enclosure constructed of non-load bearing partitions.

19. **"Chimney**"- A construction by means of which a flue is formed for the purpose of carrying products of combustion to the open air and includes a chimneystack and flue pipe.

20. "Conversion"- The change from one occupancy to another occupancy or any change in building structure or part thereof resulting in a change of space and use requiring additional occupancy certificate.

21. "Courtyard"- A space permanently open to sky, enclosed fully or partially by buildings and may be at ground level or any other level within or adjacent to a building.

22. "Covered Area"- **The Ground area covered immediately above the plinth level covered by the building but does not include the space covered by:**

a. Garden, rockery, well and well structures, plant nursery, waterpool, swimming pool (if uncovered), platform round a tree, tank, fountain, bench, chabutra with open top and unenclosed on sides by walls and the like;

b. **Drainage culvert, conduit, catch-pit, gully-pit, chamber, gutter and the like; and**

c. Compound wall, gate, slide/ swing door, canopy, and areas covered by chajja or similar projections and staircases which are uncovered and open at least on three sides and also open to sky.

23. **"Cornice"-**means a sloping or horizontal structural overhang usually provided over openings or external walls to provide protection from sun and rain.

24. **"Damp Proof Course"-** A course consisting of appropriate water proofing material provided to prevent penetration of dampness or moisture.

25. **"Drainage"-** A system constructed for the purpose of removal of wastewater.

26. **"Drain"-** A system or a line of pipes, with their fittings and accessories, such as manholes, inspection chambers, traps, gullies, floor traps used for drainage of building or yards appurtenant to the buildings within the same cartilage; and includes an open channel for conveying surface water or a system for the removal of waste water.

27. **"Dwelling"-** A building or a portion thereof which is designed or used wholly or principally for residential purposes for one family.

28. **"Encroachment"-** means an act to enter into the possession or rights either of permanent or temporary nature on a land or built up property of local body or state/ central Government or allied agency..

29. **"Empaneled Architect"-** A person empanelled by the Authority as per rules under the this Bye-laws as an authorized person to sanction

building plans of residential buildings upto 15 m. in height and for plot sizes upto one hectare, forming part of any approved lay-out plan.

30. **"Enclosed Staircase"-**means a staircase separated from the rest of the building by fire resistant walls and doors.

31. **"Existing Building"-** A building or structure existing before the commencement of these this Bye-laws

32. **"Existing Use"-** Use of a building or structure existing authorized with the approval of the Authority before the commencement of these this Bye-laws **.**

33. **"External Wall"-** An outer wall of a building not being a party wall even though adjoining to a wall of another building and also means a wall abutting on an interior open space of any building.

34. **"Exit"-** A passage channel or means of egress from the building, its storey or floor to a street or, other open space of safety; whether horizontal, outside and vertical exits meaning as under:-

    (i) Horizontal exit means an exit, which is a protected opening through or around a fire well or bridge connecting two or more buildings.

    (ii) Outside exit means an exit from building to a public way to an open area leading to a public way or to an enclosed a fire resistant passage leading to a public way.

    (iii) Vertical exit means an exit used for ascending or descending between two or more levels including stairway, fire towers, ramps and fire escapes.

35. **"Fire and/or Emergency Alarm System"-**means an arrangement of call points or detectors, sounders and other equipment for the transmission and indication of alarm signals working automatically or manually in the event of fire.

36. **"Fire Lift"-**Means a special lift designed for the use of fire service personnel in the event of fire or other emergency.

37. **"Fire Proof Door"-**Means a door or shutter fitted to a wall opening, and constructed and erected with the requirement to check the transmission of heat and fire for a specified period.

38. **"Fire Pump"-**Means a machine, driven by external power for transmitting energy to fluids by coupling the pump to a suitable engine or motor, which may have varying outputs/capacity but shall be capable of having a pressure of 3.2 kg/cm^2 at the topmost level of multi-storey or high rise building.

39. **"Fire Pump-Booster Fire Pump"-**Means a mechanical/electrical device that boosts up the water pressure at the top level of a multi-storied / high-rise building and which is capable of a pressure of 3.2 kg/cm^2 at the nearest point.

40. **"Fire Resistance"-**Means the time during which a fire resistant material i.e. material having a certain degree of fire resistance, fulfills its function of contributing to the fire safety of a building when subjected to prescribed conditions of heat and load or resistance. The fire resistance test of structures shall be done in accordance with IS: 3809-1979 Fire Resistance Test of Structure.

41. **"Fire Separation"-**Means the distance in meters measured from any other building on the site or from another site, or from the opposite side of a street or other public space to the building.

42. **"Fire Service Inlet"-**Means a connection provided at the base of a building for pumping up water through in built fire-fighting arrangements by fire service pumps in accordance; with the recommendation of the Chief Fire Officer.

43. **"Fire Tower"-** Means an enclosed staircase that can only be approached from the various floors through landings or lobbies separated from both the floor area and the staircase by fire resistant doors.

44. **"Fire Hazard Industries"-**

(i) "Low Fire Hazard Industries" includes engineering industries using/processing or assembling non-combustible materials i.e. lathe machines, steel works, steel components etc.

(ii) "Moderate Fire Hazard Industries" includes industries using / processing combustible materials but not flammable liquid etc., plastic industries, rubber, and PVC industries, textile, paper, furniture, flour mills etc.

(iii) "High Fire Hazard Industries" includes industries using/processing flammable liquids, gases, chemicals petroleum products, plastic or thermo setting group etc.

45. **"Fire Resistant Building"-** means a building in which material, which has, appropriate degree of fire resistance is used.

46. **"Floor"-** The lower surface in a storey on which one normally walks in a building, and does not include a mezzanine floor. The floor at ground level with direct access to a street or open space shall be called the ground floor; the floor above it shall be termed as floor- 1, with the next higher floor being termed as floor- 2, and so on upwards.

47. **"Floor Area Ratio (FAR)"-** The quotient of the ratio of the combined covered area (plinth area) of all floors, to the total area of plot, viz.: -

$$\text{Floor Area Ratio (FAR)} = \frac{\text{Tota1 Covered Area on All Floors}}{\text{Plot Area}} \times 100$$

48. **"Footing"-** A foundation unit constructed in brickwork, stone masonry or concrete under the base of a wall or column for the purpose of distributing the load over a larger area.

49. **"Foundation"-** That part of the structure, which is in direct contact with ground and transmits loads over it.

50. **"Front Air Plane"-** The plane contained between the ground in front of the building and the straight lines drawn downwards and outwards from the line of intersection of the outer surface of any front wall of the building with the roof perpendicular to that line, and at an angle of 63-1/2 degrees to the horizontal;

Note: *The 63-1/2 degrees angle has a tangent of 2:1 so that if the ground is the level, the air plane reaches the ground at a distance from the exterior wall equal to half the height of the above level of that ground.*

51. **"Gal1ery"-** An intermediate floor or platform projecting from a wall of an auditorium or a hall providing extra floor area, and/additional seating accommodation and includes the structures provided for seating in stadia.

52. **"Garage-Private"-** A building or a portion thereof designed and used for the parking of vehicle.

53. **"Garage-Public"-** A building or portion thereof, designed other than as a private garage, operated for gain, designed and/or used for repairing, servicing, using, selling or storing or parking motor driven or other vehicles.

54. **"Ground Floor"** shall mean storey, which has its floor surface nearest to the ground around the building.

55. **"Group Housing"** means a building unit constructed or to be constructed with one or more floors having more than two dwelling units having common service facilities.

56. **"Habitable Room"-** A room occupied or designed for occupancy for human habitation and incidental uses, but excluding kitchen, bath room, water closet compartment, laundry, serving and storing, pantry, corridor, cellar, attic, store room, pooja room and spaces not frequently used.

57. **"Illuminated Exit Signs"-** A device for indicating the means of escape during normal circumstances and power failure.

58. **"Jhamp"-** A downward, vertical or sloping projection hanging below any horizontal projection like balcony, canopy, verandah, passage etc, to provide protection from direct sun and rain.

59. **"Jhot" -**A strip of land permanently left open for drainage purposes. It is not to be used as an access way or a street and is not to be included as a part of setbacks.

60. **"Katra or Chawl"-** A building so constructed as to be suitable for living in separate tenements each consisting a single room, or of two, but not of more than two rooms and with common sanitary arrangements.

61. **"Ledge or Tand"-** A shelf-like projection supported in any manner whatsoever except by vertical supports within a room itself but without a projection of more than one meter and at a minimum clear height of 2.10 m above finished floor level.

62. **"Licensed Architect / Engineer / Supervisor / Plumber"-** A qualified Architect/ Engineer/ Plumber who has been enrolled/licensed by the Authority.

63. **"Lift"-** A mechanically guided car, platform for transport of persons and materials between two or more levels in a vertical or substantially vertical direction.

64. **"Lobby"-** means a covered space in which all the adjoining rooms open.

65. **"Loft"-** An intermediate floor between two floors or a residual space in a pitched roof above normal level constructed for storage with minimum clear height of 1.5 meters.

66. **"Light Plane"-** The plane lying between the line of intersection of the floor of any room in a building with the outer surface or an exterior wall of the building and the straight lines drawn upwards and outwards from those lines drawn upward and outwards from lines perpendicular thereto at an angle of 63 ½ degree to the horizontal.

Note: *for the purpose of the definition of light plane, the outer surface of any verandah abutting on an interior or side open space shall be considered to be the exterior wall of the building., outwards from lines perpendicular thereto at an angle of 63 ½ degrees to the horizontal*.

67. **"Masonry"-** An assemblage of masonry units properly bound together by mortar.

68. **"Masonry Unit"** -An unit whose net cross-sectional area in every plane parallel to the bearing surface is 75% or more of its gross cross-sectional area measured in the same plane. It may be either of clay, brick, stone, concrete, sand lime brick or any other construction material.

69. **"Master Plan"-** A Master Plan for town approved by the Government.

70. **"Mezzanine Floor"-** An intermediate floor, not being a loft, between the floor and ceiling of any storey.

71. **"Mumti or Stair Cover"-** A structure with a covering roof over a staircase and its landing built to enclose only the stairs for the purpose of providing protection from weather and not used for human habitation.

72. **"Means of Escape"-** An escape route provided in a building for safe evacuation of occupants.

73. **"MCB/ELCB"-** Devices for tripping of electrical circuits in event of any fault in the circuit / installation.

74. **"Non Combustible Material"-** A material which is not liable to burn or add heat to a fire when tested for combustibility in accordance with the latest code of Bureau of Indian Standards Method of Test for combustibility of Building Materials.

75. **"Occupancy or use"-** The principal occupancy or use for which a building or a part of it is used or intended to be used i.e. contingent/subsidiary occupancies. Mixed occupancy buildings being those in which more than one occupancy is present in different portions of the buildings.

76. **"Open space"-** An area forming an integral part of a site left open to the sky.

77. **"Owner"-** A person, group of persons, a company, trust, institute, registered body, state or central govt. and its attached sub-ordinate departments, and in whose name is vested the ownership dominion or title of the property and includes: -

(i) A receiver, executor or administrator or a manager appointed by any court of competent jurisdiction to have the charge of or to exercise the rights of the owner.

78. **"Parapet"-** A low wall or railing built along the edge of a roof or a floor

of minimum height 1 m.

79. **"Parking space"-** An enclosed or unenclosed covered or open area sufficient in size to park vehicles. Parking spaces shall be served by a driveway connecting them with a street or alley and permitting ingress and egress of vehicles.

80. **"Partition"-** An interior divider of storey or part storey in height.

81. **"Permanent Open Air Space"-** Air space permanently open:

(i) If it is a street.

(ii) If its freedom from encroachment is protected by any law or contract ensuring that the ground below it is either a street or is permanently and irrevocably appropriated as an open space.

82. **"Permission or Permit"-** A valid permission or authorization in writing by the Competent Authority to carryout development or a work regulated by this Bye-laws.

83. "Party Wall" includes-

(i) A wall forming part of a building and being used or constructed to be used in any part of the height or length of such wall for separation of adjoining buildings belonging to different owners or constructed or adopted to be occupied by different persons; or

(ii) A wall forming part of a building and standing in any part of the length of such wall, to a greater extent than the projection of the footing on one side or ground of different owners.

84. "Plinth"- The portion of a structure between the surface of the surrounding ground and surface of the floor immediately above the ground.

85. "Plinth Area"- The built up covered area measured at the floor level of the basement or of any storey.

86. "Plot"- A parcel or piece of land enclosed by definite boundaries.

87. "Porch"- A covered surface supported on pillars or otherwise for the purpose of a pedestrian or vehicular approach to a building.

88. "Road/Street"- Any highway, street, lane, pathway, alley, stairway, passageway carriageway, footway, square, place or bridge whether a thorough-fare or over which the public have a right of passage or access or have passed and have access uninterruptedly for specified period, whether existing or proposed in any scheme and includes all bends, channels, ditches, storm water drains, culverts sidewalks, traffic islands, roadside trees and hedges, retaining walls fences, barriers and railing within the street lines .

89. "Retention Activity" -An activity or use which is allowed to continue, notwithstanding its non-conforming nature in relation to the use permitted in the adjoining or surrounding area.

90. "Road/Street Level or Grade" – The officially established elevation or grade of the centerline of street upon which a plot fronts, and if there is no officially established grade, the existing grade of street at its mid-point.

91. "Road/Street Line" – The line defining the side limits of a road/street.

92. "Road Width or Width of Road/Street" – The whole extent of space within the boundaries of a road when applied to a new road/street as

laid down in the city survey or development plan or prescribed road lines by any act of law and measured at right angles to the course or intended course of direction of such road.

93. **"Row Housing" –** A row of houses with only front, rear and interior open spaces.

94. **"Rear Air Plane"** – The plane contained between the ground behind the building and the straight line drawn downwards and outwards from the line of intersection of the outer surface of any rear wall of the building with the roof perpendicular to that line and at an angle 63-1/2 degree to the horizontal.

95. **"Room Height"** – The vertical distance measured from the finished floor level to the finished ceiling.

96. **"Service Road"** – A road/lane provided at the front, rear or side of a plot for service purpose.

97. **"Set-back Line"** – A line usually parallel to the plot boundaries or center line of a road and laid down in each case by the Authority or as per recommendations of Master/Zonal Plan, beyond which nothing can be constructed towards the plot boundaries excepting with the permission of the Authority.

98. **"Settlement"-** A human settlement, whether urban or rural in character. It includes inhabited villages, towns, townships, cities and the areas notified under the control of the Authority.

99. **"Site"-** A parcel or piece of land enclosed by definite boundaries.

100. **"Site Corner"-** A site at the junction of and fronting on two or more roads or streets.

101. **"Site Depth"-** The horizontal distance between the front and rear side boundaries.

102. **"Site with Double Frontage"-** A site having frontage on two streets other than corner plot.

103. **"Site, Interior or Tandem"-** A site, access to which is by a passage form a street whether such passage forms part of the site or not.

104. **"Storey"-** The portion of a building included between the surface of any floor and the surface of the floor next above it, or if there be no

floor above it, then the space between any floor and the ceiling next above it.

105. **"Spiral Staircase"-** A staircase forming continuous winding curve round a central point or axis provided in a open space having tread without risers.

106. **"To abut"-** To be positioned juxtaposed to a road, lane, open space, park, building etc.

107. **"To Erect"-** in relation to a building means:

(i) To erect a new building on any site whether previously built upon or not;

(ii) To re-erect any building of which portions above the plinth level have been pulled down, burnt or destroyed; and

(iii) Conversion from one occupancy to another.

108. **"Unauthorised Construction"-**means the erection or re-erection, addition or alternations which is not approved or sanctioned by the Authority.

109. **"Underground/Overhead Tank"-** An underground/overhead water tank, constructed or placed to store water.

110. **"Ventilation"-** shall mean the supply of outside air into a building through window or other openings due to wind out side and convection effects arising from temperature, or vapour pressure differences (or both) between inside and outside of the building.

111. **"Water Closet (W.C)"-** A privy with an arrangement for flushing the pan with water, but does not include a bathroom.

112. **"Window"-** An opening to the outside other than a door, which provides all or part of the required natural light or ventilation or both to an interior space and not used as a means of egress/ingress.

113. **"Zonal Plan"-** A plan detailing out the proposals of Master Plan and acting as a link between Master Plan and the Layout Plan. It may contain a site plan and land use plan with approximate location and extent of land uses such as public & semi public buildings/works, utilities, roads, housing, recreation, industry, business, markets, schools, hospitals open spaces etc. It may also specify standards of

population density and various components of development of the zone.

Chapter-2

JURISDICTION AND APPLICABILITY OF THE BUILDING BYE-LAWS-2009

2.10 The Building Bye-laws shall apply to all the building activities in the notified urban Centers/Towns of Arunachal Pradesh or as notified by the Government from time to time.

2.11 **DEVELOPMENT AND CONSTRUCTION:** Except hereinafter or otherwise provided, these Building Bye-laws shall apply to all development, redevelopment, erection and/or re-erection of a building etc. as well as to the design, construction of, or reconstruction and additions and alterations to a building.

2.12 **PART CONSTRUCTION:** Where the whole or part of a building is demolished or altered or reconstructed, except where otherwise specifically stipulated, Building Bye-laws shall apply only to the extent of the works involved.

2.13 **CHANGE OF USE / OCCUPANCY:** Where use of a building is changed, except where otherwise specifically stipulated, these Building Bye-laws shall apply to all parts of the building affected by the change.

2.14 **RECONSTRUCTION:** Reconstruction undertaken in whole or part of a building and that has ceased to exist due to fire, natural collapse or demolished having been declared unsafe, or which is likely to be demolished by an order of the Authority as the case may be and for which the necessary certificate has been given by the Authority, to reconstruct in the Building subject to the provision of these Building Bye-laws.

2.15 **EXISTING APPROVED BUILDING:** Nothing in these Building Bye-laws shall require the removal, alteration or abandonment, nor prevent continuance of the lawfully established use or occupancy of an existing approved building unless, in the opinion of the Authority such a building is unsafe or constitutes a hazard to the safety of adjacent property or to the occupants of the building itself.

2.16 **INTERPRETATION:** In these Building Bye-laws, the use of present tense includes the future tense, the masculine gender includes the feminine and the neutral, the singular number, includes the plural and the plural includes the singular. The word person includes a corporation as an individual, writing includes printing and typing and signature includes thumb impression made by a person who cannot write, if her / his name is written near to such thumb impression.

2.17 **DEVELOPMENT**

2.17.1 **Development Permission:** No person shall carry out any development or redevelopment activities including sub-division on any plot or land (not forming part of any approved layout plan or scheme) or cause to be done without obtaining prior approval from the Authority.

2.17.2 **Building Permit:** No person shall erect, re-erect or make addition/ alterations in any building or cause the same to be done without, first obtaining a separate building permit for such building from the Authority.

2.17.3 **Pre-Code Building Permit:** Where any building permit which has been issued by the Authority before the commencement of these Building Bye-laws and where construction is in progress and has not been completed within the specified period from the date of such permit, the said permission shall be deemed to be sanctioned under these Building Bye-laws and shall only be eligible for revalidation thereafter. Accordingly, where the validity of sanction has expired and construction has not commenced, construction shall be governed by the provisions of these Building Bye-laws.

2.18 **PROCEDURE FOR OBTAINING BUILDING PERMIT**.

2.18.1 **Notice:** Every person who intends to erect, re-erect or make alternation in any part in a building or demolish any building in any place shall give notice in writing to the Authority of his intention in the prescribed form (See Appendix A and A-1) and such notice shall be accompanied by plans and statements in sufficient copies. The plans may be ammonia computer plots or plain paper copies prints, and, one of them

shall be cloth mounted. One set of such plans shall be released and the rest retained in the office of the Authority for record after the issue of permit or refusal as the case may be.

2.18.2 **Copies of Plans and Statements:** Normally 4 copies of plan and statement shall be made available to the Authority along with the notice. In case of building schemes where the clearance is required from Chief Fire Officer, the number of copies of the plans and statements accompanying the notice shall be 6. In case of sites requiring the clearance of lessor, extra copies of the plan shall be made available as registered.

2.18.3 **Information Accompanying Notice:** The notice shall be accompanied by the location plan, site plan, subdivision / layout plan, building plan, services plan, specifications and certificate of supervision, ownership title and other documents as may be prescribed by the Authority.

2.18.4 **Documents:**

Application for building permit shall be accompanied by the following documents:

(a) Ownership Documents-lease-deed/sale-deed etc. duly accompanied by an annexed site plan; giving the physical description of the plot/property. In cases where lease- deed has not been executed, no objection certificate from the Authority/lessor along with an affidavit/undertaking for handing over of the land required for road widening as in Appendix B shall be attached.

(b) In case of any deviation from the terms and conditions stipulated in the lease deed/ ownership document, necessary clearance from the Authority shall be attached..

(c) No objection certificate from the Authority regarding land use as per Master/Zonal Plan, if required.

(d) Approval from the Chief Inspector of Factories or his representative in case of Industrial Buildings; as well as from the Pollution Control Board, wherever required.

(e) Approval from Deputy Controller of Explosives, Guwahati, and Chief Fire Officer, in case of hazardous buildings.

(f) Indemnity Bond in case of proposal for the construction of a basement as given in Appendix-B-1.

(g) Approval from Director Fire Services, in case of buildings having fire safety hazards shall be required.

(h) The notice shall also be accompanied by an attested copy of house tax receipt/NOC from the Assessment Department of the local body/Authority concerned, as and when house tax are imposed by the Government.

(i) No objection certificate from the Civil Aviation Department wherever required.

(j) Undertaking as at Appendix A-5 on non-judicial stamp paper of denomination prescribed by the Authority.

(k) In case the site falls in the built-up area declared as slum area under any Act no objection certificate from the Competent Authority, from slum clearance and land use point of view.

(l) In case the application is for a Farmhouse, Motel, approval/NOC from the Competent Authority from land acquisition point of view.

(m) In case of the leasehold plots, clearance from the lessor shall be obtained with regard to the lease conditions wherever required.

(n) For individual plot, wherever required, approval of the site from the Competent Authority, if no the part of the site is indicated in the already approved layout plan.

(o) Any other information/document, which the Authority may require in case of listed buildings or otherwise.

2.18.5 **Size of Drawing Sheets and Colouring of Plans**

The size of drawing sheets shall be any of those specified in Table 2.1.

Table 2.1 Drawing Sheet Sizes

Sl. No.	Designation	Trimmed Size, (mm.)
1	A0	841 x 1189
2	A1	594 x 841
3	A2	420 x 594
4	A3	297 x 420
5	A4	210 x 297
6	A5	148 x 210

2.18.6 **Colouring Notations for Plans:** The plans shall be coloured as specified in table 2.2. Further, prints of plans shall be on one side of the paper only.

2.18.7 **Dimensions:** All dimensions shall be indicated in metric units.

Table –2.2 Colouring of Plans

Sl.No.	Type	Colour
1.	Proposed work including services	Red
2.	Existing construction proposed to be demolished.	Yellow
3.	Existing structure to be retained	Blue
4.	Work in progress duly sanctioned	Green
5.	Open Space	Not to be coloured

2.10 KEY/SITE PLAN

2.10.1 (i). **Key Plan:** A key plan drawn to a scale of not less than 1: 10,000 shall be submitted along with notice showing boundary and location of the site with respect to the neighborhood land marks, in area where there are no approved layout plans.

(ii). **Site Plan:** The site plan to be sent along with the application for permit which shall be drawn to a scale of 1: l00 for plots upto 500 sq. mt. in size and on a scale of 1:500 for plots above 500 sq. mt. in size 1:500 for site upto 1 Ha and 1:1000 for site more than 1 Ha. The plan shall show as below:

(a) the boundaries of the site and any contiguous land belonging to the owner thereof.

(b) the position of the site in relation to neighboring street.

(c) the names of the streets on which the building is proposed to be situated, if any.

(d) all existing buildings standing on, over or under the site.

(e) the position of the building and of all other buildings, if any, which the applicant intends to erect upon his contiguous land referred to in (a) in relation to.

  (i) the boundaries of the site and in case where the site has been partitioned, the boundaries of the portion; owned by the applicant and also of the portions owned by others.

  (ii) all adjacent streets / buildings (with number of storeys and height) and premises within a distance of 12m. of the site and of the contiguous land, if any, referred to in (a); and

  (iii) if there is no street within a distance of 12 mt. of the site, the nearest existing street.

(f) the means of access from the street to the building, and to all other buildings, if any which the applicant intends to erect upon his contiguous land, referred to in (a).

(g) space to be left out of the building to secure a free circulation of air, admission of light and access.

(h) the width of the street, if any, in front, at the sides or rear of building.

(i) the direction of north point relating to the plan of the buildings.

(j) any existing physical features such as well, drains, trees, over head electric supply lines etc.

(k) the ground area of the whole property and the breakup of covered area on each floor with the calculation for percentage covered in each floor in terms of the total area of the plot as required under the Building Bye-laws governing the coverage of the area.

(l) parking plans indicating the parking spaces wherever required.

(m) such other particulars as may be prescribed by the Authority; and

(n) building number or plot number of the property on which the building is intended to be erected.

2.10.2 Layout Plan: The layout plan shall be formulated as per the norms of Master Plan and shall be approved as per the procedure followed by the Authority, under the provisions of the relevant Act.

2.10.3 Landscape Plan: Landscape plan is to be to the scale of 1:100 for plot upto 500 sq.mt in size and for plots above 500 sq.m., the scale shall be 1:500, indicating the circulation and parking spaces, pathways (hard surface), greenery and plantation (soft area) etc.

2.10.4 Building Plan: The plans of the building, elevations and sections accompanying the notice with dimensions shall be drawn to a scale of 1: 50 for plots measuring upto 250 sq.m., for plots measuring above 250 sq.m. to a scale of 1: 100, and for plots measuring 2000 sq.m. and above to a scale of 1: 200 with details on a scale of 1:100 and shall:

(a) include floor plans of all floors together with the covered area clearly indicating the size and spacing of all frame members and sizes of rooms and the position and width of staircases, ramps and other exit ways, lift ways, lift machine room and lift pit details.

(b) show the use or occupancy of all parts of the building.

(c) show exact location of essential services, for example W.C., Sink. Bath etc.

(d) include sectional drawing showing clearly the sizes of the footings, thickness of basement wall, wall construction, size and spacing of framing members, floor slabs and roof slabs with their materials. The section shall indicate the heights of building and rooms and also the heights of the parapet and drainage and the slope of the roof. At least one section shall be taken through the staircase, kitchen and toilet, bath and W.C.

(e) show all elevations.

(f) indicate details of service privy, if any.

(g) give dimensions of the projected portions.

(h) include terrace plan indicating the drainage and the slope of the roof.

(i) give indications of the north point relating to the plan.

(j) indicate details of parking spaces provided.

(k) give indication of all doors, windows and other openings including ventilators with sizes in proper schedule.

(l) **show** such other particulars as may be required to explain the proposal clearly and as prescribed by the Authority.

2.10.5 Building Plans for Multi-Storeyed/Special Buildings:

For multi-storied buildings, which are above 4 storied and buildings above 15 m. in height and for special buildings like assembly, institutional, industrial storage and hazardous occupancies as defined under clause 1.13. VI (a to m) the following additional information shall be furnished/indicated in the building plans in addition to the item (a) to (i) of Building Bye-laws 2.10.4.

(a) access to fire appliances/vehicles with details of vehicular turning circle/and clear motorable access way around the building.

(b) size (width) of main and alternate staircase along with balcony approach, corridor, ventilated lobby approach.

(c) location and details of lift enclosures.

(d) location and size of fire lift.

(e) smoke stop lobby/door where provided.

(f) refuse chutes, refuse chamber, services duct, etc.

(g) vehicular parking spaces.

(h) refuge area if any.

(i) details of building services-air conditioning system with position of dampers, mechanical ventilation system, electrical services, boilers, gas pipes etc.

(j) details of exits including provision of ramps, etc. for hospitals and special
risks.

(k) location of generator, transformer and switchgear room.

(l) smoke exhaust system if any.

(m) details of fire alarm system network.

(n) location of centralized control, connecting all fire alarm systems, built-in fire protection arrangements and public address system, etc.

(o) location and dimension of static water storage tank and pump room.

(p) location and details of fixed fire protection installations such as sprinklers, wet risers, hose reels, drenchers, CO^2 installation etc.

(q) location and details of first aid and fire fighting equipment/installation.

(r) the proper signs/symbols and abbreviation of all fire fighting systems shown as per the relevant B.I.S. Codes.

2.10.6 Services Plan and Water Supply Provisions

(i) Plans, elevations and sections of private water supply, sewage disposal system and details of building services, where required by the Authority, shall be made available to a scale not less than 1: 100.

(ii) For residential plots more than 2000 sq.m. and non-residential plots more than 1 hectare in size, the following provisions shall be made:

(a) separate conveying system to be provided for sewerage and sullage to facilitate reuse of sullage water for gardening and washing purposes. This may require suitable storage facilities that shall to be indicated on the building plans

(b) for recharging ground water, rainwater-harvesting provisions are to be provided within the plot, which are to be indicated on the building plans.

2.10.7 Specifications: General specification of the proposed construction giving type and grade of material proposed to be used in the form given in Appendix A-2 duly signed by the

Architect/Engineer/Supervisor may be shown accompanying the notice as the case may be.

2.10.8 Supervision and Execution of Drainage / Sanitary works: A certificate of supervision and execution of drainage/sanitary works shall further accompany notice in the prescribed form given in Appendix A-3, by the Architect/Engineer/Supervisor as the case may be.

2.11 SIGNING OF PLANS

2.11.1 Signing the Building Plans

All plans before submission to the Authority shall be signed by the owner(s) and by a qualified Architect who has valid registration with Council of Architecture as per Appendix E-1 .

2.11.2 Layout Plans

All layout plans before submission to the Authority shall be signed by the owner(s) and by one of the following:

(a) Architect holding a valid registration with the Council of Architecture for Layout Plans of plots measuring more than 1 Ha. and below 10 Ha.

(b) Town Planner holding valid registration with the Institute of Town Planners, India for plots measuring 10 Ha. and above.

2.12 NOTICE FOR ALTERATION

When the notice is only for an alteration of the building only such plans and statement as may be necessary, shall accompany the notice.

2.12.1 No notice and building permit, is necessary for the following alterations, which do not otherwise violate any provisions regarding general building requirements, structural stability and fire safety requirements of these Building Bye-laws;

(a) plastering and patch repairs;

(b) Re-roofing or renewals of roof including roof of intermediate floors at the same height;

(c) flooring and re-flooring;

(d) opening and closing of windows, ventilators and doors not opening towards other's properties and / or public road/property;

(e) replacing fallen bricks, stones, pillars, beams etc.

(f) construction or re-construction of sunshade not more than 75cms. in width within one's land and not overhanging over a public street;

(g) construction or re-construction of parapet not more than 1.5 m. in height and also construction or re-construction of boundary wall as permissible under these Building Bye-laws;

(h) white-washing, painting, etc. including erection of false ceiling in any floor at the permissible clear height provided the false ceiling in no way can be put to use as a loft etc;

(i) reconstruction of portions of buildings damaged by storm, rains, fire, earthquake or any other natural calamity to the same extent and specification as existed prior to the damage provided the use conforms to provisions of Master Plan/Zonal Plan;

(j) erection or re-erection of internal partitions provided the same are within the purview of the Building Bye-laws.

2.13 BUILDING PERMIT FEES

Building fees for covered area in plotted development/group housing; additions/alterations/revised plan; revalidation of plans; plan submission fee; for NOC/occupancy; for use of city infrastructure during the construction and other charges shall be paid by the owner as may be as determined by the Authority.

2.14 SANCTION

2.14.1 (a) Planning Permission/Norms with respect to the provisions of Master Plan/Development Plan: The Owner, if she / he so desires, may apply to the Authority in a format (Appendix -"C") for planning permission/Norms through his Architect submitting (i) title documents; (ii) Development Code/Zoning Regulations of Master Plan/Development Plan and (iii) Building Bye-laws, which she / he

intends to follow. The Owner/Architect may indicate the Development Code interpretation of Master Plan/Development Plan and may support this through schematic drawings/sketches.

The Authority may verify the title document and scrutinize the interpretation of Development Code / Zoning Regulations and accord planning permission within 60 days of submission of the application to the Owner/Architect in accordance with procedure as prescribed by the Authority.

(b) Sanction by Empanelled Architects: Architects empanelled under the Rules shall be authorized to issue building permit subject to various provisions of the said rules.

(c) Standard Building Plans: In case of standard building plans prepared by the Authority for residential plots upto 50 sq.mt. in size and forming part of the approved layout plan, the owner shall be entitled to sign such standard plans and the required documents for sanction. In such cases, Architect / licensed Engineer / licensed Supervisor certificate would not be necessary and the owner shall be bound to follow the standard plans.

2.14.2 Grant of permit or Refusal

(1) The Authority may either sanction or refuse sanction to the plans and specifications or may sanction them with such modification or directions as it may deem necessary and thereupon shall communicate its decision to the person giving the notice in the prescribed form given in Appendix “A-6" and Appendix " A- 7".

(2) The building plans for buildings identified in Building Bye-laws no. 2.10.5. shall be subject to the scrutiny of the Director Fire Services and building permit shall be given by the Authority only after the clearance from the Director Fire Services is obtained.

(3) In case where the building scheme requires the clearance of Urban Art Commission, then the Authority shall issue the building permit only after getting the clearance from the Urban Art Commission.

(4) If, within 60 days of the receipt of notice under 2.9.1 of the Building Bye-laws, the Authority fails to intimate in writing to the person who has given the notice, of its refusal or sanction to the notice with its plans and statements, the same shall be deemed to have been sanctioned provide the fact is immediately brought to the notice of the Authority in writing by the person who has given notice and having not received any intimation from the Authority within 15 days of giving such notice subject to the conditions mentioned in these Building Bye-laws, nothing shall be construed to authorize any person to do anything in contravention or against the terms of the lease or title of the land or against any regulations, Building Bye-laws or ordinance operating at the time of execution of the work at site.

(5) Once the plan has been scrutinized and objections have been pointed out, the Owner who has given the notice under 2.9.1 shall modify the plan to comply with the objections raised and resubmit the modified plans. The Authority shall scrutinize the resubmitted plans and if, there are still some objections, they shall be intimated to the applicant for compliance. Only thereafter the plans shall be sanctioned. It is further clarified that:

(i) the above provision of deemed sanction shall only be applicable in those cases where construction is to be carried on plot forming part of an approved layout plan of the Authority.

(ii) no notice under 2.9.1 shall be valid unless the information required by the Authority under this Building Bye-laws or any further information which may be required has been furnished to the satisfaction of the Authority.

(iii) the Owner/ Architect/Engineer/Supervisor and others shall be fully responsible for any violation of Master Plan/Zonal Plan/ Building Bye-laws, architectural

controls, lease deed conditions etc. In case of any default they shall be liable for action. Any construction so raised shall be deemed to be unauthorized.

2.14.3 Duration of Sanction/Revalidation : Once a building permit is sanctioned, it shall remain valid for three years from the date of sanction for residential, industrial and commercial buildings ((upto 4 storied) and for a period of four years from the date of sanction for multi-storeyed buildings of 15 m. and above in height. However, the validity period of sanction in case of additions/alterations in both the cases, shall be two years from the date of sanction. The building permit shall be got revalidated in the prescribed form (Appendix- A-8) before the expiry of this period on year-to-year basis. Revalidation shall be subject to the Master Plan/Zonal Plan regulations and Building Bye-laws, as in force, for the area where construction has not started.

2.14.4 Revocation of Permit: The Authority may revoke any building permit issued under this provision of the Building Bye-laws, wherever there has been any false statement, mis-representation of material facts in the application on which the building permit was based and granted.

Or

If during construction it is found that the Owner has violated any of the provisions of the Building Bye-laws or sanctioned plan or compoundable limits.

Fresh sanction of building plans and occupancy certificate shall be sought from the Authority after bringing the building within the framework of Master Plan/ Zonal Plan/ Building Bye-laws.

2.14.5 Qualification and competence

Qualification and competence of Architect/Engineer/ Town Planner /Supervisor/ Plumber/Fire Consultant/ are given in Appendix -"E".

2.14.6. Penal Action

(1) The Authority reserves the right to take action and to debar/ blacklist the, Architect, Engineer, Town Planner, Supervisor or

Plumber, if found to have deviated from professional conduct or to have made any misstatement or on account of misrepresentation of any material fact or default either in authentication of a plan or in supervision of the construction against the Building Bye-laws and the sanctioned building plans.

(2) If the sanctioning Authority finds at any time any violation of the Building Bye-laws or misrepresentation of fact, or construction at variance with the sanction or Building Bye-laws, inclusive of the prescribed documents, the Authority shall revoke the sanction and take appropriate action against such professional and such professional shall not be authorized to submit fresh plans till finalisation of the case. Before debarring or blacklisting such professional if found to be indulging in professional misconduct or where she / he has misrepresented any material fact the Authority shall issue a show cause notice with a personal hearing and shall pass a speaking order to debar her / him for submission and supervision of the construction with full justification for the same. An appeal against this speaking order shall lie with the Authority with whom she / he is registered.

2.14.7 Unauthorized Development

In case of unauthorized development, the Authority shall take suitable action, which may include demolition of unauthorized construction works, sealing of premises, prosecution and criminal proceedings against the offender in pursuance of relevant laws in force.

2.15 PROCEDURE DURING CONSTRUCTION WORK

2.15.1 (1) Construction to be in conformity with Building Bye-laws – Owner's liability: Neither the granting of the permission nor the approval of the drawings and specifications, nor inspection by the Authority during erection of the building, shall in any way relieve the

Owner of the building from full responsibility for carrying out work in accordance with these Building Bye-laws.

(2) Notice for commencement of work:

Before commencement of the building work at site for which building permit has been granted, the Owner shall within the validity period of sanction give notice to the Authority, of his intention to start the work at the building site in the proforma given in Appendix A-9.

The Owner may commence the work after seven days have lapsed from the date of such notice or earlier, if permitted.

2.15.2 Documents at Site: The person to whom a permit is issued shall during construction keep

(a) posted in a conspicuous place on the property in respect of which the permit was issued, a copy of the building permit;

(b) a copy of the approved drawings and specifications referred in Building Bye-laws 2.14 of the property in respect of which the permit was issued.

(c) where tests of any materials are made to ensure conformity with the requirements of the Building Bye-laws, records of test data shall be kept available for inspection during the construction of the building and for such a period thereafter as required by the Authority.

2.15.3 Checking of Building during Construction

The Owner through his Architect /Engineer/Supervisor shall give notice to the Authority in the proforma given in Appendix-A-10 on completion of the work up to plinth level to enable the Authority to ensure that work conforms to the sanctioned building plans and Building Bye-laws. It will be obligatory on the part of the Authority to inspect the work and submit objections, if any, to the owner and Architect/Engineer/Supervisor within 30 days from the receipt of such notice in Appendix A-11 failing which work will deemed to be cleared for further construction. It will be the responsibility of the Owner/Architect/Engineer/Supervisor to ensure further construction of the building in accordance with the sanctioned building plan.

It will also be obligatory on the part of the Authority to carryout periodic inspection as may be determined by the Authority during further construction. A report of each inspection shall be prepared in duplicate by the Authority in the proforma as per Appendix A-11 and a copy of the same duly signed by the Authority shall be given to the Owner or to his Architect/Engineer /Supervisor.

2.16 NOTICE OF COMPLETION

Every Owner shall submit a notice of completion of the building (prescribed in Appendix-A-12) to the Authority regarding completion of the work described in the building permit. The notice of completion shall be submitted by the Owner through the Architect/Engineer/Supervisor as the case may be who has supervised the construction, in the proforma given in Appendix- A -12 accompanied by three copies of completion plan (as in case of sanctioned plan including one cloth mounted copy) and the following documents along with the prescribed fee:

(i) Copy of all inspection reports of the Authority.

(ii) Clearance from Director Fire Services, whenever required.

(iii) Clearance from Chief Controller of Explosives or his representatives, Guwahati, wherever required.

(iv) Clearance from Power Department, Corporation (Municipal Council / Nagar Panchayat for areas falling in the jurisdiction of Municipal Council / Nagar Panchayat) regarding provision of transformers / sub-station / ancillary power supply system etc. wherever required.

(v) Structural stability certificate duly signed by the Architect / Engineer.

(vi) Certificate of fitness of the lift from concerned Department wherever required.

(vii) Two sets of photographs from all sides duly signed by Owner/ Architect/ Engineer, as the case may be.

(viii) Any other information/document that the Authority may deem fit.

(ix) A certificate by the Owner and Architect/Supervisor /Engineer for covering up the underground drain, sanitary and water supply work, under their supervision and in accordance with Building Bye-laws and sanctioned building plans stipulated in the Appendix A-13 as applicable.

(x) In case of large campus/complex, completion of individual block/building will be issued by the local body in accordance with the construction work completed phase wise in the proforma given in Appendix A-13.

(xi) The extension of time from the date of applying for completion certificate. In case, if the completion certificate is refused due to deviation, which cannot be compounded, the completion will be rejected and extension of time will be required accordingly.

(xii) No Objection Certificate for regular water supply and electricity may be issued only after the completion certificate is obtained.

2.17 OCCUPANCY/ COMPLETION CERTIFICATE

2.17.1 The Authority on receipt of the notice of completion shall inspect the work and communicate the approval or refusal or objection thereto, in the Proforma given in Appendix A-14 and A-15 within 30 days in case of plotted development and 60 days for Group Housing Schemes from the receipt of notice of completion. Approval to occupancy certificate shall not be refused for the residential buildings unless the Authority is satisfied that major deviations have been carried out after the last inspection of the Authority. If nothing is communicated within this period, it shall be deemed to have been approved by the Authority for occupation provided the fact is immediately brought to the notice of Authority in writing by the person, who had given the notice and has not received any intimation from the Authority within 15 days. Where the occupancy certificate is refused, the reasons shall be intimated for rejection in the first instance itself.

2.17.2 In case of buildings having fire hazards, the work shall also be subject to the inspection of the Director Fire Services, and the occupancy certificate shall be issued by the Authority only after the clearance from Director Fire Services regarding the completion of work from the fire safety/protection point of view.

2.17.3 In case, where the building scheme requires the clearance of Urban Art Commission, then the Authority shall issue the occupation certificate only after getting clearance from Urban Art Commission.

2.17.4 Time limit of 30 days as described in 2.17.1 shall not apply to buildings as described in clause 2.17.2 & 2.17.3.

2.18 OCCUPANCY/COMPLETION CERTIFICATE (In Part)

2.18.1 In cases where a project has not been completed at one stretch but constructed in different stages, part occupancy/completion certificate for the building otherwise complete in all respects, may be issued subject to the condition that such a part occupancy/completion certificate would apply to an independent block/building of the sanctioned project. In case of a residential house part occupancy/completion may be issued for an independent floor.

2.18.2 For projects referred to in Building Bye-laws 2.18.1 the rest of the construction which forms part of the sanctioned plan/scheme shall be completed in the remaining sanctioned or extended period after revalidation as the case may be. Thus the remaining sanction will not lapse if the part completion certificate is issued. The remaining construction shall be completed within the validity period.

2.19 CONNECTION TO THE MUNICIPAL SEWER / WATER MAINS

(a) Temporary connection for water, electricity or sewer, permitted for the purpose of facilitating the construction, shall not be

allowed to continue in the premises without obtaining completion/occupancy certificate.

(b) No connection to the Municipal water mains or to the Municipal sewer line with a building shall be made without the prior permission of the Authority and without obtaining/completion occupancy certificate.

(c) In case the use is changed or unauthorized construction is made, the Authority is authorized to discontinue such services or cause discontinuance of such services.

Chapter –3

DEVELOPMENT CODE PERTAINING TO RESIDENTIAL AND NON-RESIDENTIAL PREMISES

The use, coverage, Floor Area Ratio (FAR) set backs, open space, height, number of dwelling units, parking standards for residential premises on plotted development, group housing, resettlement and Jhuggi Jhonpri insitu upgradation and non-residential premises shall be as per the provisions contained in Master Plan/Zonal Plan/Development Control Regulations and where these are silent on such

issues or which require interpretation the norms as decided by the Authority, shall apply.

The permission of uses \ use activities in use premises shall be permitted in accordance with the provisions of Master Plan/Zonal Plan/Layout Plan.

3.2 CONTROL FOR BUILDING /BUILDINGS WITHIN USE PREMISES

The object of these Regulations is to provide control for building/buildings within use premises excluding the internal arrangement, which is covered and controlled by the Arunachal Pradesh Building Bye-laws, 2009.

3.3 GENERAL NOTES

The premises for which building regulations have not been given shall be examined by the Authority on the basis of actual requirements and other relevant factors.

(1) A landscape plan shall be prepared, wherever decided by the Authority.
(2) The mezzanine floor, wherever provided, shall be considered as a part of the total Floor Area Ratio (FAR).
(3) Wherever the building regulations are given as per different categories of plots, the permissible area covered and the floor area required in no case shall be less than the permissible covered area and floor area, respectively, for the largest size of plot in the lower category.
(4) Besides the normal drawings, which are submitted for the sanction of any building, a proper landscape plan, a circulation plan indicating vehicular and pedestrian movement and parking and an

urban design scheme where necessary, shall be submitted for sanction by the Authority.

(5) Wherever there is a need for relaxation in height for achieving urban form, the same may be permitted by the Authority with the approval of the Government on a case to case basis.

(6) The provision of minimum setbacks for different sizes of plots for all categories of the plots shall be as per these Bye-laws.

3.4 PARKING STANDARD

Parking space shall be provided for different types of development as per norms given below:

The following table may be referred to for deciding the parking norms for different use zone/activities depending upon local vehicle ownership, mass transportation and parking needs. Only one value of ECS and not a range should be specified in the development plan. It should fall within the range indicated and can be change in subsequent plan depending upon need.

Sl. No.	**Use/Use Premises**	**Equivalent Car Spaces (ECS) per 100 sq m. of floor area**
1.	**Residential** Group Housing, Plotted Housing (plots above 250 sq.mt.) and Mixed use.	0.50 - 1.50
2.	**Commercial** (I) Wholesale Trade and Freight Complex (including parking for loading and unloading) (II) City centre, district centre, hotel, cinema and others. (III) Community centre, local shopping centre, convenience shopping center.	 1.50 - 2.50 1.00– 2.00 0.50 – 1.50
3.	**Public and Semi-Public Facilities** (I) Nursing home, hospitals, (other than government), social, cultural and other institutions, government and semi-government offices. (II) Schools, college, university and government hospitals.	 0.50 - 1.50 0.25 - 0.75

4.	**Industrial** Light and service industry, flatted group industry, extensive industry	0.50 – 1.00

Note:

(1) For the provision of car parking spaces, the space standards shall be as under:

i) For open parking 18.0 sq m. per equivalent car space.

ii) For ground floor covered parking 23.0 sq m. per equivalent car space.

iii) For basement 28.0 sq m. per equivalent car space.

(2) In the use premises, parking on the above standards may be provided on the ground floor, or in the basement (where the provision exists).

(3) In case of organized centers like district centre and community centre to meet with the above demand of parking, additional underground space (besides the basement) may be provided below the piazzas or pedestrian or open spaces but within the setback lines.

(4) For plots forming part of any commercial development, basement(s) area maximum equivalent to the plot area within the building envelope line, may be permitted for parking and services such as electric sub-station with specifications and approval, installation of electrification for fire fighting equipment with approval and any other services with appropriate approval.

3.4 SPECIFIC PREMISES

3.4.1 Residential Use Zone

The residential areas are developed either as (a) plotted development or (b) group housing/flatted development. The density pattern i.e. high density, medium density, low medium density is followed for working out the pattern of development with respect to the size of the plot, number of dwelling units on each plot, setbacks, FAR and the number of storeys/height of the building. The municipal and social infrastructure as per the norms and standards specified in the master plan are provided. The various sites/plots required for social and municipal infrastructure are indicated in the layout plans. The development norms for different use/activities and on different sizes of plots are applied for sanctioning of the plans. These are based on development control rules applicable to the city/town.

3.4.2 Buildings within the Residential Use Zone

Buildings for various uses/activities within the residential use zone forming part of the residential layout plan are to be constructed with the norms of the coverage, Floor Area Ratio (FAR), height and others as applicable to that size of a residential plot.

3.4.3 Plotted Development

The layout plans for residential scheme are formulated keeping in view (1) that there would be sufficient light and air in the buildings when constructed (2) that there would be protection against noise, dust and local hazards (3) that there would be sufficient open space for various family needs (4) that the circulation and access is easy and is safe from accident point of view (5) that, as far as possible, the plots are of regular shape and size and (6) that the plans are logically arranged in a systematic manner so as to give a regular pattern of development in the form of row houses, detached and semi-detached houses and if necessary regular bungalow type plots.

3.4.4 Residential Premises – Plotted Housing

For low-income group, the minimum plot size should not be less than 100 sq.mt. However, the plot size may vary depending upon the type of the housing and general affordability of the people. The size of the plot would also depend on the number of dwelling units to be permitted on each plot. Normally, a plot should be built for two dwelling units on each plot. However, on bigger size plots, more than one dwelling unit per plot can be built. The following table is suggested for different size of the plots applicable, ground coverage, FAR, height and number of dwelling units for a residential area:

Sl.No.	Plot Area (sq.mt)	Maximum Ground Coverage %	FAR	Maximum No.of DUs.	Maximum Height (mt.)
Low-Income Group Housing (for large, medium and small towns)					
1.	48	75	100	1	8
2.	Above 48 upto 60	75	150	2	8
3.	Above 60 upto 100	65	180	3	12
Normal Housing (for large, medium and small towns)					
4.	Above 100 upto 250	65	180	3	12
5.	Above 250 upto 500	55	200	6	15
6.	Above 500 upto 1000	45	200	8	15
7.	Above 1000 upto 1500	40	150	8	15

8.	Above 1500 upto 2250	33 1/3	125	12	15

Note:

(1)In the already developed plots the pattern of development should conform to the existing regulations.

(2) Basement, if constructed, may be used for incidental use such as parking, servicing and household storage. It is not to be used as a dwelling unit.

(3) The area of the basement should not be more than the ground coverage.

(4) Parking as per the prescribed norms should be provided with the plot or provision should be made in the layout plan without affecting the circulation pattern.

(5) 50% of the open area of the plot should be used for proper landscaping and for plantation.

3.4.5 Group Housing

The number of dwelling units are calculated on the basis of the density pattern given in the unit.

Minimum size of the plot 2250 sq m.

In hill towns 5000 sq m.

Maximum ground coverage	35%
Maximum FAR	125 (higher FAR may be given depending on the pattern of development and should not exceed 150)
Maximum Height	12 m.
Number of dwelling units	To be calculated on the basis of the net plot area of a particular neighbourhood. This may vary between 50 DUs. to 124 DUs. per ha.

Note:

(1) Basement, if constructed, shall be used for parking, services and storage and excluded in FAR calorations.

(2) The quantum of basement may vary between 33 % to 50% of the plot area.

3.4.6 Resettlement and Jhuggi Jhonpri (JJ) insitu upgradation

(i) Maximum net density 150 tenements per hectare.

(ii) Plot size- minimum 40 sq m. However, it may be reduced to33 sq m. with 100% coverage provided an area @ 7 sq m. per plot/tenement is clubbed with the cluster open space.

(iii) Path ways:

(a) 3 m. upto 30 m. in length

(b) 4 m. upto 50 m. in length

3.4.7 Low Income Housing

The norms of ISS–8888:1993 formulated by the (Bureau of Indian Standards) Bureau of Indian Standard shall be applicable for Low Income Housing, which provide a maximum net density upto 250 DUs./Ha in plain areas. However, in hilly areas, the net density may be restricted up to 150 DUs./Ha.

3.5 NON-RESIDENTIAL PREMISES

3.5.1	**Foreign Consulate in plot size**	**2250**
	Maximum ground coverage	30%
	Maximum floor area ratio	100
	Maximum height	12 m.

1.1.1.1.1.1.1.1 ***Other Controls***

(i) Basement up to the building envelope to the maximum extent of 50% plot area shall be allowed if used for parking and services and should not be counted in FAR.

3.5.2	**Hostel Minimum Plot Size**	**500s**
	Maximum ground coverage	33.33%
	Maximum floor area ratio	150
	Maximum height	12 m.

Other Control

(i) Minimum R/W in front 12 m.

(ii) Basement upto the building envelope to the maximum extent of 50% plot area shall be allowed and if used for parking and services should not be counted in FAR.

3.5.3 Guest House, Boarding House and Lodging House

Minimum plot size	500 sq m.
Maximum ground coverage	33.33%
Maximum floor area ratio	150
Maximum height	12 m.

Other Controls:

i) Minimum R/W in front 20 m.

ii) Basement upto the building envelope to the maximum extent of 50% of plot area shall be allowed and if used for parking and services should not be counted in FAR.

3.5.4 Dharmshala, Baratghar, and Night Shelter

Minimum plot size	**500 sq m.**
Maximum ground coverage	33.33%
Maximum floor area ratio	150
Maximum height	12 m.

1.1.1.1.1.1.1.1.1 Other Control

(i) Minimum R/W in front 16 m.

(ii) Basement upto the building envelope to the maximum extent of 50% plot area shall be allowed and if used for parking and services should not be counted in FAR.

3.5.5 Convenience Shopping

Maximum ground coverage	40%
Maximum floor area ratio	160
Maximum Height	12 m.

3.5.6 Local Shopping

Maximum ground coverage	40%
In hills	50%
Maximum FAR	200
Maximum Height	12 m.

3.5.7 Community Centre

Maximum ground coverage	30%
In hills	40%
Maximum FAR	160
Maximum Height	12 m.

3.5.8 District Centre

Maximum ground coverage	25%
Maximum FAR	100
Maximum Height	12 m.

1.1.1.1.1.2

1.1.1.1.1.3

1.1.1.1.1.4 Other Controls

Some of the buildings in a district centre in non-hill towns could be permitted upto 25 m. height with the approval of the Government for achieving interesting urban form.

3.5.9 Sub-Central Business District

Same regulations as for district center.

3.5.10 Central Business District

Maximum ground coverage	25%
Maximum floor area ratio	150
Maximum height	12 m.

3.5.11 Wholesale Trade/Ware Housing

Maximum ground coverage	20%
Maximum floor area ratio	85
Maximum height	12m.

Other Controls

Basement upto the building envelope to the maximum extent of 50% plot area shall be allowed and if used for parking and services should not be counted in FAR.

3.5.12 Petrol Pumps

The following regulations are recommended for locating the petrol pump cum service stations.

(i) Minimum distance from the road intersections.

(a) For minor roads having less than 30 m. R/W 45 m.

(b) For major roads having R/W 30 m. or more 60 m.

(ii) The minimum distance of the property line of pump from the center line of the Road should not be less than 15 meters on

roads having less than 30 m. R/W. In case of roads having 30 m. or more R/W, the R/W of the road should be protected.

(iii) Plot Size

(a) Only filling stations 30 m. x 17 m. and small size 18 m. x 15 m. (for two and three wheelers)

(b) Filling-cum-service station minimum size 36 m. x 30 m. and maximum 45 m. x 33 m.

(c) Frontage of the plot should not be less than 30 m.

(d) Longer side of the plot should be the frontage.

(iv) New Petrol Pump shall not be located on roads having less than 30 m. R/W.

Other Controls

(a) Filling-cum-service station size 36 m. x 30 m. and 45 m. x 33 m.)

(i)	*Ground coverage*	*20%*
(ii)	*FAR*	*20*
(iii)	*Max. Height*	*6 m.*
(iv)	*Canopy*	*Equivalent to permissible ground coverage within setback line.*
(v)	*Front Setback*	*Min. 6 m.*

(b) Filling Station (size 30 mt. x 17 mt. and 18 mt. x 15 mt.)

(i)	*Ground coverage*	*10%*
(ii)	*FAR*	*10*
(iii)	*Max. Height*	*6 m.*
(iv)	*Canopy*	*Equivalent to permissible ground coverage within setback line.*
(v)	*Front Setback*	*Min. 3 m.*

(c) Other Regulations

(i) Shall be approved by Explosives/Fire Deptt.

(ii) Ground coverage will exclude canopy area.

(iii) Mezzanine if provided will be counted in FAR

(iv) Wherever the plot is more than 33 m. x 45 m. development norms shall be restricted to as applicable to the size i.e. 33 m. x 45 m. both in urban and rural areas.

(d) Compressed Natural Gas (CNG) Mother Station

(i)	*Plot Size (Max.)*	*36 m. x 30 m.*
(ii)	*Maximum ground coverage*	*20%*

(iii)	*Maximum Height*	*4.5 m. (single storey)*
(iv)	*Building Component*	*Control room/office/Dispensing room, store, pantry and W.C.*

3.5.13 Hotel

Maximum ground coverage	30%
Maximum floor area ratio	150
Maximum height	12 m.

1.1.1.1.1.4.1 Other Controls

(i). 5% of the FAR can be used the commercial space related to hotel function.

(ii) Basement(s) up to the building envelope to the maximum extent of plot area shall be allowed and if used for parking and services should not be counted in FAR

3.5.14 Motels

Motels are permitted in Rural Zone/ Green Belt and in commercial zones on National Highways and Inter-State roads.

The following norms and building standards are recommended.

Minimum plot size	1.0 Ha
Minimum Setbacks	front - 15 m. Rear and sides - 9 m.
Maximum FAR	15
Maximum Ground Coverage	15%
Maximum Height	9 m.

Basement equivalent to the ground coverage shall be allowed free of FAR to the extent necessary for air conditioning plant, filtration plant, electric sub- station, parking and other essential services.

Parking space shall be provided on a minimum scale of 1.67 ECS per 100 sq m. of floor area, including the provision made in this regard in the basement.

Retail and service shops shall be limited to a maximum of 5% of the floor area.

3.5.15 Swimming Pool

(1) *Definition:* A constructed pool or a tank indoor or outside the building, used for the purpose of swimming, bathing, aquatic sports or games, training, treatment (Therapy) or recreation, meant exclusively for human beings, having a depth of water not less than 60 cm. and the surface area exceeding 23.25 sq m. both for the use of public or the institution concerned and includes the following categories: -

(i) *"Public"* which are open to general public.

(ii) *"Semi-public"* which are intended for the use of inmates of the organization or the institution but restricted use is allowed to outsiders.

(iii) *"Institutional"* which are exclusively for the use of inmates and members of the organization and not open to outsiders.

(iv) *"Indoor pools"* indoor pools means a pool, which is inside any building.

(v) *"Bath House"* a structure located at the swimming pool for the use of bathers having WCs urinals, showers, dressing room, etc. or such arrangement, amenities and equipments as may be prescribed by from time to time.

(vi) *"Bather"* a person who swims or intends to swim and also those who intend to take bath/training/therapy to participate in water sports or games and recreation activities etc. in the swimming pool.

(vii) *"Health Officer"* the Municipal Health Officer who is responsible for looking after the health of the locality, and is authorised to exercise the relevant power under these Building Bye-laws.

(viii) *"Licensing Officer"* the Municipal Health Officer of local Authority or any other officer designated for the purpose.

(ix) *"Inspecting Officer"* the Municipal Health Officer or accredited person like Assistant Medical Officer of Health (M.H.O), qualified Medical Personnel, Sanitary Inspector, Public Health Inspector, Engineer, Architect, Town Planner, employed by the local authority or a professional person or team of persons who may be appointed for the specific purpose and for specific period by the Municipal Health Office.

(x) *"Instructor"* a person appointed by the Local Authority for supervision of the public pools as well as semi-Public pools

(xi) "*License fees"* annual license fees for the public as well as semi-public swimming pools shall be as fixed by the Authority from time to time.

(2) "*Capacity of Pools in Relation to Bathers":* The maximum number of persons in bathing attire within the pool enclosures of the bathing area shall not exceed one person per 20 sq ft. (1.86 sq m.) of pool i.e. the area of the water surface.

(3) "*First Aid Facilities":* Every swimming pool shall have adequate arrangement for first aid which includes mechanical resuscitator for initiating artificial respiration trained staff for providing emergency aid and such equipments and medicines as may be prescribed by the local Authority.

(4) "*Safety measures in the pool":* Every swimming pool shall have adequate arrangement for providing safety measures like float, lifeline, and ladder, trained rescue personal and rescue equipment against drowning as may be prescribed by the local Authority.

(5) "*Hand Rail":* A side handrail extending up above and returning to the horizontal surface of the pool deck curb or coping shall be provided at each side of each ladder.

(6) *"Life Line":* A life line shall be provided at or near the break in grade between the shallow and deep portion of a swimming pool, with its position marked with colored floats at not greater than 6" (1.83 m) spacing. Lifeline shall not less than ¾-in min (1.90 cm) and its terminal shall be securely encased to an anchor of corrosion resistant material.

(7) "*Depth Markers":* Depth of water shall be clearly marked at or above the water surface on the vertical pool wall and on the edge of the deck or walk-way next to the pool, at maximum points and at the points of break between the deep and shallow portions and at intermediate increments of depth, spaced at not more than 2.5" (7.62 cm) intervals. Depth markers, contrasting with background shall be on both sides of the pool.

(8) "*Life Guard Chairs":* At least one lifeguard chair shall at least be provided in every swimming pool.

(9) "*Lighting and Wiring":* Where submarine lightning is used, not less than 0.5 watts shall be employed per sq. ft. of pool area.

(10*) "Area Lightning":* Where submarine lightning is employed, area lightning shall be provided for the deck areas and directed towards the deck areas and away from the pool surface so far as practicable, in a total capacity of not less than 0.6 watt per sq. ft of deck area.

Where submarine lighting is not provided and night swimming is not permitted combined pool lightning shall be provided in an amount of not less than 2 watts per sq. ft. of total area. All submarine lightning shall be individually earthed and must be water tight and damp proof.

(11) "*Over Head Wiring":* No electrical wiring for electrical or power shall be permitted to pass over within 20 feet of the pool enclosure.

(12) "*Sanitation in Bath House":* Every swimming pool should have drains and swimming pool facilities as indicating below-

(a) Every bathhouse shall be provided with separate facilities for each sex. The room shall be well lit, drained, ventilated, and

be of good construction with impervious materials and in general finished in light colors and so developed and planned that good sanitation can be maintained throughout the building at all times.

(b) Minimum sanitary plumbing facilities shall be provided separately for males and females and indicated below -

(i) One water closet combination, one lavatory and one urinal shall be provided for every 40 bathers or part thereof.

(ii) A minimum of 3 showerheads shall be provided which shall be adequate for every 75 bathers or part thereof.

(13) *"Structural Stability":* Swimming pool shall be constructed of inert and enduring material, designed to withstand all loads for both pool empty and pool full conditions conforming to the requirements as laid down in relevant BIS code for this purpose.

(14) "*Obstructions":* There shall be no obstruction extending from the wall or the floor extending into the clear area of the diving portion of the pool. There shall be completely unobstructed clear distance of 4 m. above the diving board.

(15) "*Wall and Door Finish":* Wall and floor area shall be of inert and impervious material and shall be reasonably enduring. Finish shall be moderately smooth and of a white or light colour.

(16) "*Shallow Minimum Depth":* Every swimming pool shall have a minimum depth in the shallow area of the main swimming area of not less then 0.9 mt. (3 feet), but not more than 1.07 mt. (3'-6") from the overflow level to the floor

(17) "*Shallow Areas":* In a swimming pool with a diving area, the shallow area of the pool shall be defined as the portion between the shallow end and the break point between the shallow area and the diving area. The slope of the floor shall be uniform from the break point between the diving area and the shallow portion to the outside edge of the shallow portion and shall not be greater than 1 in 2.

(18) *"Diving Area":* Pools of the type where diving is permitted shall have adequate area and depth of water for safe diving and the minimum depth and area characteristics for this area shall be as may be determined by the local Authority and shall be located at one end of the pool.

(19) "Div*ing Tower / Board":* Diving towers in excess of permissible height as standards shall not be provided in public pool without special provisions, controls, and definite limitations of their use.

(20) *"Vertical Wall Depth":* The pool walls shall be vertical at all points for a depth of not less than 2 ft 6" (0. 76 m.)

(21) *"Walks"*

(a) Walks shall be clear and continuous around the pool with a minimum width of 8-ft (2.44 m.) of unobstructed clear distance including a curb at the pool edge.

(b) A minimum of 3-ft (0.9 m.) walk width shall be provided on sides and rear of any place of diving equipment.

(c) All walks, decks and terraces shall have a minimum slope of 1 in 48 to drain of the water which shall have a free unobstructed flow to points of disposal at all times.

(d) The finished texture of walks shall be antiskid / antislip.

(22) "*Gutters and Skimmers":*

(a) Over flow gutters: a continuous overflow gutter shall be installed all around the swimming pool.

(b) Disposal of water from the overflow gutters may be either to waste water drain or may enter into circulation system to filter and return to the pool.

(23) "*Treatment of Water":* Swimming pool shall have re-circulation and filtration equipment provided for water purification as may be determined by the local Authority

(24) "*Fence":* Swimming pool shall be accessible only through one or more regulated entrances.

3.6 INDUSTRIAL PLOT

3.6.1 Flatted Group Industry And Service Centre

Minimum plot size	2000 sq m.
Maximum ground coverage	33.33%
Maximum floor area ratio in plains	120
In hills	100
Maximum height	12 m.

Other Controls

(i) Basement upto the building envelope line to the maximum extent of 50% plot area shall be allowed and if used for parking and services should not be counted in FAR.

3.6.2 Light and Service Industry

Sl.No.	Plot Size (Sq m.)	Maximum Ground Coverage	1.1.1.2 Maximum FAR in		Maximum height in (m.)	
			Plains	Hills	Plains	1.1.1.2.
1.	100 to 400	60%	125	100	12	9
2.	Above 400 & upto 4000	50%	125	100	12	12
3.	Above 4000 & upto 12000	45%	125	100	12	12
4.	Above 12000	40%	100	75	12	9

1.1.1.2.1.2

1.1.1.2.1.3 Other Controls

(i) Maximum floors allowed shall be basement, ground floor and first floor; basement should be below ground floor and to the maximum extent of ground coverage shall be counted in FAR. In case the basement is not constructed, the permissible FAR can be achieved on the second floor.

(ii) In case of roof trusses, height of buildings could be adjusted/relaxed.

3.6.3 Extensive Industry

Sl.No.	Plot Size (Sq m.)	Maximum Ground Coverage	Maximum FAR in		Maximum height in (m.)
			Plains	Hills	

1.	400 to 4000	50%	100	75	9
2.	Above 4000 & upto 12000	45%	90	60	9
3.	Above 12000 & upto 28000	40%	80	50	9
4.	Above 28000	30%	60	45	9

Other controls

i) Single Storey building with basement is allowed. Basement shall be below the ground floor and the maximum extent of ground coverage and shall be counted in FAR.

ii)In case of roof trusses, height of building could be adjusted/relaxed.

3.7 BUS TERMINAL

Maximum coverage on different floors:

Floor area ratio in plains 120

In hills 100

Ground floor 3% (for passengers facilities).

In hills 5% (for passengers facilities).

First floor 3% (for passenger facilities).

In hills 5% (for passengers facilities and terminal offices).

Second Floor 10% (for terminal offices).

(For Plain area only)

Maximum floor area permissible shall be 500 sq. m.

Maximum Height 12 m.

Other Controls

(i) The space on first and second floor shall be essentially used for public services like post and telegraph office, police post and other essential services.

(ii) Bus queue shelters are not to be included in the coverage and FAR.

3.8 GOVERNMENT OFFICES INTEGRATED OFFICE COMPLEX

Maximum ground coverage 25%

Maximum floor area ratio 100

Maximum height 12 m.

Other Controls

(i) The integrated office complex shall include Central Government Office, Local Government Office, Public Undertaking Offices and Courts.

(ii) Basements up to the building envelope line to the maximum extent of plot area shall be allowed and if used for parking and services should not be counted in Floor Area Ratio (FAR).

3.9 HEALTH SERVICES

3.9.1 Hospital

Minimum plot size	6000 sq m.
Maximum ground coverage	25%
Maximum floor area ratio	100
Maximum height	12 m.

Other Controls

(i) Area to be used for housing of essential staff is indicated in the norms for health facilities. In such an area the regulations of group housing shall apply.

(ii) Basements below the ground floor and to the extent of ground coverage shall be allowed and if used for parking and services should not be counted in FAR.

3.9.2 Health Centre/Nursing Home

Maximum ground coverage	33.33%
Maximum floor area ratio	100
Maximum height	12 m.

Basement shall be as in case of Hospital

3.10 EDUCATIONAL FACILITIES

3.10.1 Nursery School

Maximum ground coverage	33.33%
Maximum floor area ratio	66.66
Maximum height	8 m.
In hills	6 m.

Note: *Basement below the ground floor and to the maximum extent of ground coverage, and if constructed shall be counted in FAR.*

3.10.2 Primary School

Maximum ground coverage	33%
Maximum floor area ratio	120
Maximum height	12 m.

3.10.3 Higher Secondary School

Maximum ground coverage	30%
Maximum floor area ratio	120
In hills	100
Maximum height	12 m.

3.10.4 College

Maximum ground coverage	25%
Maximum floor area ratio	100
In hills	75
Maximum height	12 m.

Note:

(1) In case of the above premises the total area of the plot shall be divided in

(i) School/college building area

(ii) Play field area

(iii) Parking area

(iv) Residential and hostel area

(2) The maximum ground coverage and FAR shall be calculated only on the areas meant for building.

3.10.5 Education and Research Centre (large campus i.e. above 8 Ha.)

Large campuses of universities, medical and engineering colleges and other education and research institutes shall be covered under these regulations. The campus will be divided into three parts and the regulations shall apply, as given below:

(i) Academic, including administration (45% of the total land area)

Maximum ground coverage	20%
Maximum floor area ratio	80
Maximum height	12 m.

Basement below the ground floor and to the maximum extent of ground coverage shall be allowed and if used for parking and services should not be counted in Floor Area Ratio (FAR).

(ii) Residential (25% of total land area)

This will be developed at a density of 400 persons per hectare (PPHa) gross. The land shall be reserved for residential facilities @ 9.2 sq.mt. per person. Sub-division regulations as given for group housing shall apply.

(iii) Sports and Cultural Activities (15% of the total area)

Maximum ground coverage	10%
Maximum FAR	15

(iii) *Parks and landscape* (15% of the total land area): Suitable landscape plan to be prepared for this area.

3.11 AUDITORIUM / COMMUNITY HALL

Maximum ground coverage	35%
Maximum floor area ratio	100
Maximum height	12 m.

Other Controls

i) Basement up to the building envelope line to the maximum extent of 50% plot area shall be allowed and if used for parking and services should not be counted in FAR

3.12 RELIGIOUS PREMISES

Maximum ground coverage	33.33%
Maximum floor area ratio	66.66
Maximum height	12 m.
(excluding minarets, shikharas and domes)	

Other Controls

(i) Basement below the ground floor and to the maximum extent of ground coverage, if constructed shall be counted in FAR.

3.13 SECURITY SERVICES

3.13.1 Police Post

Maximum ground coverage	35%
Maximum floor area ratio	70
Maximum height	12 m.

Other controls

(i) Basement below the ground floor to the maximum extent of ground coverage shall be allowed and if used for parking and services should not be counted in FAR.

3.13.2 Police Station/Fire Post/Fire Station

Maximum ground coverage	25%
Maxium floor area ratio	100
Maximum height	12 m.

Other Controls

(i) Basement upto the envelope lines and to the maximum extent of 50% of the plot area shall be allowed and if used for parking and services should not be counted in FAR.

(ii) 25 % of the plot area may be used for housing the staff and the regulations of group housing shall be applicable to the area meant for housing.

3.14 POSTS AND TELEGRAPH OFFICE, HEAD POST OFFICE

Maximum ground coverage	25%
Maximum floor area ratio	100
Maximum height	12 m.

Other Controls

Basement up to the building envelope line and to the maximum extent of 50% of the plot area shall be allowed and if used for parking and services should not be counted in FAR

3.15 PUBLIC AND SEMI-PUBLIC PREMISES

General (in case where specific regulations are not given)

Maximum ground coverage	25%
Maximum floor area ratio	100
Maximum height	12 m.

Other Controls

(i) 15 % of the total floor area shall be allowed for residential purpose.

(ii) Basement up to the envelope line and to the maximum extent of 50% of the plot area shall be allowed and if used for parking and services should not be counted in FAR

3.16 FARM HOUSES

Sl. No.	Size of Farm	Maximum FAR	Maximum Height
1	Above 1.0 Ha and upto 1.99 Ha	100 sq m. (including mezzanine floor)	Single storeyed maximum height 6 m.
2	2.0 Ha and above	150 sq m. (including floor)	Single storeyed maximum height 6 m.

Other Controls

(i.) Setback in dwelling house should be 15 m. away from any boundary line of the property.

(ii) Where a property abuts an urban road, the dwelling house building should be setback from the centre line of that road by 60 m. Where the property abuts a village road, the building setback from the centre line of that road should be 30 m.

(iii) No dwelling units should be built within 400 m. of the right of way of any National Highway.

3.17 PROFESSIONAL ACTIVITY

Professional activity shall be allowed in residential plot and flats on any floor on the following condition:

Part of the premises shall be permitted to be used upto a maximum of 25 % of FAR or 100 sq m. whichever is less, for non-residential but non-nuisance activities for rendering service based on professional skills.

<u>Note:</u> In case of special public Buildings such as Assembly buildings, Hospitals, Air port and other important Buildings, which require more heights, the Authority may give permission with certain conditions, keeping in view the structural stability of such buildings after obtaining technical clearance from Directorate of Town Planning.

Chapter-4

GENERAL BUILDING REQUIREMENTS

4.1 GENERAL

The standard space requirements of various parts of a building and those of light and ventilation. and other items depending on the number of persons who would normally occupy the building, and the occupant load shall be worked out from table hereunder:

Table 4.1 Occupant Load

Sl. No.	Type of Occupancy	Occupant Load per 100 sq m. of Plinth or Covered Area
1	Residential	8.0
2	Educational	25.0
3	Institutional	6.60
4	Assembly (a) with fixed or loose seats and dance floor (b) without seating facilities	 166.6 66.6

	including dining rooms	
5	Mercantile (a) street floor and sales basement (b) upper sale floor	 33.3 16.6
6	Business and industrial	10.0
7	Storage	3.3
8	Hazardous	10.0

* *The occupant load in dormitory portions of homes for the aged, orphanages or mental hospitals etc. where sleeping accommodation is provided shall be calculated at not less than 13.3 persons per 100 sq.m.*

** *The plinth or covered area shall include, in addition to the main assembly room or space, any occupied connecting room or space in the same storey or in the storeys above or below where entrance is common to such rooms and space and the area available for use by the occupants of the assembly place. No deduction shall be made in the plinth/covered area for corridors, closets and other sub-divisions; that area shall include all space serving the particular assembly occupancy.*

4.2 SPACE REQUIREMENT FOR DIFFERENT PARTS OF BUILDING

4.2.2 Main Building

The plinth or any part of a building or outhouse shall be so located with respect to average road level from site so that adequate drainage of the site is assured but at a height not less than 45 cm.

4.2.3 Interior Courtyards, Covered Parking Spaces and Garages

These shall be raised at least 15 cm. above the surrounding ground level and shall satisfactorily drained.

4.2.3 Habitable Rooms Size and Width

The minimum size and width shall be as given in Table 4.2

Table 4.2 Minimum Size and Width of Different Components of Residential Premises

Sl. No.	Component of Building	Min. requirement for plots upto 50 sq m.		Min. requirement for plots above 50 sq m.	
1	Habitable Room	Area Width Height	7.50 sq m. 2.10 m. 2.75 m.	Area Width Height	9.50 sq m. 2.40 m. 2.75 m.
2	Kitchen	Area	3.30 sq m.	Area	4.50 sq m.

Sl. No.	Component of Building	Min. requirement for plots upto 50 sq m.		Min. requirement for plots above 50 sq m.	
		Width	1.50 m.	Width	1.50 m.
		Height	2.75 m.	Height	2.75 m.
3	Pantry	Area	Not applicable	Area	3.00 sq m.
		Width	Not applicable	Width	1.40 m.
		Height	Not applicable	Height	2.75 m.
4	Bathroom	Area	1.20 sq m.	Area	1.80 sq m.
		Width	1.00 m.	Width	1.20 m.
		Height	2.20 m.	Height	2.20 m.
5	W.C.	Area	1.00 sq m.	Area	1.10 sq m.
		Width	0.90 m.	Height	0.90 m.
		Height	2.20 m.	Height	2.20 m.
6	Combined Bath & W.C. (Toilet)	Area	1.80 sq m.	Area	2.80 sq m.
		Width	1.00 m.	Width	1.20 m.
		Height	2.20 m.	Height	2.20 m.
7	Store	Area	No restriction	Area	No restriction
		Width	No restriction	Width	No restriction
		Height	2.20 m.	Height	2.2 m.
8	Projections	Permitted within the setbacks upto 0.75 m. width		Permitted within the setbacks upto 0.75 m. width	
9	Canopy	See clause 4.9.6		See clause 4.9.6	
10	Garage	--		Area	14.85 sq m.
				Width	2.75 m.
				Length	5.40 m.
				Height	2.40 m.
11	Passage	--		Width	1.00 m.
12	Doorways Habitable rooms	Width	0.80 m.	Width	0.90 m
		Height	2.00 m.	Height	2.20 m.
	For kitchen bath, W.C. etc.	Width	0.75 m.	Width	0.75 m.
		Height	2.00 m.	Height	2.00 m
14	Staircase	Width 0.75 m. No restriction for internal ladder		Width	0.90 m.

Notes

1. *Provided that the minimum clear head way under any beam shall be not less than 2.4 m.*
2. *Maximum height permissible for all the components of the building mentioned above is 4 m.*

4.3 GROUP HOUSING

(a) Building requirement in respect of dwelling units upto 45 sq.mt. in size will correspond to Table 4.2 and as applicable to plots upto 50 sq m.

(b) Building requirement in respect of dwelling units above 45 sq m. may be referred from the Table 4.2 applicable to above 50 sq m. plot size.

(c) Projection into Open Spaces without counting towards FAR.

(i) All open spaces provided either in interior or exterior shall be kept free from any erections thereon and shall open to the sky. Nothing except cornice, chhajja or weather shade (not more than 0.75 m. wide) shall overhang or project over the said open space.

(ii) One canopy per block on the ground floor not exceeding 4.5 m. in length and 2.4 m. in width

(iii) Balcony at roof slab level of 1.2 m. width and area not exceeding 3.5 sq m. per bedroom but not exceeding 3 in number per flat.

(iv) Balcony having entrance from the toilet/bathroom and width as 1.2 m. for drying clothes.

Note: Such projections shall not be allowed at height less than 2.2 m. from the corresponding finished floor level:

4.4 NON-RESIDENTIAL BUILDINGS

The minimum area for office room/shop or any other space to be used as workspace shall not be less than 6.0 sq m. with a minimum width of 2.1m.

4.5 OTHER GENERAL REQUIREMENTS:

4.5.1 Kitchen

Every room to be used as a kitchen shall have

(a) Unless separately provided in a pantry, means for washing of kitchen utensils, which shall lead directly or through a sink to a grated and trapped connection to the waste pipe.

(b) An impermeable floor;

(c) At least a window not less than 1 sq m. in area opening directly to an interior or exterior open space, but not into a shaft and;

(d) In residential building 15 m. or more in height, refuse chute.

4.5.2 Bathroom and W. C

Every bathroom or water closet shall

(a) Be so situated that atleast one of its walls shall open to external air and shall have a minimum opening in the form of window or ventilation to the extent of 0.37 sq m.

(b) Not be directly over any room other than another latrine, washing place, bath or terrace unless it has a watertight floor.

(c) Have the platform or seat made of watertight non-absorbent material.

(d) Be enclosed by walls or partitions and the surface of every such wall partition shall be finished with a smooth impervious material to a height of not less than 1.0 m. above the floor of such a room.

(e) Be provided with an impervious floor covering, sloping towards the drain with a suitable grade and not towards verandah or any other room.

(f) No room containing water closets shall be used for any purpose except as a lavatory.

(g) Every water closet and/or a set of urinals shall have flushing cistern of adequate capacity attached to it

(h) A toilet on terrace having a maximum of 2.2 mt. height shall be permitted subject to condition that the area of toilet be counted in FAR.

(i) All the sewage outlets shall be connected to the Municipal Sewerage system. Where no such system exists, a septic tank shall be provided within the plot conforming to the requirements.

4.5.3 Loft

Lofts shall be permitted in residential building and shops only. Area of such loft shall be restricted to 25% of the covered area or respective floor. Minimum height between loft and ceiling shall be 1.75 m. and

the clear height below the loft shall be as stipulated in the Bye-laws for the space below it.

4.5.4 Mezzanine Floor

Mezzanine floor may be permitted with the minimum height of 2.75 m. between any two floors above ground in all types of building provided the same is counted as part of total permissible floor area ratio and height of the building.

4.5.5 Basement

The construction of the basement shall be allowed by Authority in accordance with the land use and other provisions specified under the Master Plan/Zonal Plan. The basement shall have the following requirement:

(i) Every basement shall be in every part at least 2.5 m. in height from the floor to underside of the roof slab or ceiling and with maximum height not more than 4.5 m.

(ii) Adequate ventilation shall be provided for the basement. The standard of ventilation shall be the same as required by the particular occupancy according to Bye-laws. Any deficiency may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans (one exhaust fan for 50 sq m. basement area), air-conditioning system, etc.

(iii) The minimum height of the ceiling of any basement shall be 0.9 m. and maximum of 1.2 mt. above the average road level on the front side of the building.

(iv) Adequate arrangement shall be made in such a way that surface drainage does not enter the basement.

(v) The walls and floors of the basement shall be watertight and be so designed that the effect of the surrounding soil and moisture,

if any, are taken into account in the design and adequate damp proofing treatment is given.

(vi) The access to the basement shall be either from the main or alternate staircase providing access to the building. No direct entry from the road shall be permitted to the basement.

(vii) Basement in an individual plot touching the adjacent property shall be allowed subject to following:

(a) In all cases the owners shall have to indemnify the local body against any damage caused by her/him/them to the adjacent property (Appendix-B-1).

(b) In case the portion of the basement projecting out of the building line shall flush with the ground.

(viii) In case partition in the basements are allowed by the Authority, no compartment shall be less than 50.0 sq m. in area and each compartment shall have ventilation standards as laid down in sub-clause (ii), above separately and independently. The basement partition shall however, conform to the norms laid down by Fire Services.

4.5.6 Garage

(i) The plinth of garage located at ground level shall not be less than 15 cm. above the surrounding ground level.

(ii) The garages shall be setback behind the building line of the street/road on to which the plot abuts and shall not be located affecting the access ways to the building. If the garage is not setback as aforesaid, the Authority may require the owner or occupier of the garage to discontinue its use as such or to carry out such structural alterations to the premises or to take such other measures as the Authority may consider necessary in order to prevent danger or obstruction to traffic along the street.

4.5.7 Corner Site

When the site fronts is situated on two streets, the frontage would be on the street having the larger width. In cases, where the two streets are of same width, then the larger depth of the site will decide the frontage and open spaces. In such case the location of a garage (on a corner plot) if provided within the open spaces shall be located diagonally opposite the point of intersection.

4.6 REQUIREMENT IN RESPECT OF BUILDING SITES

a) Requirement of sites

Any piece of land shall be used as a site for construction provided;

(i) The proposed use conforms to the Master Plan, Zonal Plan prepared under Arunachal Pradesh urban and Country Planning Act, 2007.

(ii) The site is properly drained or capable of being drained.

(iii) The sites have proper means of access.

(iv) The site is not prone to land slide.

However no land shall be used as a site for the construction of building-

(i) If the site is found to be liable to liquefaction by the Authority under the earthquake intensity of the area, except where appropriate protection measures are taken.

(ii) If the Authority finds that the proposed development falls in the area liable to storm urge during cyclone, except where protection measures are adopted to prevent storm surge damage.

b) Requirement of site plan

(i) In hilly terrain, the site plan should include location of landslide prone areas, if any, on or near the site, detected during reconnaissance. The Authority in such case shall cause to ensure that the site is away from such landslide prone areas.

(ii) The site plan on a sloping site may also include proposals for diversion of the natural flow of water coming from uphill side of the building away from the foundation.

4.6.1 Damp Sites

Wherever the dampness of a site or the nature of the soil warrants such precautions necessary, the ground surface of the site between the walls of any building erected thereon shall be rendered damp-proof to the satisfaction of the Authority.

4.6.2 Distance from Electric Line

The Distance is to be provided between the building and overhead electric supply line in accordance with the current electricity rules and its amendments from time to time.

	Vertically	**Horizontally**
(a) Low and medium voltage lines and service lines	2.50 m.	1.20 m.
(b) High voltage lines upto and including 11,000 volts	3.70 m.	1.20 m.
(c) High voltage lines above 11,000 volts and upto and including 33,000 volts	3.70 m.	2.00 m.
(d) Extra high voltage lines additional 33,000 volts	Plus 0.3 mt. for every additional 33,000 V or part thereof.	Plus 0.3 m. for every additional 33,000 V or part thereof.

4.6.3 Minimum Size of Site

(a) The minimum size of sites for the construction of different types of building or different use groups shall be in accordance with provisions of the Master Plan / Zonal Development Plan.

4.6.4 Minimum plot size.

(i) Residential: - The minimum plot size be 100 Sq.m, with a minimum plot width of 8 meters.

(ii) For commercial: - The minimum plot size shall be 50 Sq.m., with a minimum width of 6 metres.

(iii) For services, light, cottage and handloom industries: - The minimum size of pot shall not be less than 50 Sq.m. For automobile workshop a minimum plot size shall be 300 sq.m.

(iv) For medium industry: - The minimum size of the plot shall be 10,000 sq.m.

(v) For auditorium, Museum, Library: - The minimum size of the plot shall be 1000 sq.m.

(vi) For LIG/EWS Income Housing: - The minimum plot size shall be 48.sq.m. The F.A.R., maximum ground coverage, maximum floor allowed with height restricted may be referred from table 3.2. For categories failing under LIG/EWS, an income certificate from respective Deputy Commissioner is also required to be enclosed.

4.7 MEANS OF ACCESS

4.7.1 No Building shall be erected as to deprive any other building of its means of access.

4.7.2 Every person who erects a building shall not at any time erect or cause or permit to erect or re- erect any building, which in any way encroaches upon or diminishes the area set apart as means of access.

4.7.3 For buildings identified in Bye-laws 7.1 the following provisions of means of access shall be applicable.

(a) The width of the main street on which the building abuts shall not be less than 12.0 m.

(b) If there are any bends or curves in the approach road, sufficient width shall be permitted at the curve to enable fire tenders to turn, the turning circle shall be at least of 9.0 m. radius.

(c) The approach to the building and open spaces on its all sides (see Bye-laws 4.8 and 4.9) upto 6.0 m. width and the layout for the same shall be done in consultation with the Director Fire Services and the same shall be of hard surface capable of taking the weight of fire tender, weighing upto 22 tones for low rise building and 45 tones for building 12 m in height. The said open space shall be kept free of obstructions and shall be motorable.

(d) Main entrance to the premises shall be of adequate width to allow easy access to the fire tender and in no case it shall measure less than 5 m. The entrance gate shall fold back against the compound wall of the premises, thus leaving the exterior access way within the plot free for movement of the fire service vehicles. If-archway is provided over the main entrance, the height of the archway shall not be of height less than 5.0 m.

(e) For multi-storeyed group housing schemes on one plot, the approach road shall be 20.0 m. or as per Master Plan/Development Plan provisions and between individual buildings, there shall be 6.0 m. space around.

(f) In case of basement extending beyond the building line, it shall be capable of taking load of 45 tones for a building of height 12 m and 22 tones for building height less than 12 m.

(g) The external window shall not be blocked by louvres etc. In such case provisions shall be made so that one can enter the building to be rescued through the window by using hydraulic platform etc.

4.8 EXIT REQUIREMENTS

General

The following general requirement shall apply to exits:

(a) Every building meant for human occupancy shall be provided with exits sufficient to permit safe escape of occupants in case of fire or other emergency.

(b) In every building exit shall comply with the minimum requirement of this part, except those which are not accessible for general public use.

(c) All exits shall be free of obstructions.

(d) No buildings shall be altered so as to reduce the number, width or portion of the requirement of exits.

(e) Exits shall be clearly visible and the routes to reach exits shall be clearly marked and signs posted to guide the occupants of floor concerned.

(f) All exit ways shall be properly illuminated.

(g) Fire fighting equipment where provided along exits shall be suitably located and clearly marked but must not obstruct the exit way and there should be clear indication about its location from either side of the exit way.

(h) Alarm devices shall be installed to ensure prompt evacuation of the occupants

concerned through the exits, wherever required.

(i) All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.

(j) Exits shall be so arranged that they can be reached without passing through another occupied unit, except in the case of residential buildings.

4.8.1 Types of Exits

(a) Exits shall be either horizontal or vertical type. An exit may be doorway, corridor and passage to an internal staircase or external staircase, ramp or to a verandah and/or terraces that have access to the street or to roof of a building. An exit may also include horizontal exit leading to an adjoining building at the same level.

(b) Lifts escalators and revolving doors shall not be considered as exits.

4.8.2 Number and size of Exits

The requisite number and size of various exits shall be provided, based on the occupants in each room and floor based on the occupant load, capacity of exits, travel distance and height of buildings as per provisions of Bye-laws 4.8. I.

4.8.3 Arrangement of Exits

(a) Exits shall be so located so that the travel distance on the floor shall not exceed 22.50 m. for residential, educational, institutional and hazardous occupancies and 30.0 m. for assembly, business, mercantile, industrial and storage occupancies. Whenever more than one exit is required for a floor of a building they shall be placed as remote from each other as possible. All the exits shall be accessible from the entire floor area at all floor levels.

(b) The travel distance to an exit from the remote point shall not exceed half the distance as stated above except in the case of institutional occupancy in which case it shall not exceed 6.0 m.

4.8.4 Capacity of Exits

The capacity of exits (staircase, ramps and doorways) indicating the number of which persons could be safely evacuated through a unit exit width of 50 cm shall be as given below:

Table 4.3 Occupants per unit Exit width

Sl. No.	Group of Occupancy	Number of Occupants		
		Stairways	Ramps	Doors
1	Residential	25	50	75
2	Educational	25	50	75
3	Institutional	25	50	75
4	Assembly	40	50	60
5	Business	50	60	75
6	Mercantile	50	60	75
7	Industrial	50	60	75
8	Storage	50	60	75
9	Hazardous	25	30	40

4.8.6 Staircase Requirement

For buildings identified in Bye-laws No. 1.13 VI (a) to (m), there shall be minimum of two staircases and one of them shall be enclosed stairway and the other shall be on the external walls of building and shall be open directly to the exterior, interior open space or to any open place of safety. Single staircase may be accepted for educational, business or group housing society where floor area does not exceed 300 sq m. and height of the building does not exceed 24 m. and other requirements of occupant load travel distance and width of staircase meet the requirement. The single staircase in such case shall be on the outer wall of the building.

4.8.6 Minimum Width Provisions for Stairways

The following minimum width provisions shall be made for each stairway

(a) i) Residential low rise building

0.9 m.

ii) Other residential building e.g. flats,

Hostels, group housing, guest houses, etc 1.25 m.

(b) Assembly buildings like Auditorium, theatres and cinemas 2.0 m.

(c) All other buildings including hotels 1.5 m.

(d) Institutional building like hospitals 2.0 m.

(e) Educational building like School, Colleges. 1.5 m.

4.8.7 Minimum Width Provisions for Passageway/Corridors

The following minimum width provisions shall be made for each passage way/corridor.

(a) Residential buildings, dwelling unit type 1.0 m.

(b) Residential buildings, e.g., hostels, etc. 1.25 m.

(c) Assembly buildings like auditorium theatres and cinemas 2.0 m.

(d) All other buildings including hotels 1.5 m.

(e) Hospital, Nursing Homes, etc. 2.4 m.

4.8.9 Doorways

(a) Every doorway shall be opened into an enclosed stairway, a horizontal exit, on a corridor or passageway providing continuous and protected means of egress.

(b) No exit doorways shall be less than l00 cm in width and 150 cm in case of hospital and ward block. Doorways shall not be less than 210 cm in height.

(c) Exit doorways shall open outwards, that is away from the room but shall not obstruct the travel along any exit. No door when opened shall reduce the required width of stairway or landing to less than 100 cm. Overhead or sliding door shall not be installed.

(d) Exit door shall not be opened immediately upon a flight or stairs. A landing equal to at least, the width of the door shall be provided in the stairway at each doorway. Level of landings shall be the same as that of the floor, which it serves.

(e) Exit doorways shall be openable from the side, which they serve without the use of a key.

(f) Revolving doors shall not be allowed.

4.8.9 Stairways

(a) Interior stairs shall be constructed of non-combustible material throughout.

(b) Interior stairs shall be constructed as a self-contained unit with atleast one side adjacent to an external wall and shall be completely enclosed.

(c) A staircase shall not be arranged a round a lift shaft for buildings 15.0 m. and above height.

(d) Hollow combustible construction shall not be permitted.

(e) The minimum width of internal staircase shall be as given in bye-law 4.8.6.

(f) The minimum width of treads without nosing shall be 25 cm. for an internal staircase for residential high-rise buildings. In the case of other buildings, the minimum tread shall be 30 cm. The treads shall be constructed and maintained in a manner to prevent slipping. Winders shall be allowed in residential buildings provided they are not at the head of a downward flight.

(g) The maximum height of riser shall be 19 cm. in the case of residential high rise buildings and 15 cm in the case of other buildings; they shall be limited to 13 per flight.

(h) Handrails shall be provided with a minimum height of 100 cm. from the center of the tread.

(i) The minimum headroom in a passage under the landing of a staircase and under the staircase shall be 2.10 m.

(j) For building more than 15 m. in height, access to main staircase shall be through a lobby created by double door of one hour fire rating. One of the doors shall be fixed in the wall of the staircase and other after the lobby.

(k) No living space, store or other fire risk shall open directly into the staircase or staircases.

(l) External exit door of staircase enclosure at ground level shall be opened directly to the open spaces or should be reached without passing through any door other than a door provided to form a draught lobby.

(m) The main staircase and fire escape staircase shall be continuous from ground floor to the terrace level.

(n) No electrical shafts/AC ducts or gas pipe etc. shall pass through the staircase. Lift shall not open in staircase landing.

(o) No combustible material shall be used for decoration/wall paneling in the staircase.

(p) Beams/columns and other building features shall not reduce the head room/width of the staircase.

(q) The exit sign with arrow indicating the way to the escape route shall be provided at a suitable height from the floor level on the wall and shall be illuminated by electric light connected to corridor circuits. All exit way marking signs should be flush with the wall and be so designed that no mechanical damage shall occur to them due to moving of furniture or other heavy equipments. Further all landings of floor shall have floor-indicating boards indicating the number of floor as per bye-law.

The floor indication board shall be placed on the wall immediately facing the flight of stairs and nearest to the landing. It shall be of size not less than 0.2 m. x 0.5 m.

(r) Individual floors shall be prominently indicated on the wall facing the staircase.

(s) In case of single staircase it shall terminate at the ground floor level and the access to the basement shall be by a separate staircase. However, the second staircase may lead to basement levels provided the same is separated at ground level either by ventilated lobby with discharge points at two different ends through enclosures.

4.9 OPEN SPACE AREA AND HEIGHT LIMITATION

4.9.1 Every room that is intended for human habitation shall abut on an interior or exterior open space or on to a verandah open to such interior or exterior open space.

4.9.2 The open spaces to be left around the building including set backs, covered area, total built up area, limitations through FAR shall be as per Master Plan/Zonal Plan requirements. The relevant provisions related to open spaces, areas and height limitations of the Master Plan are given in Chapter-3.

4.9.3 Interior Open Space for Light and Ventilation

The whole or part of one side of one or more rooms intended for human habitation and not abutting on either the front, rear or side open spaces shall abut on an interior open space whose minimum width in all directions shall be 3.0 m. in case of buildings not more than 12 m. in height and subject to the provision of increasing the same with increasing height @ of 0.3 m. per every meter height or part thereof beyond 12 m. However, in case of buildings already constructed with 3.0 m. the open space for new construction on upper floor, the open space on this basis should be ensured and would remain as mandatory open space.

Note: Where only a kitchen is abutting an interior open space, the minimum width as specified can be reduced by 0.55 m. correspondingly.

4.9.4 Provision of exterior Open Spaces around the Building

(a) The set backs of the respective building shall be as per Master Plan, Development Plan/ detailed Layout Plan.

(b) For buildings identified in Bye-laws no. 2.l0.5 and 7.1 the provision of exterior open spaces around the buildings shall be as given in Table 4.4.

Table 4.4 Provision of Exterior Open Spaces around the Buildings

Sl. No.	Height of the Building Upto (m.)	Exterior open spaces to be left out on all sides in m. (front rear and sides in each plot)
1	10	3
2	15	5
3	18	6
4	21	7

Note:On sides where no habitable rooms face, a minimum space of 9.0 m. shall be left for heights of 12 m.

(c) In case of multi storeyed buildings the exterior open space around a building shall be of hard surface capable to take load of fire engine weighting upto 45 tonnes.

4.9.5 Joint Open Air Space

Every interior or exterior or air space, unless the latter is a street, shall be maintained for the benefit of such building exclusively and shall be entirely within the owner's premises.

4.9.5.1 If such interior or exterior open air space is intended to be used for the benefit of more than one building belonging to the same owner; then the width of such open air space shall be the one specified for the tallest building as specified in building bye-law 4.9.3 and 4.9.4 abutting on such open air space.

4.9.6 Exemption to Open Spaces/Covered area

The following exemption to open space shall be permitted.

4.9.6.1 Projections into Open Spaces

(a) Every interior or exterior open space shall be kept, free from any erection thereon and shall be opened to the sky. Nothing except cornice, chajja or weather shade (not more than 0.75 m. wide) shall

overhang or project over the said open spaces so as to reduce the width to less than the minimum requirement.

Note: Such projections shall not be allowed at a height less than 2.10 m. from the corresponding finished floor level

(b) A canopy or canopies each not exceeding 4.50 m. in length and 2.40 m. in width in the form of cantilever or cantilevers, over the main entrance/entrances, shall be at a minimum clear height of 2.10 m from the finished floor level.

In single storeyed residential building, only one such canopy shall be permitted for each individual detached block. In more than one storeyed residential building, two canopies shall be permitted over ground floor/higher floor entrances.

In buildings of other occupancies, the permissibility of canopy/canopies shall be as decided by the Authority on its merits.

(c) In case of residential building only, a balcony or balconies at roof level of a width of 1.20 m. overhang within set backs within one's own land and courtyards shall be allowed provided the minimum area required shall not be reduced by more than 30% of such open spaces.

(d) The projections (cantilever) of cupboards and shelves shall be permitted and are exempted from covered area calculations in case of residential buildings only. Such projection shall be upto 0.75 m. depth provided.

(i) that no cupboard shall project in the side set back on the ground floor.

(ii) that outer length of cupboard overhanging in the set backs shall not exceed 2.0 m. per habitable room. In addition to this, cupboard under and above the windows may be provided.

Note: Cupboard means a space used for storage of household goods/clothes, having shelves/partitions not more than 1.5 m. apart.

(iii) Only one pergola on each floor shall be permitted in a residential building if constructed in the exterior open spaces or terrace.

Such pergola shall not exceed 3.50 sq m. in area on which 40% shall be void and shall have a clear height of 2.10 m.

4.9.6.2 In addition to above, the following shall not be included in covered area for FAR calculations.

(a) Machine room for lift on top floor as required for the lift machine installation (see Appendix No. Ll and L2

Note: The shaft provided for lift shall be taken for covered area calculations only on one floor.

(b) Rockery, well and well structures, plant nursery, water pool, swimming pool (if uncovered), platform a round a tree, tank, fountain, bench, chabutara with open top and / or unenclosed sides by walls, open ramps, compound wall, gate, slide swing door, uncovered staircase (uncovered and unclosed on three sides except for a 1.00 m. high railing/wall, overhead water tank on top of building/open shafts.

(c) A mumty over staircase on top floor.

(d) Culvert on Municipal drains.

4.9.7 Height Limit

The Height and number of storeys shall be related to provisions of FAR as given in Chapter-3 and the provisions of open spaces given in the Bye-laws and the following:

(a) The maximum height of building shall not exceed 1.5 times the width of road on which it abuts plus the front open spaces.

(b) If a building abuts on two or more streets of different width, the building shall be deemed to face upon the street that has the greater width and the height of the building shall be regulated by the width of

that street. Height shall however, not exceed the maximum heights of 12 meters.

(c) For buildings in the vicinity of the aerodromes the maximum height of such buildings shall be subject to clearance from the Civil Aviation Authorities from time to time and to this effect a no objection certificate issued by that Authority shall be submitted by the applicant along with plans to the sanctioning Authority.

Note: The location of slaughter house/butcher house and other areas for activities like depositing of garbage/ dumps which would attract high flying birds like eagles/hawks etc. shall not be permitted within a radius of 10 km. from aerodrome reference point.

4.9.8 Height Exemptions

The following apartment structures shall not be included in the height of building covered under Bye-laws 4.9.7.

Roof tanks and their supports not exceeding 1.0 m. in height, ventilating, air conditioning and lift rooms and similar service equipments, stair covered with Mumty not exceeding 3.00 m. in height. Chimneys and parapet wall and architectural features not exceeding 1.50 m. in height unless the aggregate area of such structures exceeds 1/3 of the roof area of the building on which they are erected.

4.10 LIGHTING AND VENTILATION OF ROOMS

4.10.1 All habitable rooms shall have for the admission of light and air, one or more apertures, such as window, glazed door and fan lights, opening directly to the external air or into a open verandah not more than 2.40 mt. in width. The Buildings shall be designed with Solar Passive Concepts/Architecture and should be made energy efficient. In case light and ventilation to habitable space area are through an internal courtyard, the minimum dimensions of such courtyard shall not be less

than 3.0 m. x 3.0 m. for buildings upto 12.50 m. in height. For buildings with higher heights, the minimum dimensions of the internal courtyard shall be as given in Bye-laws 4.9.

4.10.2 Where the lighting and ventilation requirements are not met through day lighting and natural ventilation, the same shall be ensured through artificial lighting and mechanical ventilation as given in Part-VII Building services Section-1 lighting and Ventilation of National Building Code of India, 2005 published by the Bureau of Indian Standards. The latest version of the National Building Code of India shall be taken into account at the time of enforcement of this Bye-law. The energy efficient devices like CFL (Compact Fluorescent Lamps) shall be used in the Buildings.

Notwithstanding the above, the minimum aggregate area of openings of habitable rooms and kitchens excluding doors shall be not less than 1/10 of the floor area.

No portion of a room shall be assumed to be lighted if it is more than 7.50 m. from the opening assumed for lighting that portion.

4.10.3 Ventilation Shaft

For ventilating spaces like water closets and bathrooms, if not open on the front side, rear and interior open spaces, shall open on the ventilation shaft, the size, of which shall not be less than the values given below:

Table 4.5 Size of Ventilation Shaft

Height of Building in m.	Size of ventilation shaft in sq m.	Minimum size of shaft in m.
Upto 9.0	1.5	1.0
12.5	3.0	1.2
15 and above	4.0	1.5

** For buildings above 12.0 m. height, mechanical ventilation system shall be installed besides the provision of minimum ventilation shaft.*

4.11 PARAPET

Parapet walls and handrails provided on the edges of roof terrace, balcony etc. should not be less than 1.0 m. and more than 1.5 m. in height.

***Note**: The above shall not apply where roof terrace is not accessible by a staircase.*

4.12 GARBAGE DUMPING FACILITIES

Garbage, dumping place (dustbin) for commercial complex, hostel, restaurant, office, institution, workshop, etc.

(i) The minimum size for dustbin 5 ft. (1.5m) height, 5 ft. (1.5m) length and 4ft breadth (1.2m) 5x5x4) or (1.5 x 1.5 x 1.2) = 100 cubic ft. or 2.7 Cubic m., should be provided within the premises.

(ii) The dustbin should be constructed at least 10 inches or 0.925 cm above the ground.

(iii) The dustbin should be made by R.C.C

(iv) On one side of the wall there should be a door made of Metal Plate to be opened at the time of collection of the garbage.

(v) The dustbin should be, located in such a place which is accessible for collection.

(vi) Incinerator: - Hospital/Nursing Home Incinerator Plants should be provided within the premises or as per pollution control Board norms.

Chapter-5

STRUCTURAL SAFETY AND SERVICES

5.0 STRUCTURAL DESIGN

The structural design of foundation, masonry, timber, plain concrete, reinforced concrete, pre-stressed concrete and structural steel shall be carried out in accordance with Part-VI structural design, section-1 loads, section-2 foundation, section-3 wood, section-4 masonry, section-5 concrete and section-6 steel of the National Building Code of India, 2005 taking into consideration all relevant Indian Standards prescribed by Bureau of Indian Standards including the Indian Standard given in IS-Code 1893-1984, 13920-1993, 4326-1993, 13828-1993, 13827-1993 and 13935-1993 for structural safety. All the structural design shall incorporate earthquake resistant features in buildings.

5.5 QUALITY OF MATERIALS AND WORKMANSHIP

All materials and workmanship shall be of good quality conforming generally to accepted standards of Public Works Department and Indian standard specification and codes as included in Part-V Building Materials and Part-VII Construction practices and safety of the National Building Code of India, 2005.

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5.6 ALTERNATIVE MATERIALS, METHODS OF DESIGN AND CONSTRUCTION AND TESTS

5.2.1 **The provision of this Building Bye-laws are not intended to prevent the use of any material or method of design or construction not specifically prescribed by this Bye-laws, provided any such alternative has been approved. The Building materials approved by B.I.S. or any statutory body shall form part of the approved building material and technology as part of this Building Bye-laws.**

5.7 BUILDING SERVICES

5.7.1 The planning design and installation of electrical installations, air conditioning installation of lifts and escalators can be carried out in accordance with Part-VIII Building Services, section–2 electrical installation, section–3 air conditioning and heating, section-5 installation of lifts and escalators of the National Building Code of India, 2005. However deviations from National Building Code may be done as per good engineering practices.

5.7.2 The number and type of lifts to be provided in different buildings shall be as given in Appendix-D & D-1.

5.7.3 The requirements of electric sub-station are given in Appendix-D2. The provision of electric sub-station shall also require approval from Electricity Board concerned.

5.8 PLUMBING SERVICES

5.8.1 The planning, design, construction and installation of water supply, drainage and sanitation and gas supply system shall be in accordance

with Part-IX Plumbing Services, section-l water supply; section-2 drainage and sanitation and section-3 gas supply of the National Building Code of India, 2005.

5.4.2 Requirement of water supply for various occupancies in buildings shall be as given in Table 5.1, 5.2, and 5.3.

5.4.3 Requirement of sanitary fittings and installations for different occupancies in buildings shall be as given in Table 5.4 to 5.15. For calculation of occupancy, clause 4.1 shall be is referred.

Table 5.1 Per capita water requirement for various Occupancies/Uses

Sl. No.	Type of Occupancy	Consumption per head per day (in lt.)
1	Residential (a) In living units (b) Hotels with lodging accommodation (per bed)	 135 180
2	Educational (a) Day schools (b) Boarding Schools	 45 135
3	**Institutional (Medical Hospitals)** (a) No. of beds not exceeding 100 (b) No. of beds exceeding 100 (c) Medical quarters and hostels	 340 450 135
4	Assembly- Cinema theatres, auditoria, etc. (per seat accommodation)	15
5	Government or semi public business	45
6	Mercantile (Commercial) **(a) Restaurants (per seat)** (b) Other business building	 70 45
7	Industrial (a) Factories where bath-rooms are to be provided (b) Factories where bath-rooms are not to be provided	 45 30
8	Storage (including Warehouses)	30
9	Hazardous	30
10	Intermediate Stations (excluding mail and express stops).	45(25)*
11	Junction Station	70(45)*
12	Terminal Stations	45
13	International and Domestic Airports	70

* The values in parenthesis are for such stations, where bathing facilities are not provided.

Note: The number of persons for Sl. No. 10 to 13 shall be determined by the average number of passenger handled by the station daily with due consideration given to the staff and workers likely to use the facilities.

Table 5.2 Flushing Storage Capacities

Sl. No.	Classification of Building	Storage Capacity
1.	For tenements having common convenience	900 lt. net per w.c. seat
2.	For residential premises other than tenement having common conveniences	270 lt. net for one w.c. seat each and 180 lt. for each additional seat in the same flat.
3.	For factories and workshops	900 lt. per w.c. seat and 180 lt. per urinal.
4.	For cinemas, public assembly hall, etc.	900 lt. per w.c. seat and 350 lt. per urinal.

Table 5.3 Domestic Storage Capacities

Sl. No.	No. of Floors	Storage Capacity	Remarks
For premise occupied tenements with common conveniences:			
1.	Ground floor	Nil	Provided down take fittings are installed
2.	Floors 2, 3,4, 5 and upper floors	500 litre per tenement	
For premises occupied as flats or blocks			
1.	Ground floor	Nil	Provided down take fittings are installed
2.	Floors 2, 3, 4, 5 and upper floors	500 litre per tenement	

Note 1: If the premises are situated at a place higher than the road level in front of the premises, storage at ground level shall be provided on the same lines as on floors.

2: The above storage may be permitted to be installed provided that the total domestic storage calculated on the above basis is not less than the storage calculated on the number of down take fittings according to scale given below:

1.1.1.3 Down take taps	**70 l. each**
Showers	*135 l. each*
Bathtubs	*200 l. each*

Table 5.4 Sanitation requirements for shops and Commercial Offices

Sl. No.	Sanitary Unit / Fittings	For Personnel
1.	Water closet	One for every 25 persons or part thereof exceeding 15 (including employees and customers). For female personnel 1 for every 15 persons or part thereof exceeding

		10.
2.	Drinking Water Fountain	One for every 100 person with a minimum of one on each floor.
3.	Wash Basin	One for every 25 persons or part thereof.
4.	Urinals	Same as Sl. No. 3 of Table 5.9
5.	Cleaners' Sink	One per floor minimum, preferably in or adjacent to sanitary rooms.

Note: Number of customers for the purpose of the above calculation shall be the average number of persons in the premises for a time interval of one hour during the peak period. For male-female calculation a ratio of 1: 1 may be assumed.

Table-5.5 Sanitary Requirements for Hotels

Sl. No.	Sanitary Unit	For Residential Public staff	For non residential Staff	
			For male	For female
1.	Water Closet (W.C.)	One per 8 Persons omitting occupants of the attached water closet minimum of 2 if both sexes are lodged	1 or 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons
2.	Ablution Taps	One in each W.C	One in each W.C	One in each W.C.
3.	Urinals	Nil	Nil upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 40-70 persons 4 for 71-100 persons	Nil
4.	Wash Basins	One per 10 persons omitting each basin installed in the room / suite	1 for 15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 2 for 13-25 3 for 26-40 4 for 41-57 5 for 58-77 6 for 78-100
5.	Baths	One per 10 persons omitting occupants of room with bath in suite	Nil	Nil
6.	Stop Sinks	One per 30 Bed rooms (one per floor minimum)	Nil	Nil
7.	Kitchen Sink	One in each Kitchen	One in each Kitchen	One in each Kitchen

Table 5.5 contd. For Public Rest Rooms

Sl. No.	Sanitary Unit	For Male	For Female
1.	Water Closet	One per 100 persons upto 400 persons; for over 400 add at the rate of one per 250 persons or part thereof.	Two for 10 persons upto 200 persons; over 200 add at the rate of one per 100 persons or part thereof.
2.	Ablution	One in each W.C.	One in each W.C.

Sl. No.	Sanitary Unit	For Male	For Female
	Taps		
3.	Urinals	One for 50 persons or part thereof.	Nil, upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons
4.	Wash Basins	One per W.C. and urinal provided	One per W.C. and urinal provided
5.	Baths	--	--
6.	Stop Sinks	--	--
7.	Kitchen Sink	One in each Kitchen	One in each Kitchen

Note: *i) It may be assumed that the two-thirds of the number are males and one- third females*

ii) One water tap with drainage arrangements shall be provided for every 50 persons or part thereof in the vicinity of water closet and urinals.

Table 5.6 Sanitation Requirements for Educational Occupancy

Sl. No.	Sanitary Unit	Boarding Institution		Other Educational Institution	
		For Boys	For Girls	For Boys	For Girls
1.	Water Closet (W.C.)	--	--	--	--
2.	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C.	One in each W.C.
3.	Urinals	One per every 25 pupils or part thereof	--	One per every 20 pupils or part thereof	--
4.	Wash Basins	One for every 8 pupils or part thereof	One for every 6 pupils or part thereof	One for every 40 pupils or part thereof	One for every 40 pupils or part thereof
5.	Baths	One for every 8 pupils or part thereof	One for every 6 pupils or part thereof	--	--
6.	Drinking Water Fountains	One for every 50 pupils or part thereof	One for every 50 pupils or part thereof	One for every 50 pupils or part thereof	One for every 50 pupils or part thereof
7.	Cleaner's Sink	One per Floor minimum	One per Floor minimum	One per Floor minimum	One per Floor minimum

Nursery Schools

Sl. No.	Sanitary Unit	Requirement
1.	Water Closet	One for every 15 pupils or part thereof --
2.	Ablution Taps	One in each W.C.
3.	Urinals	--
4.	Wash Basins	One for every 15 pupils or part thereof
5.	Baths	One bath sink per 40 pupils
6.	Drinking Water Fountains	One for every 50 pupils or part thereof
7.	Cleaner's Sink	--

Note: 1. One water tap with draining arrangements shall be provided for every 50 persons or part thereof, in the vicinity of water closets and urinal.

2. For teaching staff, the schedule of sanitary units to be provided shall be the same as in case of office buildings (Table 5.9).

Table 5.7 Sanitation Requirements for Institutional (Medical) Occupancy- Hospital

Sl. No.	Sanitary Unit	Hospitals With indoor Patient Ward	Hospitals With outdoor Patient Wards	
		For Males & females	For Males	For Females
1.	Water Closet (W.C.)	One for every 6 beds or part thereof	One for every 100 persons or part thereof	Two for every 100 persons or part thereof
2.	Ablution taps	One in each W.C.	One in each W.C.	One in each W.C.
3.	Wash Basins	Two upto 30 bed; add one for every additional 30 beds; or part thereof	One for every 100 persons or part thereof	One for every 100 persons or part thereof.
4.	Baths with Shower	One bath with shower for every 8 beds or part thereof.	--	--
5.	Bed pan washing sink	One for each ward	-	--
6.	Cleaner' Sinks	One for each ward	One per floor minimum	One per floor minimum
7.	Kitchen sinks & dish Washers (where Kitchen is provided)	One for each ward	--	--
8.	Urinals	--	One for every 50 persons or part thereof	--

Table 5.7 contd. Administrative Buildings

Sl. No.	Sanitary Unit	For Males	For Females
1.	Water Closet (W.C.)	One for every 25 persons or part thereof	One for every 15 persons or part thereof
2.	Ablution Taps	One in each W.C.	One in each W.C.
3.	Wash Basins	One for every 25 persons or part thereof	One for every 25 persons or part thereof
4.	Baths with Shower	One on each floor	One on each floor
5.	Bed pan washing sink	--	--
6.	Cleaner's Sink	One per floor minimum	One per floor minimum
7.	Kitchen sinks & dish	One for each floor	One for each floor

Sl. No.	Sanitary Unit	For Males	For Females
	Washers (where Kitchen is provided)		
8.	Urinals	Nil upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons From 101 to 200 persons add at the rate of 3%; for over 200 persons add at the rate of 2.5%.	--

Table-5.8 Sanitation Requirements for Institutional (Medical) Occupancy- (staff quarters and Hostels)

Sl. No.	Sanitary Unit	Doctor's Dormitories		Nurses Hostel
		For Male Staff	For female staff	
1.	Water Closet	One for 4 persons	One for 4 persons	One for 4 persons or part thereof
2.	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C.
3.	Wash Basins	One for every 8 persons or part thereof	One for every 8 persons or part thereof	One for every 8 persons or part thereof
4.	Bath (with shower)	One for every 4 persons or part thereof	One for every 4 persons or part thereof	One for every 4 persons or part thereof
5.	Cleaner's Sink	One per floor minimum	One per floor minimum	One per floor minimum

Table: 5.9 Sanitation Requirements for Governmental and Public Business Occupancy and Offices

Sl. No.	Sanitary Unit	For Male Personnel	For female Personnel
1.	Water Closet (W.C.)	One for 25 persons or part thereof	One for 15 persons or part thereof
2.	Ablution taps	One in each W.C.	One in each W.C.
3.	Urinals	Nil upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons From 101 to 200 add at the rate of 3%; For over 200 persons add at the rate of 2.5%.	--
4.	Wash Basins	One for every 25 persons or part thereof	--
5.	Drinking water fountains	One for every 100 persons with a minimum of one on each floor	--
6.	Baths	Preferably one on each floor	Preferably one or each floor
7.	Cleaner's Sinks	One per floor minimum; preferably in or adjacent to sanitary rooms.	--

Note: One water tap with drainage arrangements shall be provided for every 50 persons or part thereof in the vicinity of water closet and urinals.

Table-5.10 Sanitation Requirements for Residences

Sl. No.	Sanitary Unit	Dwelling with individual conveniences	Dwelling without individual conveniences
1.	Bath Room	One provided with water tap	One for every two tenement
2.	Water Closet (W.C.)	One	One for every two tenement
3.	Sink (or Nahani) in the Floor	One	--
4.	Water Tap	One	One with drainage arrangement in each tenement One in common bath rooms and common water closet.

Note: Where only one water closet is provided in a dwelling, the bath and water closet shall be separately accommodated.

Table: -5.11 Sanitation Requirements for Assembly Occupancy Buildings (Cinema, Theaters, Auditoria. etc.)

Sl. No.	Sanitary Unit	For Public		For Staff	
		Male	Female	Male	Female
1	Water Closet	One for 100 persons upto 400 persons. For over 400 persons, add at the rate of 1 per 250 persons or part thereof	Two per 100 persons upto 200 persons. For over 200 persons add at the rate of 1 per 100 persons or part thereof	One for 15 persons. Two for 16-35 persons	One for 1-12 persons. Two for 13-25 persons
2	Ablution Taps	One in each W.C.	One in each W.C.	One in each WC	One in each WC
3	Urinals	One for 50 persons or part thereof	_____	Nil upto 6 persons One for 7-20 persons Two for 21-45 persons	_____
4	Wash Basins	One for every 200 persons or part thereof	One for every 200 persons or part thereof	One for 1-15 persons Two for 16-35	One for 1-12 persons Two for 13-25 persons
5	Drinking Water Fountain	One per 100 persons or part thereof			

Note: -(i) One water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of water closets and urinals.

(ii) It may be assumed that two thirds of the number are males and one third females.

Table: -5.12 Sanitation Requirements for Assembly Occupancy Buildings (Art, Galleries, Libraries and Museums)

Sl. No.	Sanitary Unit	For Public		For Staff	
		Male	**Female**	**Male**	**Female**
1	Water Closet (W.C.)	One for 200 persons upto 400 persons. For over 200 persons, add at the rate of 1 per 250 persons or part thereof	One per 100 persons upto 200 persons. For over 200 persons, add at the rate of 1 per 150 persons or part thereof	One for 1-15 persons. Two for 16-35 persons	One for 1-12 persons. Two for 13-25 persons
2	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C	One in each W.C
3	Urinals	One for 50 persons or part thereof	--	Nil upto 6 persons One for 7-20 persons Two for 21-45 persons	--
4	Wash Basins	One for every 200 persons or part thereof. For over 400 persons, add at the rate of 1 per 250 persons or part thereof.	One for every 200 persons or part thereof. For over 200 persons, add at the rate of 1 per 150 persons or part thereof	One for 1-15 persons Two for 16-35	One for 1-12 persons Two for 13-25 persons
5	Cleaner's Sink	One per floor, minimum			
6	Drinking Water Fountain	One per 100 persons or part thereof			

Note: It may be assumed that two thirds of the numbers are males and one third females.

Table 5.13 Sanitation Requirements for Restaurant

Sl. No.	Sanitary Unit	For Public		For Staff	
		Male	**Female**	**Male**	**Female**
1.	Water Closet (W.C.)	One per 50 seats upto 200 seats. For over 200 seats, add at the rate of 1 per 100 seats or part thereof	One per 50 seats upto 200 seats. For over 200 seats, add at the rate of 1 per 100 seats or part thereof	1 for 15 persons. 2 for 16-35 persons. 3 for 36-65 persons. 4 for 66-100 persons.	1 per 1-12 persons. 2 for 13-25 persons. 3 for 26-40 persons. 4 for 41-57 persons. 5 for 58-77 persons. 6for 78-100. persons.
2.	Ablution Taps	One in each W.C.	One in each W.C.	One in each W.C.	One in each W.C.
3.	Urinals	One for 50 persons or part thereof	--	Nil upto 6 persons. 1 for 7-20 persons. 2 for 21-45 persons. 3 for 46-70 persons. 4 for 71-100 persons.	--
4.	Wash Basins	One for every water closet			
5.	Kitchen Sinks & Dish Washer	One per each Kitchen			
6.	Service Sink	One in the restaurant			

Note: - (i) It may be assumed that two thirds of the numbers are males and one-third females.

(ii) One water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of water closets and urinal.

Table: -5.14 Sanitation Requirements for Factories

Sl. No.	Sanitary Unit	For Male Personnel	For female Personnel
1.	Water Closet	1 for 15 persons 2 for 16-35 persons 3 for 36-65 persons. 4 for 66-100 persons. For 101 to 200 persons add at rate of 3%. From over 200 persons, add at the rate of 2.5%.	1 for 1-12 persons 1 for 13-25 persons. 2 for 26-40 persons. 3 for 41-57 persons. 4 for 58-77 persons. 5 for 78-100 persons. For 101 to 200 persons, add at the rate of 5%. From over 200 persons add at the rate of 4%.
2.	Ablution Taps	One in each W.C	One in each W.C.
3.	Urinals	Nil upto 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons From 101 to 200 persons add at the rate of 3%; for over 200 persons add at the rate of 2.5%.	--
4.	Washing Taps with draining arrangement	One for every 25 persons or part thereof	
5.	Drinking Water Fountains	One for every 100 persons with a minimum of one on each floor	
6.	Baths Preferably Showers	As required for particular trade or occupation	

Note: (i) For many trades of a dirty or dangerous character, more extensive provisions are required.

(ii) One water tap with draining arrangement shall be provided for every 50 persons or part thereof in the vicinity of water closet and urinal

(iii) Crèches where provided shall be fitted with water closets (One for 10 persons or part thereof), wash basins (1 for 15 persons or part thereof) and drinking water tap with drinking arrangement for every 50 persons or part thereof

Table 5.15 Sanitary Requirements for Large Stations and Airports

Sl. No.	Place	W.C. for Males	W.C. for Females	Urinals for Males only
1.	Junction Stations, Intermediate Stations and Substations	3 for first 1000 persons and 1 for subsequent 1000 persons or part thereof.	4 for first 100 persons and 1 for every additional 1000 persons or part thereof.	4 for every 1000 person and 1 for every additional 1000 persons or part thereof.
2.	Terminal Stations and Bus Terminals	4 for first 1000 persons and 1 for every additional 1000 persons or part thereof.	5 for every 1000 person and 1 for every additional 200 persons or part thereof.	6 for every 1000 person and 1 for every additional 1000 persons or part thereof.
3.	Domestic Airports **Minimum.** For 200 persons For 400 persons For 600 persons For 800 persons For 1000 persons	 2* 5 9 12 16 18	 4* 8 15 20 26 29	 2* 6 12 16 20 22
4.	Internal Airports For 200 persons For 600 persons For 1000 persons	 6 12 18	 10 20 29	 8 16 22

Note: i) Provision for wash basins, baths including shower stalls, shall be in accordance with part ix section 2- Drainage and Sanitation of National Building Code of India, 2005.

***** *At least one Indian style water closet shall be provided in each toilet. Assume 60 % males and 40 % females in any area.*

Notes for General Guidance for water supply arrangements:

(1) *For new construction:* Provision shall be made for under ground tank for the storage of water, having capacity at 200 litres. per person with adequate pumping arrangements to supply water to upper floors. Filtered water connection will be allowed only for use of drinking and bathing needs. For other purposes i.e. flushing and gardening etc., the individual shall be required to have own arrangements of tube well water within the premises. While according sanction to Layout Plan, the Authority shall make a special mention that provision for space shall be kept for the construction of under ground reservoir of adequate capacity along with booster pumping station.

(2) Arrangements as given in 1 above shall also be provided in Group Housing Societies.

(3) The plumbing arrangement in case of new constructions shall be made in such a way that the potable water shall be used for drinking, cooking & bathing only and for rest of the uses, provision for ground water can be made with dual piping system.

(4) Low capacity cistern should preferably be provided instead of normal 12.5 litre capacity.

(5) *Water Harvesting:* Water harvesting through storing of water runoff including rainwater in all new buildings on plots of 100 sq m. and above will be mandatory. The plans submitted to the local bodies shall indicate the system of storm water drainage along with points of collection of rain water in surface reservoirs or in recharge wells.

(6) All building having a minimum discharge of 10,000 litres and above per day shall incorporate waste water recycling system. The recycled water should be used for horticultural purposes.

(7) *Installation of Solar Assisted Water Heating System in Buildings:*

(i) No new building in the following categories in which there is a system of installation for supplying hot water shall be built unless the system of the installation is also having an auxiliary solar assisted water heating system:-

(a) Hospitals and Nursing Home

(b) Hotels, Lodges, and Guest Houses, Group Housing with the plot area of 4000 sq m.

(c) Hostels of Schools, Colleges and Training Centres with more than 100 Students.

(d) Barracks of armed forces, paramilitary forces and police

(e) Individual residential buildings having more than 150 sq m. plinth area

(f) Functional Buildings of Railway Stations and Air Ports like waiting rooms, retiring rooms, rest rooms, inspection bungalows and catering units

(g) Community Centres, Banquet Halls, Baratghars, Mangal Karyalayas and buildings for similar use.

(i) *Definitions*

(i)	"Solar Assisted Water Heating System:-	A device to heat water using solar energy as heat source.
(ii)	"Auxiliary back up":-	Electricity operated or fuel fired boilers/systems to heat water coming out from solar water heating system to meet continuous requirement of hot water.
(iii)	"New Building":-	Such buildings of above said categories for which construction plans have been submitted to the Authority for clearance.
(iv)	"Existing building":-	Such buildings, which are licensed to perform their respective business.

(ii) ***Installation of Solar Water Heating System***

(a) *New Buildings:* Clearance of plan for the construction of new buildings of the aforesaid categories shall only be given if they have a provision in the building design itself for an insulated pipeline from the rooftop in the building to various distribution points where hot water is required. The building must have a provision for continuous water supply to the solar water heating system. The building should also have open space on the rooftop, which receives direct sun light. The load bearing capacity of the roof should at least be 50 kg. per sq m. All new buildings of above said categories must complete installation of solar water heating systems before obtaining necessary license to commence their business.

(b) *Existing Buildings:* Installation of Solar Assisted Water Heating Systems in the existing building shall be made mandatory at the time of change of use to above said category provided there is a system or installation for supplying hot water.

(iii) *Capacity:* The capacity of solar water heating system to be installed on

the building of different categories shall be decided in consultation with the local bodies. The recommended minimum capacity shall not be less than 25 litres per day for each bathroom and kitchen subject to the condition that maximum of 50% of the total roof area is provided with the system.

(iv) *Specifications:* Installation of Solar Assisted Water Heating Systems shall conform to BIS specification IS 12933. The solar collectors used in the system shall have the BIS certification mark.

(v) *Auxiliary System:* Wherever hot water requirement is continuous, auxiliary heating arrangement either with electric elements or oil of adequate capacity may be provided.

Chapter-6

SPECIAL REQUIREMENTS FOR OCCUPANCY/LAND DEVELOPMENT AND OTHERS

6.0 INDUSTRIAL BUILDINGS (FACTORIES, WORKSHOPS, ETC.)

(1) The relevant provisions contained in the Factory Act. 1948 shall apply for the construction of factory buildings. The minimum internal height of workrooms shall not be less than 4.5 m. measured from the floor level to the lowest point in the ceiling provided that this bye-law shall not apply to room intended for storage, godowns and the like purposes but only in rooms occupied by workers for purposes of manufacture.

In case of small factories, employing less than 50 workers for purposes of manufacturing and carrying out a class of manufacturing covered under the flatted factories and service industries, as given in the Master Plan/Development Plan, the Authority may allow minimum height upto 3.60 m.

(2) Parking space provisions as provided in development code of Master Plan/Development Plan or as prescribed are to be adhered to.

(3) Requirements of water supply, drainage and sanitary installation shall be as per table 5.1, 5.2 and 5.14 of Chapter-5, but in no

case less than 1 W.C. and one urinal shall be permitted.

(4)

(a) Notwithstanding the provision of exits requirements as per Bye-law No. 4.8 (Chapter-4) each working room shall be provided with adequate number of exits not less than two in number.

(b) No exit shall be less than 1.2 m. in width and 2.1 m. in height and doors of such exit shall be so arranged that it can be opened easily from inside.

(c) No staircase, lobby corridors or passage shall be less than 1.2 m. in width.

In addition to the requirement in this part, provisions contained in chapter-3 will be followed.

(5) There shall be provided at all time for each person employed in any room of factory at least 3.5 sq m. of floor space exclusive to that occupied by the machinery and a breathing space of at least 15 cum. (Further the provision of part VIII section 1 lighting and ventilation of the National Building Code of India, 2005 shall be followed).

(6) The effluent from industries (industrial and biological in nature) shall be treated and shall be of quality to the satisfaction of the concerned local bodies before letting out the same into a watercourse or municipal drain.

6.1 EDUCATIONAL BUILDING (SCHOOL/COLLEGES)

(1) No basement or cellar room shall be designed, constructed, altered, converted or used for the purpose of study or instruction.

(2) Every such building, exceeding two storeys in height shall be constructed of fire resistant material throughout.

(3) The minimum size of a cellar room, study room or room used for purpose of instruction shall be 5.5 m. x 4.5 m. and no part of such room distant shall be more than 7.5 m. from an external wall abutting on the requisite open space. Every such room shall have minimum ventilation to the extent of $1/5^{th}$ of its floor area.

(4) A minimum of 1.0 sq m. of net floor space per student shall be provided. A central hall will not be counted in the accommodation, nor will a class room for cookery, laundry, manual instruction, drawing or science. The number of students in such building shall be calculated on this basis for the purpose of this clause.

(5) Every assembly room, gymnasium shall have a clear height of 3.6 m. except under a girder which may project 0.6 m. below the required ceiling height.

A clear internal height under balcony or a girder shall be not less than 3.0 m.

A minimum room height for classroom in all schools and other institutions shall be not less than 3.0 m. The minimum head room under beams shall be 2.75 m.

(6) Exit requirements shall conform to bye-law 4.8 (Chapter-4). No door shall be less than 1.2 m. in width and 2.10 m. in height.

(7) Requirement of water supply, drainage and sanitary installation shall conform to table 5.1 to 5.6 of Chapter -5.

(8) A playground shall be provided as per norms.

6.2 ASSEMBLY BUILDING (CINEMA, THEATERS, ETC.)

(1) The relevant provisions of the Cinematographic Rules/Acts and IS: 4878 code for construction of Cinema Building shall apply for planning, design and construction of Cinema Building.

(2) Parking spaces wherever not specifically given shall conform to bye-law 4.11 in Chapter – 4).

(3) Requirements of water supply, drainage and sanitation shall conform to provisions of table 5.1, 5.2, 5.11, and 5.12 of Chapter - 5.

(4) Buildings for religious worship shall not be erected on a site, which has not been previously approved by the Authority.

6.3 PETROL FILLING STATION

The location of the petrol filling stations and its layout shall be approved by the Authority in consultation with the Commissioner of the Division depending upon width of roads and traffic generated location with respect of points of intersections and nearness to occupancies of educational, assembly, storage and hazardous uses.

6.4 BURIAL AND CREMATION GROUNDS

The Authority shall under the provisions of Regulations/Acts, regulate the location and area limits of the burial and cremation grounds, including cemetry. Further, the Authority shall prohibit certain burial and cremation grounds to be located in certain area, which in their opinion is dangerous or likely to be dangerous to the health and well being of the persons living in the neighbourhood or to be offensive to such persons.

6.5 BUILDING IN MINING AREA

Building in mining area shall not be constructed to a height more than one storey without the special prior approval of the Authority.

6.6 POULTRY / PIGGERY FARMS (WHEREVER ALLOWED AS PER MASTER PLAN)

6.6.1 **The coverage for poultry farms shall be allowed in case of farmhouses.**

6.6.2 **Setback: The setback for farm building from the right of way shall be as under:**

1.1.1.4 Road	**Front Setback**
National Highway (90 m)	60 m.
State Highway (60 m.)	37 m.
Major Urban Road (30 m.)	22 m.
Village Road (18 m.)	13 m.

6.6.3 Space Planning

(a) There should be a minimum distance of 6.0 mt. between sheds in the farm.

(b) The minimum distance of any farm building from the property line should be 4.5 m.

(c) The minimum distance of any farm shed or farm building from the dwelling unit should be 7.5 m.

6.6.4 Farm Shed

(a) Shed should be constructed on pillars with walls on two longer sides not higher than 1.2 mt.

(b) The remaining height of the farm sheds in respect of two longer sidewalls can be covered with netting or other similar material.

(c) The maximum height of the roof of the farm shed shall not exceed 6.0 m.

6.6.5 Dwelling Units as a Farm House

The following norms shall be adopted for construction of dwellings in farmhouses:

(a) The maximum coverage for the dwelling unit shall be as per the provision of the Master Plan / Zonal Plan.

(b) The distance of parts of dwelling units from shed shall be as in Building Bye-laws 6.6.3(c)

(c) The requirements of parts of dwelling shall be as in Building Bye-laws 4.2 in Chapter-4.

(d) Any other special requirements as may be specified by the Authority.

6.7 GOVERNMENT HOUSING

a) The minimum distance of government housing from the private or other housing / dwelling unit shall be 5.0 m.

b) Any other special requirements as may be specified by the Authority

6.7 SPECIAL BUILDINGS NOT COVERED

In case of special buildings not covered above, norms to be followed shall be decided by the Authority.

6.8 PROVISIONS IN THE PUBLIC BUILDINGS FOR HANDICAPPED PERSONS

The building to be designed for Handicapped persons need special treatment and the provisions for site planning, building requirements etc. are given in Appendix-G.

6.9 RESETTLEMENT AND JHUGGI JHONPRI (JJ) INSITU UPGRADATION

Regulations pertaining to resettlement and JJ Insitu upgradation are provided for in Appendix-H.

6.10 RULES FOR DEVELOPMENT OF LAND

6.10.1 The provisions of Master Plan/Development Plan and norms formulated by Authority shall apply regarding sub-division of a large parcel of land into plots, open areas, roads, spaces for services and community facilities.

6.10.2 Regulations for Low Income Housing

The norms specified for Low-income housing are given in Appendix-I.

6.11 PENAL ACTION FOR VIOLATION OF MASTER PLAN/ZONAL PLAN REGULATIONS / BYE- LAWS

6.11.1 The Authority shall take action for violation of Master Plan/Zonal Plan / Regulations. The Authority may take penal action under relevant Acts, which may include stopping of construction activity, demolition/ alteration and levying of penalties as given in Appendix-F.

6.11.2 **The Authority may also take action as provided under Building Construction Bill 2.14.6 in Chapter-2.**

6.11.3 In addition, action for discontinuance of services in building may also be taken.

6.12 SIGNS AND OUTDOOR DISPLAY STRUCTURES

No advertising signs (including hoarding) on buildings or on land shall be displayed without the prior approval of the Authority. The standards specified in part X Signs and outdoor display structures of National

Building Code of India, 2005 published by Bureau of Indian Standards Institution shall be applicable.

Chapter-7

FIRE PROTECTION AND FIRE SAFETY REQUIREMENTS

7.1 SCOPE

This part covers the requirements of the fire protection for the multi-storeyed buildings (high rise buildings) and the buildings, which are of 12 m. and above in height and low occupancies of categories such as Assembly, Institutional., Educational (more than two storeyed and built-up area which exceeds 1000 sq m)., Business (where plot area exceeds 500 sq m.), Mercantile (where aggregate covered area exceeds 750 sq m.), Hotel, Hospital, Nursing Homes, Underground Complexes, Industrial Storage, Meeting / Banquet Halls, Hazardous Occupancies.

7.2 PROCEDURE FOR CLEARANCE FROM FIRE SERVICE

(a) The concerned Authority shall refer the building plans to the Director Fire service for obtaining clearance in respect of building identified in clause 7.1 of this Building Bye-law.

(b) The Authority shall furnish three sets of complete building plans along with prescribed fee to the Director Fire service, after ensuring that the proposals are in line with Master Plan/Zonal Plan of the area.

(c) The plans shall be clearly marked and indicate the complete fire protection arrangements and the means of access/escape for the proposed building with suitable legend along with standard signs and symbols on the drawings. The same shall be duly signed/certified by a licensed Fire Consultant/Architect. The information regarding fire safety measures shall be furnished as per Annexure ‘D’ along with details.

(d) The Director Fire service shall examine these plans to ensure that they are in accordance with the provisions of fire safety and means of escape as per these bye- laws and shall forward two sets of plans duly signed for implementation to the building sanctioning Authority.

(e) After completion of fire fighting installations as approved and duly tested and certified by the licensed Fire Consultant / Architect, the Owner/ Builder of the building shall approach the Director Fire service through the concerned Authority for obtaining clearance from fire safety and means of escape point of view. The concerned Authority shall ensure that clearance from Director Fire service has been obtained for the building identified in clause 7.1 before granting the completion certificate.

(f) On receipt of the above request, the Director Fire service shall issue the No Objection Certificate from fire safety and means of escape point of view after satisfying himself that the entire fire protection measures are implemented and functional as per approved plans.

(g) Any deficiencies observed during the course of inspection shall be communicated to the Authority for rectification and a copy of the same shall be forwarded to the concerned building owner /builder.

7.3 RENEWAL OF FIRE CLEARANCE

On the basis of undertaking given by the Fire Consultant / Architect, the Director Fire service shall renew the fire clearance in respect of the following buildings on annual basis:-

(1) Public entertainment and assembly

(2) Hospitals

(3) Hotels

(4) Under ground shopping complex

7.4 FEE

(a) For augmentation of fire service facilities for effecting rescue/fire fighting operation in high rise building, fee payable to Director Fire Serviceby the applicant(s) along with sets of plans for obtaining the No Objection Certificate shall be as prescribed by the Authority.

7.5 FIRE CONSULTANT

The Architect of the project will be responsible for making provisions for fire protection and fire fighting measure as provided in this Chapter and for that she / he may consult an expert in this field, like professionals for structural, sanitary and others.

7.6 TERMINOLOGY

For the purpose of this Chapter all the technical terms shall have the meaning as defined in the National Building Code of India, Part-IV, Fire Protection as amended from time to time but for the terms which are defined otherwise shall be same as defind. in this Building Bye-laws.

7.7 GENERAL

The Director Fire service may insist on suitable provisions in the building from fire safety and means of escape point of view depending on the occupancy, height or on account of new developments creating special fire hazard, in addition to the provision of these building bye laws and part IV (Fire Protection) of National Building Code of India

7.8 MEANS OF ACCESS

As provided in Building Bye laws 4.7.

7.8.1 ***Provisions of Exterior Open Spaces around the Building: As*** provided in building bye laws *4.9.4.*

7.10 EXIT REQUIREMENT

As provided in Building Bye-laws 4.8.

7.9.1 ***Type of Exits:*** *As* provided in Building Bye-laws 4.8.1

7.9.2 ***Number and Size of Exits:*** *As* provided in Building Bye-laws 4.8.2

7.9.3 ***Arrangements of Exits:*** As provided in Building Bye-laws 4.8.3

7.9.4 ***Occupant Load:*** As provided in Building Bye-laws 4.1

7.9.5 ***Capacity of Exit:*** As provided in Building Bye-laws 4.8.4

7.9.6 ***Staircase Requirements:*** *As* provided in Building Bye-laws 4.8.5

7.9.9 ***Minimum Width Provision for Stairways:*** As provided in Building Bye-laws 4.8.6

7.9.10 ***Minimum Width Provision for Passageway/Corridors:*** As provided in Building Bye-laws 4.8.7

7.9.9 ***Doorways:*** As provided in Building Bye-laws 4.8.8

7.9.10 ***Stairways:*** As provided in Building Bye-laws 4.8.9

7.9.11 ***Fire Escapes or External Stairs:***

(a) Fire escape shall not be taken into account while calculating the number of staircases for a building.

(b) All fire escapes shall be directly connected to the ground.

(c) Entrance to the fire escape shall be separate and remote from internal staircase.

(d) The route to fire escape shall be free of obstructions at all times except the doorway leading to the fire escape which shall have the required fire resistance.

(e) Fire escape shall be constructed of non-combustible materials.

(f) Fire escape stairs shall have straight flight not less than 125 cm wide with 25 cm treads and risers not more than 19 cm.

(g) Handrails shall be at a height not less than 100 cm.

(h) Fire escape staircase in the mercantile, business, assembly, hotel buildings above 15 meter height shall installed a fire tower and in such case width of the same shall not be less than the width of the main staircase. No combustible material shall be allowed in the fire tower.

7.9.12 Spiral Stairs

(a) The use of spiral staircase shall be limited to low occupant load and to a building height 9 m.

(b) A spiral stair shall not be less than 1.50 m in diameter and shall be designed to give the adequate headroom.

7.9.14 Staircase Enclosures

(a) The external enclosing walls of the staircase shall be of the brick or the R.C.C. construction having fire resistance of not less than two hours. All enclosed staircases shall have access through self-closing door of one-hour fire resistance. These shall be single swing doors opening in the direction of the escape. The door shall be fitted with the check action door closers.

(b) The staircase enclosures on the external wall of the building shall be ventilated to the atmosphere at each landing.

(c) Permanent vent at the top equal to the 5% of the cross sectional area of the enclosure and openable sashes at each floor level with area equal to 1 to 15% of the cross sectional area of the enclosure on external shall be provided. The roof of the shaft shall be at least 1 m. above the surrounding roof. There shall be no glazing or the glass bricks in any internal closing wall of staircase. If the staircase is in the core of the building and cannot be ventilated at each landing, a positive of 5-mm. w.g. by electrically operated blower/blowers shall be maintained.

(d) The mechanism for pressurizing the staircase shaft shall be so installed that the same shall operate automatically on fire alarm system/sprinkler system and be provided with manual operation facilities.

7.9.14 Ramps

(a) Ramps of slope of not more than 1 in 10 may be substituted for and shall comply with all the applicable requirements of all required stairways as to enclosure capacity and limiting dimensions. Larger slopes shall be provided for special uses but in no case greater than 1 in 8. For all slopes exceeding 1 in 10 and where the use is such as to involve danger of slipping, the ramp shall be surfaced with approved non-slipping material.

(b) The minimum width of the ramps in the Hospitals shall be 2.4 m. and in the basement using car parking shall be 6.0 m.

(c) Handrails shall be provided on both sides of the ramp.

(d) Ramp shall lead directly to outside open space at ground level or courtyards of safe place.

(e) In case of nursing homes, hospitals etc. area exceeding 300 sq m. at each floor one of the exit facility shall be a ramp of not less than 2.4 m. in width.

7.10 PROVISION OF LIFTS

(a) Provision of the lifts shall be made for all multi-storeyed building having a height of 12 m. and above.

(b) All the floors shall be accessible for 24 hrs. by the lift. The lift provided in the buildings shall not be considered as a means of escape in case of emergency.

(c) Grounding switch at ground floor level to enable the fire service to ground the lift car in case of emergency shall also be provided.

(d) The lift machine room shall be separated and no other machinery be installed in it.

7.10.1 Lift Enclosure/lift

General requirements shall be as follows

(a) Walls of lift enclosures shall have a fire rating of two hours. Lift shafts shall have a vent at the top of area not less than 0.2 sq m.

(b) Lift motor room shall be located preferably on top of the shaft and separated from the shaft by the floor of the room.

(c) Landing door in lift enclosures shall have a fire resistance of not less than one hour.

(d) The number of lifts in one lift bank shall not exceed four. A wall of two hours fire rating shall separate individual shafts in a bank.

(e) Lift car door shall have a fire resistance rating of 1 hour.

(f) For buildings 12 m. and above in height, collapsible gates shall not be permitted for lifts and solid doors with fire resistance of at least one hour shall be provided.

(g) If the lift shaft and lobby is in the core of the building a positive pressure between 25 and 30 Pascal9 (pa) shall be maintained in the lobby and a possible pressure of 50 Pascal (pa) shall be maintained in the lift shaft. The mechanism for the pressurization shall act automatically with the fire alarm/sprinkler system and it shall be possible to operate this mechanically also.

(h) Exit from the lift lobby, if located in the core of the building, shall be through a self-closing fire smoke check door of one-hour fire resistance.

(i) Lift shall not normally communicate with the basement. If however, lifts are in communication, the lift lobby of the basement shall be pressurized as in (g) with self closing door as in (h).

(j) Grounding switch (es), at ground floor level shall be provided to enable the fire service to ground the lifts.

(k) Telephone/talk back communication facilities may be provided in lift cars for communication system and lifts shall be connected to the fire control room of the building.

(l) Suitable arrangements such as providing slope in the floor of the lift lobby shall be made to prevent water used during fire fighting, etc at any landing from entering the lift shafts.

(m) A sign shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall also contain a plan for each floor showing the location of the stairways. Floor marking shall be done at each floor on the wall in front of the lift-landing door.

(n) Alternate power supply shall be provided in all the lifts.

7.10.2 Fire Lift

Following details shall apply for a fire lift in addition to above requirements:

(a) To enable fire service personnel to reach the upper floors with the minimum delay, one or more of the lifts shall be so designed so as to be available for the exclusive use of the fireman in an emergency and be directly accessible to every dwelling/lettable floor space on each floor.

(b) The lift shall have a floor area of not less than 1.4 sq.mt. It shall have a loading capacity of not less than 545 kg. (8 persons lift) with automatic closing doors.

(c) The electric supply shall be on a separate service from electric supply mains in a building and the cables run in a route safe from fire that is within a lift shaft. Lights and fans in the elevator having wooden paneling or sheet steel construction shall be operated on 24-volt supply.

(d) In case of failure of normal electric supply, it shall automatically switchover to the alternate supply. For apartment houses, this changeover of supply could be done through manually operated changeover switch. Alternatively, the lift should be so wired that in case of power failure, it comes down at the ground level and comes to stand still with door open.

(e) The operation of a fire lift shall by a single toggle of two-button switch situated in a glass-fronted box adjacent to the lift at the entrance level. When the switch is on landing; call points will become inoperative and the lift will be on car control only or on a priority control device. When the switch is off, the lift will return to normal working. This lift can be used by the occupants in normal times.

(f) The words 'F1RE LIFT' shall be conspicuously displayed in fluorescent paint on the lift landing doors at each floor level.

(g) The speed of the fire lift shall be such that it can reach to the top floor from ground level within one minute.

7.11 BASEMENT

As provided in Chapter- 3 and Building Bye-laws 4.5.5

7.11.1 Requirements

(i) The access to the basement shall be either from the main or alternate staircase providing access and exit from higher floors. Where the staircase is continue the same shall be enclosed type serving as a fire separation from the basement floor and higher floors. Open ramps shall be permitted if they are constructed within the building line subject to the provision of the (iv).

(ii) In case of basement for office, sufficient number of exit ways and access ways shall be provided with a travel distance not more than 15.0 m. The travel distance in case of dead-end shall be 7.5 m.

(iii) The basement shall be partitioned and in no case compartment shall be more than 500 sq m. and less than 50 sq m. area except parking. Each compartment shall have ventilation standards as laid down in Building Bye-laws separately and independently. The partition shall be made in consultation with Director Fire service.

(iv) The first basement (immediately below ground level) can be used for services/parking/other permissible services. Lower basement, if provided, shall exclusively be used for car parking only.

(v) Each basement shall be separately ventilated. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills or breakable starboard lights or pavement lights or by way of shafts. Alternatively a system of air inlets shall be provided at basement floor level and smoke outlets at basement ceiling level. Inlets and extracts may be terminated at ground level with starboard or pavement lights as before. But ducts to convey fresh air to the basement floor level have to be laid. Starboard and pavement lights should be in positions easily accessible to the firemen and clearly marked "SMOKE OUTLET" or AIR INLET" with an indication of area served at or near the opening.

(vi) The staircase of basement shall be of enclosed type having fire resistance of not less than two hours and shall be situated at the periphery of the basement to be entered at ground level only from the open air and in such positions that smoke from any fire in the basement shall not obstruct any exit serving the ground and upper stories of the building and shall communicate with basement through a lobby provided with fire resisting self closing door of one hour rating. In case of basement being used as car parking only, the travel distance shall be 45 m.

(vii) In multi-storeyed basements, intake duct may serve all basements levels, but each basement and basement compartment shall have separate smoke outlet duct or ducts. Mechanical extractors for smoke venting system from lower basement levels shall also be provided. The system shall be of such design as to operate on actuation of smoke, heat sensitive detectors/sprinklers, if installed, and shall have a considerably superior performance compared to the standard units. It shall also have an arrangement to start it manually.

(viii) Mechanical extractors shall have an internal locking arrangement so that extractors shall continue to operate and supply fans shall stop automatically with the actuation of fire

detectors. Mechanical extractors shall be designed to permit 30 air changes per hour in case of fire or distress call. However, for normal operation, only 30 air changes or any other convenient factor can be maintained.

(ix) Mechanical extractors shall have an alternate source of power supply.

(x) Ventilating ducts shall be integrated with the structure and made out of brick masonry or RCC as far as possible and when this duct crosses the transformer area of electrical switchboard, fire dampers shall be provided.

(xi) Kitchens working on gas fuel shall not be permitted in basement/sub-basement.

(xii) If cutouts are provided from basement to the upper floors or to the atmosphere, all side cutout openings in the basements shall be protected by sprinkler heads at closed spacing so as to form a water curtain in the event of a fire.

(xiii) Dewatering pump shall be provided in all basements.

7.12 SERVICE DUCTS/REFUGE CHUTE

(a) Service duct shall be enclosed by walls and door, if any, of 2 hours fire rating. If ducts are larger than 10 sq m. the floor should seal them, but provide suitable opening for the pipes to pass through, with the gaps sealed.

(b) A vent opening at the top of the service shaft shall be provided between one-fourth and one-half of the area of the shaft. Refuge chutes shall have an outlet at least of wall of non-combustible material with fire resistance of not less than two hours. They shall not be located within the staircase enclosure or service shafts or air-conditioning shafts. Inspection panel and door shall be tight fitting with 1 hour fire resistance; the chutes should be as far away as possible from exits.

(c) Refuge chutes shall not be provided in staircase walls and A/C shafts etc.

7.13.1 ELECTRICAL SERVICES

Electrical Services shall conform to the following:

(a) The electric distribution cables/wiring shall be laid in a separate duct which shall be sealed at every floor with non-combustible material having the same fire resistance as that of the duct. Low and medium voltage wiring running in shaft and in false ceiling shall run in separate conduits.

(b) Water mains, telephone wires, inter-com lines, gas pipes or any other service lines shall not be laid in ducts for electric cables.

(c) Separate conduits for water pumps, lifts, staircases and corridor lighting and blowers for pressuring system shall be directly from the main switch panel and these circuits shall be laid in separate conduit pipes, so that fire in one circuit will not affect the others. Master switches controlling essential service circuits shall be clearly labeled.

(d) The inspection panel doors and any other opening in the shaft shall be provided with airtight fire doors having fire resistance of not less then 1 hour.

(e) Medium and low voltage wiring running in shafts and within false ceiling shall run in metal conduits. Any 230 voltage wiring for lighting or other services, above false ceiling should have 660V grade insulation. The false ceiling including all fixtures used for its suspension shall be of non-combustible material.

(f) An independent and well-ventilated service room shall be provided on the 00ground floor with direct access from outside or from the corridor for the purpose of termination of electrical supply from the licenses service and alternative supply cables. The doors provided for the service room shall have fire resistance of not less than 1 hour

(g) Multi-Circuit Breaker (MCB) and Electric line Circuit Breaker (ELCB) shall be provided for electrical circuit.

7.15 STAIRCASE AND CORRIDOR LIGHTS

The staircase and corridor lighting shall be on separate circuits and shall be independently connected so that it could be operated by one switch installation on the ground floor easily accessible to fire fighting staff at any time irrespective of the position of the individual control of the light points, if any. It should be of miniature circuit breaker type of switch so as to avoid replacement of fuse in case of crisis.

(a) Staircase and corridor lighting shall also be connected to alternate source of power supply.

(b) Suitable arrangement shall be made by installing double throw switches to ensure that the lighting installed in the staircase and the corridor does not get connected to two sources of supply simultaneously. Double throw switch shall be installed in the service room for terminating the stand by supply.

(c) Emergency lights shall be provided in the staircase and corridor.

7.15 AIR-CONDITIONING

(a) Air- conditioning system should be installed and maintained so as to minimise the danger of spread of fire, smoke or fumes thereby from one floor of fire area to another or from outside into any occupied building or structure.

(b) Air -Conditioning systems circulating air to more than one floor area should be provided with dampers designed to close automatically in case of fire and thereby prevent spread of fire

or smoke. Such a system should also be provided with automatic controls to stop fans in case of fire, unless arranged to remove smoke from a fire, in which case these should be designed to remain in operation.

(c) Air- conditioning system serving large places of assembly (over one thousand persons), large departmental stores, or hostels with over 100 rooms in a single block should be provided with effective means for preventing circulation of smoke through the system in the case of fire in air filters or from other sources drawn into the system even though there is insufficient heat to actuate heat smoke sensitive devices controlling fans or dampers. Such means shall consist of approved effective smoke sensitive controls.

7.15.1 Air- Conditioning should conform to the following:

(a) Escape routes like staircase, common corridors, lift lobbies; etc should not be used as return air passage.

(b) The ducting should be constructed of metal in accordance with BIS 655:1963

(c) Wherever the ducts pass through fire walls or floor, the opening around the ducts should be sealed with fire resisting material of same rating as of walls / floors.

(d) Metallic ducts should be used even for the return air instead of space above the false ceiling.

(e) The material used for insulating the duct system (inside or outside) should be of flame resistant (IS 4355: 1977) and non-conductor of heat.

(f) Area more than 750 sq m. on individual floor should be segregated by a firewall and automatic fire dampers for isolation should be provided.

(g) In case of more than one floor, arrangement by way of automatic fire dampers for isolating the ducting at every floor from the floor should be made. Where plenums used for return air passage, ceiling and its features and air filters of the air handling units, these should be flame resistant. Inspection

panels should be provided in the main trenching. No combustible material should be fixed nearer than 15 cm. to any duct unless such ducting is properly enclosed and protected with flame resistant material

(h) In case of buildings more than 12 m. in height, in non-ventilated lobbies, corridors, smoke extraction shaft should be provided.

7.15.2 Fire Dampers

(a) These shall be located in air ducts and return air ducts/passages at the following points:

(i) At the fire separation wall.

(ii) Where ducts/passages enter the central vertical shaft.

(iii) Where the ducts pass through floors.

(iv) At the inlet of supply air duct and the return air duct of each compartment on every floor.

(b) The dampers shall operate automatically and shall simultaneously switch off the air- handling fans. Manual operation facilities shall also be provided.

Note: For blowers, where extraction system and dust accumulators are used, dampers shall be provided.

(c) Fire/smoke dampers (for smoke extraction shafts) for building more than 24 m. in height.

For apartment houses in non-ventilated lobbies /corridor operated by detection system and manual control sprinkler system.

For other buildings on operation of smoke/ heat detection system and manual control/sprinkler system.

(d) Automatic fire dampers shall be so arranged so as to close by gravity in the direction of air movement and to remain tightly closed on operation of a fusible link.

7.16 BOILER ROOM

Provisions of boiler and boiler rooms shall conform to Indian Boiler Act. Further, the following additional aspects may be taken into account in the location of boiler/ boiler room

(a) The boiler shall not be allowed in sub-basement, but may be allowed in the basement away from the escape routes.

(b) The boilers shall be installed in a fire resisting room of 4 hours fire resistance rating, and this room shall be situated on the periphery of the basement. Catch pits shall be provided at the low level.

(c) Entry to this room shall be provided with a composite door of 2 hours fire resistance.

(d) The boiler room shall be provided with fresh air inlets and smoke exhaust directly to the atmosphere.

(e) The furnace oil tank for the boiler if located in the adjoining room shall be separated by fire resisting wall of 4 hours rating. The entrance to this room shall be provided with double composite doors. A curb of suitable height shall be provided at the entrance in order to prevent the flow of oil into boiler room in case of tank rupture.

(f) Foam inlets shall be provided on the external walls of the building near the ground level to enable the fire services to use foam in case of fire.

7.17 ALTERNATE SOURCE OF ELECTRIC SUPPLY

A stand by electric generator shall be installed to supply power to staircase and corridor lighting circuits, lifts detection system, fire pumps, pressurization fans and bowlers, P.A system, exit sign, smoke extraction system, in case of failure of normal electric supply. The generator shall be capable of taking starting current of all the machines and circuits stated above simultaneously.

If the standby pump is driven by diesel engine, the generator supply need not be connected to the standby pump. The generator shall be automatic in operation.

7.18.1 SAFETY MEASURES IN ELECTRIC SUB-STATION

(1) Clear independent approach to the sub-station from outside the building shall be made available round the clock

(2) The approaches/corridors to the sub-station area shall be kept clear for movement of men and material at all times.

(3) The sub-station space is required to be provided with proper internal lighting arrangements.

(4) In addition to natural ventilation proper ventilation to the sub-station area is to be provided by grill shutters and exhaust fans at suitable places so as to discharge all smoke from the sub-station without delay in case of fire so that sub-station operations can be carried out expeditiously.

(5) Cable trenches of 0.6 m. X 0.6 m. dummy floor of 0.6 mt. depth shall be provided to facilitate laying of cable inside the building for connecting to the equipment.

(6) Steel shutters of 8'X 8' with suitable grills shall be provided for transformers and sub-station room.

(7) The floor of the sub-station should be capable of carrying 10 tons of transformer weight on wheels.

(8) Built up substation space is to be provided free of cost.

(9) Sub-station space should be clear from any water, sewer, air conditioning, and gas pipe or telephone services. No other service should pass through the sub station space or the cable trenches.

(10) Proper ramp with suitable slope may be provided for loading and unloading of the equipment and proper approach will be provided.

(11) RCC pipes at suitable places as required will be provided for the cable entries to the sub station space and making suitable arrangement for non-ingress of water through these pipes.

(12) The sub station space is to be provided in the approved/sanctioned covered area of the building.

(13) Any other alteration /modification required while erection of the equipment will be made by the Owner / builder at site as per requirement.

(14) Adequate arrangement for fixing chain pulley block above the fixing shall be made available for load of 15 tons.

(15) Provision shall be kept for the sumps so as to accommodate complete volume of transformer oil, which can spillover in the event of explosion of the transformer in the basement of the building. Sufficient arrangement should exist to avoid fire in the sub-station building from spread of the oil from the sumps.

(16) Arrangement should be made for the provision of fire retardant cables so as to avoid chances of spread of fire in the sub-station building.

(17) Sufficient pumping arrangement should exist for pumping the water out, in case of fire so as to ensure minimum loss to the switchgear and transformer.

(18) No combustible material should be stacked inside the substation premises or in the vicinity to avoid chances of fire.

(19) It should be made mandatory that the promoters of the multi-storeyed building should get substation premises inspected once a year to get their license revalidated for the provision of electric supply from Electricity Board so that suitable action can be taken against the Owner / Builder in case of non-implementation of the Building Bye-laws.

(20) The sub-station must not be located below the 1st basement and above the ground floor.

(21) The sub station space should be totally segregated from the other areas of the basement by fire resisting wall. The ramp

should have a slope of 1 : 10 with entry from ground level. The entire Sub-station space including the entrance at ground floor be handed over to the licensee of electricity free of cost and rent.

(22) The sub-station area shall have a clear height of 12 feet (3.65 m.) below beams. Further the Sub-station area will have level above the rest of basement level by 2 feet.

(23) It is to be ensured that the Sub-station area is free of seepage / leakage of water.

(24) The licensee of electricity will have the power to disconnect the supply of the building in case of violation of any of the above points.

(25) Electric sub station enclosure must be completely segregated with 4-hours fire rating wall from remaining part of basement.

(26) The Sub-station should be located on periphery /sub basement and (not above ground floor).

(27) Additional exit shall be provided if travel distance from farthest corner to ramp is more than l5 m.

(28) Perfect independent vent system 30 air changes per hour linked with detection as well as automatic high velocity water spray system shall be provided.

(29) All the transformers shall be protected with high velocity water spray system / Nitrogen Injection System, Carbon Dioxide total flooding system in case of oil filled transformer. In addition to this, manual control of auto high velocity spray system for individual transformers shall be located outside the building at ground floor.

(30) Suitable arrangement for pump house, water storage tanks with main electrical pump and a diesel-operated pump shall be made if no such arrangement is provided in the building. In case the water pumping facilities are existing in the building for sprinkler system, the same should however be utilized for high velocity water spray system. Alternatively automatic CO2 total

flooding system shall be provided with manual controls outside the electric sub-station.

(31) System shall have facility to give an audio alarm in the basement as well as at the control room.

(32) Fire control room shall be manned round the clock.

(33) The electric sub station shall have electric supply from alternate source for operation of vent System lighting arrangements.

(34) Cable trenches shall be filled with sand

(35) Party walls shall be provided between two transformers as per the rules.

(36) Electric control panels shall be segregated.

(37) Exits from basement electric substation shall have self-closing fire smoke check doors of 2-hours fire rating near entry to ramp.

(38) All openings to lower basement or to ground floor shall be sealed properly.

(39) Yearly inspection shall be carried out by electrical load sanctioning Authority.

(40) Ramp to be designed in a manner that in case of fire no smoke should enter the main building.

(41) Electric sub station transformer shall have clearance on all sides as per BBL/relevant electric rules.

(42) Other facility will be as per Building Bye-laws and relevant electric rules.

(43) Rising electrical mains shall consist of metal bus bars suitably protected from safety point of view.

(44) Oil less transformer shall be preferred.

7.19.1. FIRE PROTECTION REQUIREMENTS

Buildings shall be planned, designed and constructed to ensure fire safety and this sha1l be done in accordance with part IV Fire Protection of National Building Code of India, unless otherwise specified in this Building Bye-laws. In the case of buildings (identified in Building Bye-laws No. 7.1) the building schemes shall also be cleared by the Director Fire service .

7.19.1 First Aid /Fixed Fire Fighting /Fire Detection Systems and other Facilities

Provision of fire safety arrangement for different occupancy from. SI no. 1 to 23 as indicated below shall be as per Annexure 'A' 'B' & 'C'.

(1) Access
(2) Wet Riser
(3) Down Comer
(4) Hose Reel
(5) Automatic Sprinkler System
(6) Yard Hydrant
(7) U.G. Tank with Draw off Connection
(8) Terrace Tanks
(9) Fire Pump
(10) Terrace Pump
(11) First Aid Fire Fighting Appliances
(12) Auto Detection System
(13) Manual operated Electrical Fire Alarm System
(14) P.A System with talk back facility
(15) Emergency Light
(16) Auto D.G. Set
(17) Illuminated Exit Sign
(18) Means of Escape
(19) Compartimentation
(20) MCB /ELCB
(21) Fire Man Switch in Lift
(22) Hose Boxes with Delivery Hoses and Branch
(23) Pipes Refuge Area

1.1.1.5

1.1.1.6 Note for Annexure ‘A’ ‘B’ & ‘C’

(1) Where more than one riser is required because of large floor area, the quantity of water and pump capacity recommended in these Annexures should be finalized in consultation with the Director Fire service .

(2) The above quantities of water shall be exclusively for fire fighting and shall not be utilized for domestic or other use.

(3) A facility to boost up water pressure in the riser directly from the mobile pump shall be provided in the wet riser, down comer system with suitable fire service inlets (collecting head) with 2 to 4 numbers of 63 mm inlets for 100-200 mm dia main, with check valve and a gate valve.

(4) Internal diameter of rubber hose for reel shall be minimum 20 mm. A shut off branch with nozzle of 5 mm. size shall be provided.

(5) Fire pumps shall have positive suctions. The pump house shall be adequately ventilated by using normal/mechanical means. A clear space of 1.0 m. shall be kept in between the pumps and enclosure for easy movement /maintenance. Proper testing facilities and control panel etc. shall be provided.

(6) Unless otherwise specified in Building Bye-laws, the fire fighting equipments /installation shall conform to relevant Indian Standard Specification.

(7) In case of mixed occupancy, the fire fighting arrangement shall be made as per the highest class of occupancy.

(8) Requirement of water based first aid fire extinguishers shall be reduced to half if hose reel is provided in the Building.

7.20 STATIC WATER STORAGE TANK

(a) A satisfactory supply of water exclusively for the purpose of fire fighting shall always be available in the form of

underground static storage tank with capacity specified in Annexure-A with arrangements of replenishment by town's main or alternative source of supply @ 1000 liters per minute. The static storage water supply required for the above mentioned purpose should entirely be accessible to the fire tenders of the local fire service. Provision of suitable number of manholes shall be made available for inspection repairs and insertion of suction hose etc. The covering slab shall be able to withstand the vehicular load of 45 tonnes in case of high rise and 22 tonnes in case of low rise buildings. A draw off connection shall be provided. The slab need not strengthened if the static tank is not located in mandatory set- back area.

(b) To prevent stagnation of water in the static water tank the suction tank of the domestic water supply shall be fed only through an over flow arrangement to maintain the level therein at the minimum specified capacity.

(c) The static water storage tank shall be provided with a fire brigade collecting branching with 4 Nos. 63mm dia instantaneous male inlets arranged in a valve box with a suitable fixed pipe not less than 15 cm dia to discharge water into the tank. This arrangement is not required where down comer is provided.

7.21 AUTOMATIC SPRINKLERS

Automatic sprinkler system shall be installed in the following buildings:

(a) All buildings of 12 m. and above in height.

(b) Hotels below l2 m. in height and above 1000 sq m. built up area at each floor and or if basement is existing.

(c) All hotels, mercantile, and institutional buildings of 12 m. and above.

(d) Mercantile building having basement more than one floor but below 15 m. (floor area not exceeding 750 sq m.)

(e) Underground Shopping Complex.

(f) Underground car / scooter parking /enclosed car parking.

(g) Basement area 200 sq m. and above.

(h) Any special hazards where the Chief Fire Officer considers it necessary.

(i) For buildings up to 24 m. in height where automatic sprinkler system is not mandatory as per this Building Bye-laws, if provided with sprinkler installation following relaxation may be considered.

  (i) Automatic heat/smoke detection system and M.C.P. need not be insisted upon.

  (ii) The number of Fire Extinguisher required shall be reduced by half.

7.22 FIXED CARBON DI-OXIDE / FOAM / DCO WATER SPRAY EXTINGUISHING SYSTEM

Fixed extinguishing installations shall be provided as per the relevant specifications in the premises where use of above extinguishing media is considered necessary by the Director Fire service .

7.23 FIRE ALARM SYSTEM

All buildings of 12 m. and above in height shall be equipped with fire alarm system, and also residential buildings (Dwelling House, Boarding House and Hostels) above 12 m. height.

(a) All residential buildings like dwelling houses (including flats) boarding houses and hostels shall be equipped with manually operated electrical fire alarm system with one or more call boxes located at each floor. The location of the call boxes shall be decided after taking into consideration their floor without having to travel more than 22.5 m.

(b) The call boxes shall be of the break glass type without any moving parts, where the call is transmitted automatically to the

control room without any other action on the part of the person operating the call boxes.

(c) All call boxes shall be wired in a closed circuit to a control panel in a control room, located as per Building Bye-laws so that the floor number from where the call box is actuated is clearly indicated on the control panel. The circuit shall also include one or more batteries with a capacity of 48 hours normal working at full load. The battery shall be arranged to be a continuously trickle charged from the electric mains.

(d) The call boxes shall be arranged to sound one or more sounders so as to ensure that all occupants of the floor shall be warned whenever any call box is actuated.

(e) The call boxes shall be so installed that they do not obstruct the exit ways and yet their location can easily be noticed from either direction. The base of the call box shall be at a height of 1.5 m. from the floor level.

(f) All buildings other than as indicated above shall, in addition to the manually operated electrical fire alarm system, be equipped with an automatic fire alarm system.

(g) Automatic detection system shall be installed in accordance with the relevant standard specifications. In buildings where automatic sprinkler system is provided, the automatic detection system may not be insisted upon unless decided otherwise by the Director Fire service.

Note: Several type of fire detectors are available in the market but the application of each type is limited and has to be carefully considered in relation to the type of risk and the structural features of the building where they are to be installed.

7.24 CONTROL ROOM

There shall be a control room on the entrance floor of the building with communication system (suitable public address system) to all floors and facilities for receiving the message from different floors. Details of all floor plans along with the details of fire fighting equipment and installation shall be maintained in the Control Room. The Control Room shall also have facility to detect the fire on any floor through indicator boards connecting fire detection and alarm system on all floors. The staff in charge of the Control Room shall be responsible for the maintenance of the various services and fire fighting equipment and installation. The Control Room shall be manned round the clock by trained fire fighting staff.

7.25 FIRE DRILLS AND FIRE ORDERS

The guidelines for fire drill and evacuation etc. for high-rise building may be seen in Appendix (B) of National Building Code part IV. All such building shall prepare the fire orders duly approved by the Director Fire service.

7.26 A qualified fire officer and trained staff shall be appointed for the following buildings.

(a) All high rise buildings above20 m. in height where covered area of one floor exceeds 1000 sq m. except apartments / group housing.

(b) All hotels, identified under classification three stars and above category by Tourism Department and all hotels above 12 m. in height with 150 beds capacity or more without star category.

(c) All hospital building of 12 m. and above or having number of beds exceeding 100.

(d) Underground shopping complex where covered area exceeds 1000 sq m.

(e) All high hazard industries.

(f) Any other risk which Chief Fire Officer considers necessary.

7.27 The lightening protection warning light (red) for high-rise buildings shall be provided in accordance with the relevant standard. The same shall be checked by electrical department.

7.28 MATERIAL USED FOR CONSTRUCTION OF BUILDING

(a) The combustible/flammable material shall not be used for partitioning, wall paneling, false ceiling etc. Any material giving out toxic gases/smoke if involved in the fire shall not be used for partitioning of a floor or wall paneling or a false ceiling etc. The surface frames spread of the lining material shall conform to class-I of the standard specification. The framework of the entire false ceiling should be provided with metallic sections and no wooden framework shall be allowed for paneling/false ceiling.

(b) Construction features/elements of structures shall conform to National Building Code and BIS code

7.29 LPG

The use of LPG shall not be permitted in the high-rise building except residential/hotel/hostel/kitchen/pantry (if any) and shall be located at the periphery of the building on the ground level.

7.30 HOUSE KEEPING

A high standard of house keeping must be insisted upon by all concerned. There must be no laxity in this respect. It must be borne in

mind that fire safety is dependent to a large extent upon good housekeeping.

7.30.1 Good House-Keeping includes the following:-

(a) Maintaining the entire premises in neat and clean condition.

(b) Ensuring that rubbish and combustible material are not thrown about or allowed to accumulate, even in small quantity, in any portion of the building. Particular attention must be paid to corners and places hidden from view.

(c) Providing metal receptacles/waste paper basket (of non-combustible material) at suitable locations for disposal of waste. Separate receptacles must be provided for disposal of cotton rags/waste, wherever it is generated, these must under no circumstances be left lying around in any portion of the building.

(d) Ensuring that receptacles for waste are emptied at regular intervals and the waste removed immediately for safe disposal outside the building.

(e) Ensuring that all doors/fixtures are maintained in good repairs, particular attention must be paid to self-closing fire smoke check doors and automatic fire/doors/rolling shutters.

(f) Ensuring that self-closing fire/smoke check doors close properly and that the doors are not wedged open.

(g) Ensuring that the entire structure of the building is maintained in good repairs.

(h) Ensuring that all electrical and mechanical service equipments are maintained in good working condition at all times.

(i) Ensuring that Cars / Scooters etc. are parked systematically in neat rows. It is advisable to mark parking lines on the ground in the parking areas near the building and in the parking area on ground floor and in basement(s); as applicable, inside the

building. A parking attendant must ensure that vehicles are parked in an orderly manner and that the vehicles do not encroach upon the open space surrounding the building.

7.30.2. Smoking Restrictions

(a) Smoking shall be prohibited throughout the basement(s) and in all areas where there is a profusion of combustible materials. Easily readable "NO SMOKING" signs must be conspicuously posted at locations where they can catch the eye. Each sign must also include a pictograph. The sign may also be illuminated.

(b) In all places where smoking is permitted ashtrays, half filled with water, must be placed on each table/at each other suitable locations for safe disposal of spent smoking material. The design of the ashtrays must be such that they cannot easily topple over. If, for any reason, this is not practicable a minimum of one metal bucket or other non-combustible container half filled with water must be provided in each compartment for disposal of spent smoking materials.

7.30.3 Limiting the Occupant Load in Parking and Other Areas of Basement(s)

Where parking facility is provided in the basement(s) no person other than the floor-parking attendant may be allowed to enter and remain in the parking areas except for parking and removal of Cars/Scooters. Regular offices must not be maintained in the storage /parking area in the basement(s). The stores / godowns must be opened for the limited purpose of keeping or removing stores.

No person other than those on duty may be permitted in the air-conditioning plant room(s), HL/LT switch room, transformer compartment, control room pump-house, generator room, stores and records etc.

7.31 FIRE PREVENTION

In addition to the measures recommended above, the following fire prevention measures must be implemented when the building is in occupation.

(a) Storage of flammable substances, such as diesel oil, gasoline, motor oils, etc must not be allowed anywhere within the building. The only exception to this rule may be:

  (i) Storage of diesel oil in a properly installed tank in a fire-resisting compartment in the generator room;

  (ii) Diesel oil, gasoline, motor oil etc, filled in the vehicle tanks.

(b) Preparation of tea and warming of food must be prohibited throughout the building.

(c) Where heaters are used during winters, the following precautions must be taken.

  (i) All heaters, except convector heaters, must be fitted with guards.

  (ii) Heaters must not be placed in direct contact with or too close to any combustible material.

  (iii) Heaters must be kept away from curtains to ensure that the latter do not blow over the heater accidentally.

  (iv) Heaters must not be left unattended while they are switched on.

  (v) Defective heaters must be immediately removed from service until they have been repaired and tested for satisfactory performance.

  (vi) Use of heaters must be prohibited in the entire basement, fire control room and in all weather maker rooms throughout the building. Also in all places where there is profusion of combustible flammable materials.

(d) Use of candles or other naked light flame must be forbidden throughout the building, except in the offices (for sealing letters only) and kitchen. When candles/ spirit lamps are used for sealing letters/packets, extreme

care must be take to ensure that paper do not come in direct contact with the naked flame and the candle/spirit lamp does not topple over accidentally while still lighted. All candles/spirit lamps kitchen fires must be extinguished when no longer required.

(e) Fluorescent lights must not be directly above the open file racks in offices/record rooms. Where this is unavoidable, such lights must be switched on only for as long as they are needed.

(f) Filling up of old furniture and other combustible materials such as scrap paper, rags, etc. must not be permitted anywhere in the building. These must be promptly removed from the building.

(g) More than one portable electrical appliance must not be connected to any single electrical outlet.

(h) Used stencils, ink smeared combustible materials and empty ink tubes must not be allowed to accumulate in rooms/compartments where cyclostyling is done. These must be removed and disposed off regularly.

(i) All shutters/doors of main switch panels and compartments/shafts for electrical cables must be kept locked.

(j) Aisles in record rooms and stores must have a clear uniform width of not less than 1.0 m. Racks must not be placed directly against the wall/partition.

(k) In record rooms, offices and stores, a clear space of not less than 30 cm. must be maintained between the top-most stack of stores/records and the or lighting fittings whichever is lower.

(l) A similar clearance, and at (k) above must be maintained from fire detectors.

(m) Fire detectors must not be painted under any circumstances and must also be kept free from lime/distemper.

(n) Records must not be piled/dumped on the floor.

(o) Welding or use of blow torch shall not be permitted inside the building, except when it is done under strict supervision and in full conformity with the requirements laid down in IS: 3016-1966 code of practice for fire precautions in welding and cutting operation.

(p) Printing ink/oil must not be allowed to remain on the floor, the floor must be maintained in a clean condition at all times.

7.32 OCCUPANCY RESTRICTIONS

(a) The premises leased to any party shall be used strictly for the purpose for which they are leased.

(b) No dangerous trade/practices (including experimenting with dangerous chemicals) shall be carried on in the leased premises;

(c) No dangerous goods shall be stored within the leased premises.

(d) The common/public corridor shall be maintained free of obstructions, and the lessee shall not put up any fixtures that may obstruct the passage in the corridor and/or shall not keep any wares, furniture or other articles in the corridor.

(e) The penalty for contravention of the condition laid down above must be immediate termination of lease and removal of all offending materials.

(f) Regular inspection and checks must be carried out at frequent intervals to ensure compliance with conditions above.

Chapter-8

CONSERVATION OF HERITAGE SITES INCLUDING HERITAGE BUILDINGS, HERITAGE PRECINCTS AND NATURAL FEATURE AREAS.

Conservation of heritage sites shall include buildings, artifacts, structures, areas and precincts of historic, aesthetic, architectural, cultural or environmentally significant nature (heritage buildings and heritage precincts), natural feature areas of environmental significance or sites of scenic beauty.

8.1 APPLICABILITY

This regulation shall apply to heritage sites which shall include those buildings, artifacts, structures, streets, areas and precincts of historic, architectural, aesthetic, cultural or environmental value (hereinafter referred to as Listed Heritage Buildings / Listed Heritage Precincts) and those natural feature areas of environmental significance or of scenic beauty including, but not restricted to, sacred groves, hills, hillocks, water bodies (and the areas adjoining the same), open areas, wooded areas, points, walks, rides, bridle paths (hereinafter referred to as ‘listed natural feature areas’) which shall be listed in

notification(s) to be issued by the State Government.

8.1.1 Definitions

(a) “Heritage building” means and includes any building of one or more premises or any part thereof and/or structure and/or artifact which requires conservation and / or preservation for historical and / or architectural and / or artisanary and /or aesthetic and/or cultural and/or environmental and/or ecological purpose and includes such portion of land adjoining such building or part thereof as may be required for fencing or covering or in any manner preserving the historical and/or architectural and/or aesthetic and/or cultural value of such building.

(b) “Heritage Precincts” means and includes any space that requires conservation and /or preservation for historical and / or architectural and/or aesthetic and/or cultural and/or environmental and/or ecological purpose. Walls or other boundaries of a particular area or place or building or may enclose such space by an imaginary line drawn around it.

(c) “Conservation” means all the processes of looking after a place so as to retain its historical and/or architectural and/or aesthetic and/or cultural significance and includes maintenance, preservation, restoration, reconstruction and adoption

or a combination of more than one of these.

(d) “Preservation” means and includes maintaining the fabric of a place in its existing state and retarding deterioration.

(e) “Restoration” means and includes returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without introducing new materials.

(f) “Reconstruction” means and includes returning a place as nearly as possible to a known earlier state and distinguished by the introduction of materials (new or old) into the fabric. This shall not include either recreation or conjectural reconstruction.

8.2 RESPONSIBILITY OF THE OWNERS OF HERITAGE BUILDINGS

It shall be the duty of the owners of heritage buildings and buildings in heritage precincts or in heritage streets to carry out regular repairs and maintenance of the buildings. The State Government, the Local Bodies and Authorities concerned shall not be responsible for such repair and maintenance except for the buildings owned by the Government and the Urban Local Bodies.

8.3 RESTRICTIONS ON DEVELOPMENT / RE-DEVELOPMENT / REPAIRS ETC.

(i) No development or redevelopment or engineering operation or additions / alterations, repairs, renovations including painting of the building, replacement of special features or plastering or demolition of any part thereof of the said listed buildings or listed precincts or listed natural feature areas shall be allowed except with the prior permission of Commissioner, Urban Local Bodies/Authority. Before granting such permission, the agency concerned shall consult the Heritage Conservation Committee to be appointed by the State Government and shall act in according with the advice of the Heritage Conservation Committee.

(ii) Provided that, before granting any permission for demolition or major alterations / additions to listed buildings (or buildings within listed streets or precincts), or construction at any listed natural features, or alteration of boundaries of any listed natural feature areas, objections and suggestions from the public shall be invited and shall be considered by the Heritage Conservation Committee.

(iii) Provided that, only in exceptional cases, for reasons to be recorded in writing, the Commissioner, Urban Local Bodies/ Authority may refer the matter back to the Heritage Conservation Committee for reconsideration.

However, the decision of the Heritage Conservation Committee after such reconsideration shall be final and binding.

8.4 PENALTIES

Violation of the regulations shall be punishable under the provisions regarding unauthorized development. In case of proved deliberate neglect of and/or damage to Heritage Buildings and Heritage Precincts, or if the building is allowed to be damaged or destroyed due to neglect or any other reason, in addition to penal action provided under the concerned Act, no permission to construct any new building shall be granted on the site if a Heritage Building or Building in a Heritage Precinct is damaged or pulled down without appropriate permission from Commissioner, Urban Local Bodies/Authority.

It shall be open to the Heritage Conservation Committee to consider a request for re-building/reconstruction of a Heritage Building that was unauthorizedly demolished or damaged, provided that the total built-up area in all floors put together in such new construction is not in excess of the total built-up area in all floors put together in the original Heritage Building in the same form and style in addition to other controls that may be specified.

8.5 PREPARATION OF LIST OF HERITAGE SITES INCLUDING HERITAGE BUILDINGS, HERITAGE PRECINCTS AND LISTED NATURAL FEATURE AREAS

The list of heritage sites including Heritage Buildings, Heritage Precincts and listed Natural Features Areas is to be prepared and supplemented by the Commissioner, Urban Local

Bodies / Authority on the advice of the Heritage Conservation Committee. Before being finalized, objections and suggestions of the public are to be invited and considered. The said list to which the regulation applies shall not form part of this regulation for the purpose of Building Bye-laws. The list may be supplemented from time to time by Government on receipt of proposal from the agency concerned or by Government *suo moto* provided that before the list is supplemented, objections and suggestions from the public be invited and duly considered by the Commissioner, Urban Local Bodies,/ Authority and the Heritage Conservation Committee.

When a building or group of buildings or natural feature areas are listed it would automatically mean (unless otherwise indicated) that the entire property including its entire compound / plot boundary along with all the subsidiary structures and artifacts, etc. within the compound/plot boundary, etc. shall form part of list.

8.6 ALTERATION / MODIFICATION / RELAXATION IN DEVELOPMENT NORMS

On the advice of the said Heritage Conservation Committee to be appointed by the Government and for reasons to be recorded in writing, the Commissioner, Urban Local Bodies/ Authority shall

follow the procedure as per Urban & Country Planning Act, 2007 to alter, modify or relax the Development Control Norms prescribed in the Master Plan, if required, for the conservation or preservation or retention of historic or aesthetic or cultural or architectural or environmental quality of any heritage site.

8.7 HERITAGE PRECINCTS / NATURAL FEATURE AREAS

In cases of streets, precincts, areas and (where deemed necessary by the Heritage Conservation Committee) natural feature areas notified, development permissions shall be granted in accordance with the special separate regulation prescribed for respective streets, precincts / natural feature areas which shall be framed by the Commissioner, Urban Local Bodies / Authority on the advice of the Heritage Conservation Committee.

Before finalizing the special separate regulations for precincts, streets, natural features, areas, the draft of the same shall be published in the Official Gazette and in leading newspapers for the purpose of inviting objections and suggestions from the public. All objections and suggestions received within a period of 30 days from the date of publication in the official gazette shall be considered by the Commissioner, Urban Local Bodies/ Authority and Heritage Conservation Committee.

After consideration of the above suggestions and objections, the agency concerned**,** acting on the advice of the Heritage Conservation Committee shall modify (if necessary) the aforesaid draft separate

regulations for streets, precincts, areas and natural features and forward the same to Government for notification.

8.8 ROAD WIDENING

Widening of the existing roads under the Master Plan of the City or Town / Zonal Development Plan or in the Layout Plan shall be carried out considering the existing heritage buildings (even if they are not included in a Heritage Precinct) or which may affect listed natural features areas.

8.9 INCENTIVE USES FOR HERITAGE BUILDINGS

In cases of buildings located in non-commercial use zones included in the Heritage Conservation List, if the owner / owners agree to maintain the listed heritage building as it is in the existing state and to preserve its heritage state with due repairs and the owner / owners / lessees give a written undertaking to that effect, the owner / owners / lessees may be allowed with the approval of the Heritage Conservation Committee within permissible use zone to convert part or whole thereof of the non-commercial area within such a heritage building to commercial/office use/hotel. Provided that if the heritage building is not maintained suitably or if the heritage value of the building is spoiled

in any manner, the commercial / office / hotel use shall be disallowed.

8.10 MAINTAINING SKYLINE AND ARCHITECTURAL HARMONY

After the guidelines are framed, buildings within heritage precincts or in the vicinity of heritage sites shall maintain the skyline in the precinct and follow the architectural style (without any high-rise or multi-storeyed development) as may be existing in the surrounding area, so as not to diminish or destroy the value and beauty of or the view from the said heritage sites. The development within the precinct or in the vicinity of heritage sites shall be in accordance with the guidelines framed by the Commissioner, Urban Local Bodies/Authority and the advice of the Heritage Conservation Committee or separate regulations / guidelines, if any, prescribed for respective zones by Urban Local Bodies / Authority.

8.11 RESTRICTIVE COVENANTS

Restrictions existing as imposed under covenants, terms and conditions on the leasehold plots either by the State Government or Urban Local Bodies of the city/town or by Authority shall continue to be imposed in addition to Development Control Regulations. However, in case of any conflict with the heritage preservation interest/environmental conservation, this Heritage Regulation shall prevail.

8.12 GRADING OF THE LISTED BUILDINGS / LISTED PRECINCTS

Listed Heritage Buildings / Listed Heritage Precincts may be graded into three categories. The definition of these and basic guidelines for development permissions are as follows:

Listing does not prevent change of ownership or usage. However, change of use of such Listed Heritage Building / Listed Precincts shall not be permitted without prior approval of the Heritage Conservation Committee. Use should be in harmony with the said listed heritage site.

Grade-I	**Grade-II**	**Grade-III**
(A) Definition Heritage Grade-I **comprises buildings and precincts of national or historic importance, embodying excellence in architectural style, design, technology and material usage and/or aesthetics; they may be associated with a great historic event, personality, movement or institution. They have been and are the prime landmarks of the region.** All natural sites shall fall within Grade-I.	**Heritage Grade-II (A&B)** comprises of buildings and precincts of regional or local importance possessing special architectural or aesthetic merit, or cultural or historical significance though of a lower scale than Heritage Grade-I. They are local landmarks, which contribute to the image and identity of the region. They may be the work of master craftsmen or may be models of proportion and ornamentation or designed to suit a particular climate.	**Heritage Grade-III** comprises building and precincts of importance for townscape; that evoke architectural, aesthetic, or sociological interest though not as much as in Heritage Grade-II. These contribute to determine the character of the locality and can be representative of lifestyle of a particular community or region and may also be distinguished by setting, or special character of the façade and uniformity of height, width and scale.

(B) Objective: Heritage Grade-I richly deserves careful preservation.	Heritage Grade-II deserves intelligent conservation.	Heritage Grade-II deserves intelligent conservation (though on a lesser scale than Grade-II and special protection to unique features and attributes).
(C) Scope for Changes: No interventions be permitted either on exterior or interior of the heritage building or natural features unless it is necessary in the interest of strengthening and prolonging the life of the buildings/or precincts or any part or features thereof. For this purpose, absolutely essential and minimum changes would be allowed and they must be in conformity with the original.	*Grade-II(A):* Internal changes and adaptive re-use may by and large be allowed but subject to strict scrutiny. Care would be taken to ensure the conservation of all special aspects for which it is included in Heritage Grade-II. *Grade-II(B):* In addition to the above, extension or additional building in the same plot or compound could in certain circumstances, be allowed provided that the extension / additional building is in harmony with (and does not detract from) the existing heritage building(s) or precincts especially in terms of height and façade.	Internal changes and adaptive re-use may by and large be allowed. Changes can include extensions and additional buildings in the same plot or compound. However, any changes should be such that they are in harmony with and should be such that they do not detract from the existing heritage building/precinct.
(D) Procedure: Development permission for the changes would be given on the advice of the Heritage Conservation Committee.	Development permission for the changes would be given on the advice of the Heritage Conservation Committee.	Development permission for changes should be given on the advice of the Heritage Conservation Committee.
(E) Vistas / Surrounding Development: All development in areas surrounding Heritage Grade-I shall be regulated	All development in areas surrounding Heritage Grade-II shall be regulated and	All development in areas surrounding Heritage Grade-III shall be regulated and

and controlled, ensuring that it does not mar the grandeur of, or view from Heritage Grade-I.	controlled, ensuring that it does not mar the grandeur of, or view from Heritage Grade-II.	controlled, ensuring that it does not mar the grandeur of, or view from Heritage Grade-III.

8.13 OPINION OF THE HERITAGE CONSERVATION COMMITTEE

Nothing mentioned above should be deemed to confer a right on the owner / occupier of the plot to demolish or reconstruct or make alterations to his heritage building / buildings in a heritage precinct or on a natural heritage site if in the opinion of the Heritage Conservation Committee, such demolition / reconstruction /alteration is undesirable.

8.14 APPROVAL TO PRESEVE THE BEAUTY OF THE AREA

The Heritage Conservation Committee shall have the powers to direct, especially in areas designated by them, that the exterior design and height of buildings should have their approval to preserve the beauty of the area.

8.15 SIGNS AND OUTDOOR DISPLAY STRUCTURES / INCLUDING STREET FURNITURE ON HERITAGE SITES

Commissioner, Urban Local Bodies / Authority on the advice of the Heritage Conservation Committee shall frame regulations or guidelines to regulate signs, outdoor display structures and street furniture on heritage sites.

8.16 COMPOSITION OF HERITAGE CONSERVATION COMMITTEE

The Heritage Conservation Committee shall be appointed by the State Government comprising of:

(i) Secretary (UD, Housing and Town Planning) **Chairman**

(ii) Chief Town Planner/ Director, Town Planning **Member Secretary**

(iii) Structural Engineer having experience of ten years in the field and membership of the Institution of Engineers, India **Member**

(iv) Senior Architect PWD,AP registered with the Council Of Architecture **Member**

(v) Environmentalist having in-depth knowledge and experience of 10 years of the subject **Member**

(vi) Historian having knowledge of the region having 10 years experience in the field **Member**

(vii) Town Planner with valid registration. **Member**

(viii) Representative of State Archeological Department **Member**

(a) The Committee shall have the powers to co-opt upto three additional members who may have related experience.

(b) The tenure of the Chairman and Members other than Government Department / Local Bodies shall be three years.

The terms of reference of the Committee shall inter alia be:

(i) to advice the Commissioner, Urban Local Bodies/Authority whether development permission is to be granted under Building Bye-laws No.8.3 and the conditions of permission (vide BBL No. 8);

(ii) to prepare a supplementary list of heritage sites, which include buildings artifacts, structures, streets, areas, precincts of historic, aesthetic, architectural, cultural, or environmental significance and a supplementary list of natural feature areas of environmental significance, scenic beauty including but not restricted to sacred groves, hills, hillocks, water bodies (and the areas adjoining the

same), open areas, wooded areas, points, walks, rides, bridle paths etc. to which this Building Bye-Law shall apply.

(iii) to advise whether any relaxation, modification, alteration, or variance of any of the Building Bye-laws be made.

(iv) to frame special regulations / guidelines for precincts and if necessary for natural feature areas to advise the Commissioner, Urban Local Bodies/ Authority regarding the same;

(v) to advise whether to allow commercial / office/ hotel use in the (name of the areas) and when to terminate the same;

(vi) to advise the Commissioner, Urban Local Bodies / Authority in the operation of this Building Bye-laws to regulate or eliminate/erection of outside advertisements/bill boards/street furniture;

(vii) to recommend guidelines to the Commissioner, Urban Local Bodies / Authority to be adopted by those private parties or public / Government agencies who sponsor beautification schemes at heritage sites;

(viii) to prepare special designs and guidelines / publications for listed buildings, control of height and essential façade characteristics such as maintenance of special types of balconies and other heritage items of the buildings and to suggest suitable designs adopting appropriate materials for replacement keeping the old form intact to the extent possible.

(ix) to prepare guidelines relating to design elements and conservation principles to be adhered to and to prepare other guidelines for the purposes of this Regulation;

(x) to advise the Commissioner, Urban Local Bodies / Authority on any other issues as may be required from time to time during course of scrutiny of development permissions and in overall interest of heritage / conservation;

(xi) to appear before the Government either independently or through representatives or on behalf of the Commissioner, Urban Local Bodies / Authority in cases of Appeals under Municipal Law/ Act

in cases of listed buildings / heritage buildings and listed precincts / heritage precincts and listed natural feature areas.

8.17 IMPLICATIONS OF LISTING AS HERITAGE BUILDINGS

The Regulations do not amount to any blanket prevention of demolition or of changes to Heritage Buildings. The only requirement is to obtain clearance from the Commissioner, Urban Local Bodies/ Authority and Heritage Conservation Committee for demolition or changes of Heritage Buildings from heritage point of view.

8.18 OWNERSHIP NOT AFFECTED

Sale and purchase of Heritage Buildings does not require any permission from Municipality/ Authority/or Heritage Conservation Committee. The Regulations do not affect the ownership or usage. However, such usage should be in harmony with the said listed precincts / buildings. Care will be taken to ensure that the development permission relating to these buildings is given within 60 days.

Chapter -9
ADDITIONAL PROVISONS IN DEVELOPMENT CONTROL REGULATIONS FOR SAFETY IN NATURAL HAZARD PRONE AREAS

9.1 INTRODUCTION

Subject to various provisions in previous Chapters, the following additional features are incorporated in the Bye-laws. These additional provisions should be notified under the relevant provision of the applicable legislation in this behalf.

9.2 DEFINITIONS

(i) Additions and /or Alterations

Means any change in existing authorized building or change from one use to another use, or a structural change such as additions to the area or height, or the removal of part of a building, or a change to the structure such as the construction or cutting into or removal of any structural wall or part of a structural wall, column, beam, joist, floor including a mezzanine floor or other support. The addition to any existing structure shall only be permitted if it complies with the provisions of these Bye-laws.

(ii) Building

Means all types of permanent building defined below, but structure of temporary nature like tents, hutment as well as shamianas erected for temporary purposes for ceremonial occasions, with the permission of the Competent Authority, shall not be considered to be "buildings".

Definition of building shall also include "Unsafe Building" means a building which,

- is structurally unsafe,
- is insanitary,
- is not provided with adequate means of egress,
- constitutes a fire hazard,
- in relation to its existing use constitutes a hazard to safety or health or

- public welfare by reasons of inadequate maintenance, dilapidation or abandonment.

(iii) Natural Hazard means

The probability of occurrence, within a specific period of time in a given area, of a potentially damaging natural phenomenon.

(iv) Natural Hazard Prone Areas means

Areas likely to have moderate to high intensity of earthquake, or cyclonic storm, or significant flood flow or inundation, or land slides/mud flows/avalanches, or one or more of these hazards.

Note: Moderate to very high damage risk zones of earthquakes are as shown in Seismic Zones III, IV and V specified in IS:1893; moderate to very high damage risk zones of cyclones are those areas along the sea coast of India prone to having wind velocities of 39 m/s or more as specified in IS:875(Part 3;) and flood prone areas in river plains (unprotected and protected) are indicated in the Flood Atlas of India prepared by the Central Water Commission, besides, other areas can be flooded under conditions of heavy intensity rains, inundation in depressions, back flow in drains, inadequate drainage, etc. as identified through local surveys in the development plan of the area and landslide prone areas as identified by State Government / Land surveys.

(v) Lifeline Building mean

Those buildings which are of post earthquake importance such as hospital building, power house building, telephone exchange building and the like.

(vi) Special Building mean

Those buildings housing large gathering at a time such as cinemas, theatres, meeting halls, assembly halls, lecture halls, town halls and the like.

(vii) Retrofitting

Means upgrading the strength of an unsafe building by using suitable engineering techniques.

(viii) Quality Control means

Related to construction quality and to control of variation in the material properties and structural adequacy. In case of concrete, it is the control of accuracy of all operations which affect the consistency and strength of concrete, batching, mixing, transporting, placing, curing and testing.

(ix) Quality Audit means

Third party quality audit for an independent assessment of the quality and seismic or cyclone resistant features of all the high-rise buildings in earthquake zone IV and V and coastal areas of the country. The quality audit report shall consist of conformance or non-conformance of structures with the technical specifications for earthquake and cyclone resistance and to suggest remedies/ rectification if any.

(x) Quality Assurance means

All planned and systematic actions necessary to ensure that the final product i.e.structure or structural elements will perform satisfactorily in service life.

(xi) Compliance means

The verification of the properties of construction materials based on test data and verification of the strength and structural adequacy for various components of buildings and structures.meets with the required standard.

(xii) Non-Structural Component means

Those components of buildings which do not contribute to the structural stability such as infill walls in RCC. framed buildings, glass panes, claddings, parapet walls, chimneys etc.

9.3 GENERAL REQUIREMENTS FOR DEVELOPMENT

9.3.1 Requirements of Site

(i) No earthquake prove or cyclonic zone land shall be used as a site for the construction of building, if the site is found to be liable to liquefaction by the Competent Authority under the earthquake

intensity of the area, except where appropriate protection measures are taken.

(ii) If the Competent Authority finds that the proposed development falls in the area liable to storm surge during cyclone, except where protection measures are adopted to prevent storm surge damage.

9.3.2 Requirement of Site Plan

(i) In hilly terrain, the site plan should include location of land slide prone areas, if any, on or near the site, detected during reconnaissance. The Authority in such case shall cause to ensure that the site is away from such land slide prone areas.

(ii) The site plan on a sloping site may also include proposals for diversion of the natural flow of water coming from uphill side of the building away from the foundation.

9.4` DECISION OF THE AUTHORITY

9.4 .1 Grant or Refusal of the Permission for Development

On receipt of the application for Development Permission, the Competent Authority after making such inquiry and clearance from such an expert whenever considered necessary for the safety of building, as it thinks fit may communicate its decisions granting with or without condition including condition of submission of detailed working drawing/ structural drawing along with soil investigation report before the commencement of the work or refusing permission to the applicant as per the provisions of the Bye-Laws. On receipt of the application for Development Permission, the Competent Authority after making such inquiry as he thinks fit may communicate its decisions granting or refusing permission to the applicant as per the provisions of the Bye-Lays. The permission may be granted with or without conditions or subject to any general or special orders made by the State Government in this behalf.

The Development permission shall be in **No. Form 5** and it should be issued by an officer authorized by the Competent Authority in this behalf. Every order granting permission subject to conditions or

refusing permission shall state the grounds for imposing such conditions or for such refusal.

9.4.2 Exception for Small Building

The Competent Authority, however, may consider to grant exemption for submission of working drawing, structural drawing and soil investigation report in case the Competent Authority is satisfied that in the area where the proposed construction is to be taken, similar types of structure and soil investigation reports are already available on record and such request is from an individual owner/developer, having plot of not more than 500 sq mt. in size and for a maximum 3 storied residential building.

If the local site conditions do not require any soil testing or if a soil testing indicates that no special structural design is required, a small building having up to ground + 2 floors, having load bearing structure, may be constructed.

If the proposed small house is to be constructed with load bearing type masonry construction technique, where no structural design is involved, no certificate from a Structural Engineer on Record will be required (to be attached with Appendix "A-2" However, a Structural Design Basis Report Appendix "A-6" has to be submitted, duly filled in.

9.4.3 Suspension of Permission

Development permission granted under the relevant section of the Bye Laws shall deemed to be suspended in cases of resignation by any professional namely Architect on Record/ Engineer on Record, Structural Engineer on Record, and Construction Engineer on Record, till the new appointments are made. During this period construction shall not be carried out at the site. Any work at site during this time shall be treated as unauthorized development without any due permission.

9.4.4 Structural Deviation during Course of Construction

Notwithstanding anything stated in the above Bye Laws it shall be incumbent on every person whose plans have been approved to submit revised (amended) plans for any structural deviations he proposes to make during the course of construction of his building work and the procedure laid down for plans or other documents here to before shall apply to all such Revised (amended) plans.

Chapter -10

ADDITIONAL PROVISONS IN BUILDING BYE-LAWS FOR STRUCTURAL SAFETY IN NATURAL HAZARD PRONE AREAS

10.1 STRUCTURAL DESIGN

Subject to various provisions in the previous chapters, any building under the jurisdiction of these Bye-laws/regulations, structural design/ retrofitting shall only be carried out by a Structural Engineer or Structural Design Agency. Proof checking of various designs/ reports shall be carried out by the competent authority.

In general, the structural design of foundations, elements of masonry, timber, plain concrete, reinforced concrete, pre-stressed concrete and structural steel shall conform to the provisions of part VI Structural Design Section – 1 Loads, Section – 2 Foundation, Section – 3 Wood, Section – 4 Masonry, Section – 5 Concrete & Section – 6 Steel of National Building Code of India (NBC), taking into consideration the Indian Standards as given below:

For General Structural Safety

1. IS: 456:2000 “Code of Practice for Plain and Reinforced Concrete
2. IS: 800-1984 “Code of Practice for General Construction in Steel
3. IS: 801-1975 “Code of Practice for Use of Cold Formal Light Gauge Steel Structural Members in General Building Construction
4. IS 875 (Part 2):1987Design loads (other than earthquake) for buildings and structures Part2 Imposed Loads
5. IS 875 (Part 3):1987Design loads (other than earthquake) for buildings and structures Part 3 Wind Loads
6. IS 875 (Part 4):1987Design loads (other than earthquake) for buildings and structures Part 4 Snow Loads

7. IS 875 (Part 5):1987Design loads (other than earthquake) for buildings and structures Part 5 special loads and load combination
8. IS: 883:1966 “Code of Practice for Design of Structural Timber in Building
9. IS: 1904:1987 “Code of Practice for Structural Safety of Buildings: Foundation”
10. IS1905:1987 “Code of Practice for Structural Safety of Buildings: Masonry Walls
11. IS 2911 (Part 1): Section 1: 1979 “Code of Practice for Design and Construction of

    Pile Foundation Section 1

    Part 1: Section 2 Based Cast-in-situ Piles

    Part 1: Section 3 Driven Precast Concrete Piles

    Part 1: Section 4 Based precast Concrete Piles

    Part 2: Timber Piles

    Part 3 Under Reamed Piles

    Part 4 Load Test on Piles

For Cyclone/Wind Storm Protection

12. IS 875 (3)-1987 "Code of Practice for Design Loads (other than Earthquake) for Buildings and Structures, Part 3, Wind Loads"
13 Guidelines *(Based on IS 875 (3)-1987)* for improving the Cyclonic Resistance of Low rise houses and other building.

For Earthquake Protection

14 IS: 1893-2002 "Criteria for Earthquake Resistant Design of Structures (Fifth Revision)"

15 IS:13920-1993 "Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces - Code of Practice"

16 IS:4326-1993 "Earthquake Resistant Design and Construction of Buildings - Code of Practice (Second Revision)"

17 IS:13828-1993 "Improving Earthquake Resistance of Low Strength Masonry Buildings - Guidelines"

18 IS:13827-1993 "Improving Earthquake Resistance of Earthen Buildings - Guidelines",

19 IS:13935-1993 "Repair and Seismic Strengthening of Buildings - Guidelines"

For Protection of Landslide Hazard

20 IS 14458 (Part 1): 1998 Guidelines for retaining wall for hill area: Part 1 Selection of type of wall.

21 IS 14458 (Part 2): 1997 Guidelines for retaining wall for hill area: Part 2 Design of Retaining/breast walls

22 IS 14458 (Part 3): 1998 Guidelines for retaining wall for hill area: Part 3 Construction of dry stone walls

23 IS 14496 (Part 2): 1998 Guidelines for preparation of landslide – Hazard zonation maps in mountainous terrains: Part 2 Macro-zonation

Note: ***Whenever an Indian Standard including those referred in the National Building Code or the National Building Code is referred, the latest revision of the same shall be followed except specific criteria, if any, mentioned above against that code.***

10.2 STRUCTURAL DESIGN BASIS REPORT

In compliance of the design with the above Indian Standard, the Structural Engineer will submit a structural design basis report in the Proforma attached herewith covering the essential safety requirements specified in the Standard.

(i) The" Structural Design Basis Report (SDBR)"consists of four parts (Appendix-**.6**)

Part-1 - General Information/ Data

Part-2 – Reinforced Concrete Buildings

10.3 SEISMIC STRENGTHENING/RETROFITTING:

Prior to seismic strengthening/ retrofitting of any existing structure, evaluation of the existing structure as regards structural vulnerability in the specified wind/ seismic hazard zone shall be carried out by a Registered Structural Engineer. If as per the evaluation of the Registered Structural Engineer the seismic resistance is assessed to be less than the specified minimum seismic resistance as given in the note below, action will be initiated to carry out the upgrading of the seismic resistance of the building as per applicable standard guidelines.

Note: (a) For masonry buildings reference is to be made to IS: 4326 and IS: 13935 and

(b) For concrete buildings and structures reference to be made to

BIS code on evaluation and seismic strengthening for retrofitting of RCC buildings under preparation at present.

10.4 REVIEW OF STRUCTURAL DESIGN:

(i) The Competent Authority shall create a Structural Design Review Panel (SDRP) consisting of senior registered Structural Engineers, whose task will be to review and certify the design prepared by Structural Engineer on record, whenever referred by the competent authority.

(ii) The Reviewing Agency shall submit addendum to the certificate or a new certificate in case of subsequent changes in structural design.

Notes:

- Public building means assembly of large number of people including schools, hospitals, Courts etc.
- Special structure means large span structures such as stadium, assembly halls, or tall structures such as water tanks, TV tower, chimney, etc.

10.5 CERTIFICATION REGARDING STRUCTURAL SAFETY IN DESIGN:

Structural Engineer on record shall give a certificate of structural safety of his design as per Proforma given in Form-3 and Form- 14**.** **(**Appendix-J & L) at the time of completion.

10.6 CONSTRUCTIONAL SAFETY

10.6.1 Supervision:

All constructions shall be carried out under supervision of the Construction Engineer on record for various seismic zones.

10.6.2 Certification of structural safety in construction:

The Construction Engineer on record shall give a certificate of structural safety of construction as per Performa given in **Form-13 (Appendix-K)** at the time of completion**.**

10.7 CONTROL OF SIGNS (HOARDINGS) AND OUTDOOR DISPLAY STRUCTURES AND PAGING TOWER AND TELEPHONE TOWER AND OUTDOOR DISPLAY STRUCTURES:

Following provisions shall apply for telecommunication infrastructure.

a) Location: The Telecommunication Infrastructure shall be either placed on the building roof tops or on the ground or open space within the premises subject to other regulations.

b) Type of structure

(i) Steel fabricated tower or antennae's on M.S. pole.

(ii) Pre-fabricated shelters of fibre glass or P.V.C. on the building roof top/terrace for equipment.

(iii) Masonry Structure/ Shelter on the ground for equipment.

(iv) D.G. Set with sound proof covers to reduce the noise level.

c) Requirement:

(i) Every applicant has to obtain/ procure the necessary permission from the "Standing Advisory Committee on Radio Frequency Allocation" (SACFA) issued by Ministry of Telecommunications.

(ii) Every applicant will have to produce the structural safety & stability certificate for the tower as well as the building from the Structural Engineer on Record (SER) which shall be the liability of both owner and SER.

(iii) Applicant has to produce / submit plans of structure to be erected.

d) Projection: No Pager and/or Telephone Tower shall project beyond the existing building line of the building on which it is erected in any direction.

10.9 STRUCTURAL REQUIREMENTS OF LOW COST HOUSING:

Notwithstanding anything contained herein, for the structural safety and services for development of low cost housing, the relevant provisions of applicable IS Codes shall be enforced.

10.10 INSPECTION:

The general requirement for inspection of the development shall also include the following regulation.

10.11 MAINTENANCE OF BUILDINGS:

In case of building older than fifty years, it shall be the duty of the owner of a building, to get his building inspected by a Registered Structural Engineer (RSE) within a year from the date of coming into force of these regulations. The Structural Inspection Report **(Form No.16) (Appendix M)** shall be produced by the Owner to the Appropriate Authority. If any action, for ensuring the structural safety and stability of the building is to be taken, as recommended by SER, it shall be completed within five years.

For other buildings, the owner shall get his building inspected after the age of building has crossed forty years. The procedure shall be followed as per above regulation.

10.12 PROTECTIVE MEASURES IN NATURAL HAZARD PRONE AREAS:

In natural hazard prone areas identified under the land use zoning regulations, structures buildings and installations which cannot be avoided, protective measures for such construction/ development should be properly safeguarded.

Chapter -11

INTEGRATED TOWNSHIP

11.0. Large Projects

(i) "Integrated Township" is gaining increasing acceptance recent times. To give impetus to economic growth and to enhance the vibrance and dynamism of urban activities in urban areas of Arunachal Pradesh, Integrated Townships with minimum 10 Ha of land having access from minimum 24 m. road width shall be allowed.

(ii) The integrated Township shall be permitted in Residential / Institutional zones.

(iii) Permissible land use within the town ship (%)

A.	Residential	- 45-50
B.	Industrial, Non Polluting type	- 8-10
C.	Commercial	- 2- 3
D.	Institutional	- 6- 8
E.	Recreational	- 12-14
F.	Minimum internal road width	- 18 m.

(iv) Other Regulations for approval of Integrated Township

A. 10% of the total area shall be reserved for parks and open space. It shall be developed and maintained by the developer to the satisfaction of the Authority.

B. 5 % of the site area shall be reserved for public and semi-public use and shall be handed over to the Authority free of cost and the same shall be allotted by the Authority for development either to the developer or others on lease basis.

C. The FAR shall be calculated on the total area.

D. Road shown in Comprehensive Development Plan shall be incorporated within the plan and shall be handed over to the Local Authority free of cost after development.

E. The FAR and coverage shall be 2.50 and 40% respectively.

F. At least 15% of the housing units developed will be earmarked for EWS/LIG category.

Chapter-12

MULTI-STOREYED BUILDINGS AND GROUP HOUSING SCHEMES/APARTMENTS:

ADDITIONAL REQUIREMENTS

12.0. Restriction on construction of Multi- Storied Building

(i) Construction of multi-storied building shall not be permitted in localities, sectors or villages namely "A", "B", "P", "C", "D", "E", "F", "G", "H", Mowb ii, Nitivihar, Vivek Vihar. In Itanagar and Sector "A", "E", "D", "E", "F", "G", "Polo coloney", "F & G", "in Naharlagun.

The Authority may include any other areas for prohibition of multi storied building from time to time.

(ii) The Authority may restrict construction of multistoreyed buildings in any other area on the basis of objective assessment of the available infrastructure and planning needs after obtaining due approval of the Government.

(iii) Before commencement of these Regulations, where permission has been granted conditionally, such cases shall be dealt with under these Regulations as far as possible, without any major change, or without removal of construction. However, where violation of Heritage Zone conditions has occurred, this relaxation shall not apply.

(iv) No multi-storied building shall be allowed to be constructed:

A. With approach road less than 18 m. width;

B. On plot the size less than 5000 sq. m.

C. Within 100 meters from the centre of the National High way 52-A or on either side in the corridor between Banderdewa and Chimpu via Naharlagun and Itanagar.

D. Within 100 meters from the centre of the State Highway or major roads connecting two or more Districts on either side.

12.1 Stage of permission

Permission for construction of a multi-storied buildings, & Group Housing Schemes shall be given with the approval of the Authority and in following stages namely:-

A. In the first stage permission shall be accorded conditionally to develop the infrastructure as per specification of Local Authority and Public Health Engineering Department.

B. After joint inspection, up to 75% of the proposed building height shall be allowed.

C. After completion of construction up to 75% of the proposed building as per the approved plan and plantation of 20% of the plot area the remaining 25% construction shall be allowed.

Note: *The plantation shall not obstruct free movement of fire tenders around the building.*

12.2. Commencement of work.

(i) Every applicant or builder or owner shall submit a notice regarding his intention to commence the foundation work of the proposed multi-storied building to the Authority through authorised technical persons. The said notice shall be accompanied by the approved plan and should be in Form-V.

(ii) Soon after the receipt of the notice referred to in sub- clause (1) above, the Authority shall send a team of officers including, a civil Engineer, Architect and Town Planner, to the proposed building site and the layout for foundation of the proposed multi-storied building shall be made in presence of those officers. The team shall also submit a report to the Authority to the effect that the layout has been made as per the approved plan.

(iii) During or soon after the construction of the foundation work of the multi-storied building, the Municipal Chairperson, Municipal President of the Authority or his representatives or independent Engineer/ Architect appointed by Authority shall inspect the construction to ensure that the setbacks, coverage, basement if any, and foundation standards are according to the approved plan.

(iv) The applicant / builder shall submit periodic progress report after casting of each floor slab in Form-VIII.

12.3 Liability of defective construction

(i) For defective constructions, the Authority shall sue the owners, builders, architects, and the engineers for both civil and criminal liabilities, besides taking action under these Regulations.

(ii) Without prejudice to the provisions of the Act, the actions to be taken by the Authority shall include stop construction notices, cancellation of permission, and removal of unauthorized constructions. Such actions shall be notified.

12.4. Maintenance.

(i) The main entrance to the premises shall not be less than 5 (five) meters in width in order to allow easy access to fire engine. The gate shall fold back against the compound wall of the premises, thus leaving the exterior access way, within the plot, free for the movement of fire service vehicles. If archway is provided over the main entrances, the height of the archway shall not be less than 5 (five) meters.

(ii) For multi-storied group housing scheme on one plot, the access way within the premises shall not be less than 7.5 (seven and half) meters in width and between individual building blocks, there shall be an open un-built space of 6 (six) meters.

(iii) The space set apart for providing access within the premises shall, in no case, be included in the calculation of requirements pertaining to parking spaces and other amenities required to be provided for the building.

(iv) Every access way shall be properly drained and lit to the satisfaction of the Authority. Manhole covers or any other fittings laid within the right of way of the access way shall be flushed with the finished surface level of it so as not to obstruct safe movement of men and vehicles.

(v) Reconstruction or addition or alteration to any multi-storied building shall not be taken in a manner which shall reduce the width of the access way to a level below the minimum prescribed limit under these Regulations.

12.5. Exit

(i) Every multi-storied building meant for human occupation or assembly, shall be provided with exit sufficient to permit safe escape of the occupants in case of fire or other emergencies.

(ii) An exit may be a door-way, corridor, passage way to an internal or external staircase or to a verandah or roof or terrace having access to a street.

(iii) Exits shall be so arranged as to provide continuous means of access to the exterior of a building or exterior open space leading to a street without passing through any occupied unit.

(iv) Exits shall be so located that the travel distance on the floor shall not exceed twenty meters in case of residential, educational, institutional and hazardous occupancies and thirty metres in the case of assembly, business, mercantile, industrial and storage occupancies. Wherever more than one exit is required for a floor

of a building, exits shall be placed at a reasonable distance from each other as possible. All the exits shall be accessible from the entire floor area at all floor levels.

(v) There shall be at least two exits serving every floor and at least one of them shall lead to a staircase.

(vi) The width of every exit shall not be less than one meter and shall be provided as per the following table.

TABLE – 12.1 NUMBER OF OCCUPANTS AS PER TYPE OF OCCUPANCY

Sl.No.	Type of occupancy	Number of occupants per unit exit	
		Stair Case	Terrace
(1)	(2)	(3)	(4)
1	Residential	25	75
2	Mixed and other uses	50	75

Explanation:

A. Lifts and escalators shall not be considered as an exit.

B. 'Travel distance' means the distance from any point in the floor area to any exit measured along the path or egress except that when the floor areas are sub-divided into rooms, used singly or of rooms and served by suite corridors and passage, the travel distance may be measured from the corridor entrance of such rooms or suites to the nearest staircase or verandah having access to the street.

12.6. ICT landing points

Every multi storied building complex shall have provision for Information and Communication Technology (ICT) landing point in the form of a room near the main entrance gate of dimension not less than 3 m x 4 m. and having 3 m. clear height. The room shall have two fire proofs doors of 1.2 m. width opening outwards along with adequate ventilation in the form of windows/ ventilators. Such room shall not be counted in coverage and Floor Area Ratio (FAR) calculations.

12.7. Penal Action against Builders/ Technical personnel.

(i) Not withstanding anything contained in these regulations the Authority reserves the right to debar/ black list the builder/ technical person who has deviated from the professional conduct or has made any fraudulent statement or has misrepresented/suppressed any material facts in his application/ plan or is involved in construction of the building deviating from the approved plan/norms of these Regulations.

(ii) Before taking any action under clause (1) specified above the Authority shall issue a notice specifying the reasons thereof asking for a show-cause within 15 days as to why such builder / technical person shall not be debarred / black listed. After receipt of the show cause, if any, the same shall be placed before the Authority for a decision on debarring / black listing the technical person / builder. The decision of the Authority in this regard shall be published.

(iii) An appeal against an order under sub-clause (2) above shall lie under section 18 of the Act.

12.8. Occupancy of the building

In addition to the general provisions the following provisions shall be followed in case of multi storied buildings, apartments and group housing schemes;

(i) No person shall occupy or allow any other person to occupy any part of the multi-storied building for any purpose until such building or any part of it, as the case may be, is granted occupancy certificate by the Authority.

(ii) On receipt of completion certificate in Form-6 (Part-I & Part-II) the Planning Member with the approval of Municipal Chairperson/ Municipal President shall issue a provisional occupancy certificate in Form-X to enable the builder / land owner to obtain service connections.
The authorities entrusted with the job of providing services like electricity, water supply and sewerage shall not provide such services without provisional occupancy certificate by the Authority. However, temporary service connection may be provided for construction purpose.

(iii) The builder shall cause to register an Association of apartment owners, before occupancy certificate for 50% or more of the floor area is given.

(iv) The Builder shall submit a copy of the agreement it has entered into with the apartment owners' society. This agreement shall show the terms of maintenance of public utilities.

(iv) On satisfactory compliance of above & provision of the services the final occupancy certificate shall be issued by the Planning Member with approval of the Chief Municipal Executive officer/ Municipal Executive Officer.

12.9. Completion of construction

Every applicant/ owner shall submit a notice in Form - VI (Part-I and Part-II) regarding completion of the construction of multi-storied building, to the Authority through the registered Architect / Structural

Engineer, who has supervised the construction. The said notice shall be accompanied with the following documents:

A. Three copies of plan of the completed building.

B. A fee of Rs.5000.

C. Record of Rights relating to ownership.

D. Evidence that all public utility services, and in particular, sewerage, drainage, water supply, and electricity have been linked to the main public utility system.

E. No Objection Certificate from Director Fire Services

12.10. Issue of occupancy certificate

(i) The Authority on receipt of the notice of completion, along with all the required documents, shall take a decision to either issue or refuse occupancy certificate in Form-X within 30 days from the date of receipt of such notice. This fact shall be published in the public notice and website of the Authority.

(ii) If the occupancy certificate is not issued by the Authority within sixty days from the receipt of notice, the owner can prefer an appeal.

(iii) Where occupancy certificate is refused by the Authority, reasons thereof shall be communicated to the applicant and the same shall be published. An appeal against such a decision will lie under section 18 or 103 of the Act. The Appellate Authority shall be competent to seek the views of, and implead as parties, authorities in charge of public utility services, as provided under the Act, under the Orissa Apartment Ownership Act,1982, and apartment owners. Where non-provision of public utilities is likely to affect other residents, such residents can also be impleaded as parties.

12.11. Structural safety Design and other services requirements

(i) Structural Design: The structural design of foundation, masonry, timber, plain concrete, reinforced concrete, pre-stressed concrete and structural steel shall be carried out in accordance with Part-VI structural design, section-1 loads, section-2 foundation, section-3 wood, section-4 masonry, section-5 concrete and section-6 steel of National Building Code of India taking into consideration all relevant Indian Standards prescribed by Bureau of Indian Standards including the Indian Standard given in IS-Code 1893-1984, 13920-1993, 4326-1993, 13828-1993, 13827-1993 and 13935-1993 for structural safety.

(ii) Quality of Materials and Workmanship: All material and workmanship shall be of good quality conforming generally to accepted standards of Public Works Department and Indian standard specification and codes as included in Part-V Building Materials and Part-VII Construction practices and safety of National Building Code of India.

(iii) Alternative Materials, Methods of Design and Construction and Tests: The provision of the Bye-Laws are not intended to prevent the use of any material or method of design or construction not specifically prescribed by the bye-law provided any such alternative has been approved. The building materials approved by B.I.S. or any statutory body will form part of the approved building material and technology as part of the Bye-Laws.

(iv) Building Services

A. The Planning design and installation of electrical installations, air conditioning installation of lifts and escalators can be carried out in accordance with Part-VIII Building Services, section–2 electrical installation, section–3 air conditioning and heating, section-5 installation of lifts and escalators of National Building Code of India, 2005

B. The requirements of electric sub-station and the provision of electric sub-station shall also require approval from the concerned Authority.

(v) Plumbing Services

The planning, design, construction and installation of water supply, drainage and sanitation and gas supply system shall be in accordance with Part-IX, Plumbing Services, section-l water supply; section-2 drainage and sanitation and section-3 gas supply of National Building Code of India 2005.

Annexure: "A"

Occupancy Categorization of Buildings for Water and Other Requirement for Fire Fighting

Level-I	Level-II	Lever-III
GROUP "A": RESIDENTIAL	GROUP "A": RESIDENTIAL	GROUP "A": RESIDENTIAL
A1 Lodging and Rooming Houses A2 One or two family private dwelling A3 Dormitories A4 Apartment Houses	A5 Hotels	F2 Shops and stores, etc. above 500 sq.mt. floor area F3 Underground shopping centers
Group "B" Educational B1 Schools up to higher secondary level	Group "C" Institutional C1 Hospitals and Sanitoria (More than 100 beds)	Group "G" Industrial G3 High hazard Industries
GROUP "C" INSTITUTIONAL C1 Hospital & Sanitoria (upto 100 beds) C2 Custodial Institutions C3 Penal & mental Institutions	GROUP "D" ASSEMBLY BUILDINGS D1 For more than 1000 persons with permanent stage and fixed seats D2 For less than 1000 persons with permanent stage and fixed seats	GROUP "H" STORAGE BUILDINGS
GROUP "D" ASSEMBLY BUILDINGS D3 Upto 300 persons without permanent stage and fixed seats D4 Above 300 persons without permanent stage & fixed seats	GROUP "E" BUSINESS BUILDINGS E1 Offices, Banks, etc. E2 Laboratories, Libraries, etc. E3 Telephone Exchanges	GROUP "J" HAZARDOUS BUILDINGS
GROUP "E" BUSINESS E3 Computer Installations E5 Broadcasting stations	GROUP "F" MERCANTILE F1 Shops, Stores, etc. upto 500 m^2 floor area	
GROUP "G" INDUSTRIAL G1 Low hazard Industries	GROUP "G" INDUSTRIAL	

Annexure: "B-I"

Fire Protection Requirements for Buildings in Level-I Category

No.	Measures	Group-A: Residential A1, A2, A3, A4				Group-B: Educational			Group-C: Institutional		
		O	I	II	III	I	II	III	I	II	III
1	Access	P	P	P	P	P	P	P	P	P	P
2	Means of Escape	P	P	P	P	P	P	P	P	P	P
3	Compartmentation	P	P	P	P	P	P	P	P	P	P
4	Refuge Area	X	X	X	X	X	X	X	X	X	X
5	Emergency Lights	X	X	P	P	P	P	P	P	P	P
6	Exit Signs	P	P	P	P	P	P	P	P	P	P
7	PA System with Talk Back Facility	X	X	X	X	X	P	P	P	P	P
8	Moefa	X	X	X	P	X	P	P	P2	P	P
9	Extinguishers	P	P	P	P	P	P	P	P	P	P
10	Hose Reel	P3	P	P	P	P3	P	P	P	P	P
11	Yard Hydrant	X	X	X	P	X	P	P	X	P	P
12	Down Comer	X	X	X	P	X	P	X	P4	X	X
13	Wet Riser	X	X	P	X	X	X	P	X	P	P
14	Fire Detection System	X	X	X	X	X	P6	X	P2	P	P
15	Automatic Sprinkler System	S	S	S	S	S	S	FS	S	S	FS
16	Under Ground Tank	X	X	X	X	X	X	P	P2	P	P
17	Over Head Tank	P13	P	P	P	P	P	P	P	P	P
18	Fire Pumps	X	X	X	X	X	X	P	X	P	P
19	Booster Pumps	P3	P	P	P	P	P3	P	P	X	P
20	Auto D.G. Set	P3	X	P	P	P3	P	P	P	P	P
21	MCB/ELCB	P	P	P	P	P	P	P	P	P	P
22	Hose Boxes	X	X	X	P	X	P	P	P4	P	P
23	Fireman's Grounding Switch	P	P	P	P	P	P	P	P	P	P

Annexure: "B-I" (Contd.)

Fire Protection Requirements for Buildings in Level-I Category

No.	Measures	Group-D: Assembly D3, D4			Group-E: Business E3, E5			Group-G: Industrial G1				
		I	II	III	I	II	III	IV	V	VI	VII	VIII
1	Access	P	P	P	P	P	P	P	P	P	P	P
2	Means of Escape	P	P	P	P	P	P	P	P	P	P	P
3	Compartmentation	P	P	P	P	P	P	P	P	P	P	P
4	Refuge Area	X	X	X	X	X	X	X	X	X	X	X
5	Emergency Lights	P	P	P	P	P	P	P	P	P	P	P
6	Exit Signs	P	P	P	P	P	P	X	X	P	P	P
7	PA System with Talk Back Facility	P1	P	P	X	P	P	X	X	X	X	P
8	Moefa	P1	P	P	X	P	P	X	X	P	P	P
9	Extinguishers	P	P	P	P	P	P	P	P	P	P	P
10	Hose Reel	P2	P	P	P	P	P	X	P	P	P	P
11	Yard Hydrant	X	P	P	X	P	P	X	X	X	P	P
12	Down Comer	X	X	P	P2	X	X	X	X	X	X	X
13	Wet Riser	X	P	P	X	P	P	X	X	X	P5	P
14	Fire Detection System	P7	P	P	P2	P8	P9	X	X	X	P	P
15	Automatic Sprinkler System	S7	FS	FS	S	S	FS	S	S	S	S	FS
16	Under Ground Tank	P7	P	P	X	P	P	X	X	P10	P11	P
17	Over Head Tank	P2	P	P	P	P	P	P5	P	P	P	P
18	Fire Pumps	P11	P	P	X	P	P	X	X	X	P5	P
19	Booster Pumps	X	X	X	P	X	X	P12	P	P	P	P
20	Auto D.G. Set	P7	P	P	P	P	P	X	X	P	P	P
21	MCB/ELCB	P	P	P	P	P	P	P	P	P	P	P
22	Hose Boxes	P	P	P	P2	P	P	X	X	X	P5	P
23	Fireman's Grounding Switch	P	P	P	P	P	P	P	P	P	P	P

Legend

O Guest Houses/Lodging having up to 20 rooms or 40 beds and below

I Height less than 15 mt.

II Height 15 mt. and above up to 24 mt.

III Height above 24 mt

IV Height less than 15 mt. and plot area less than 250 sq.mt.

V Height less than 15 mt. and plot area 251 sq.mt. and above up to 500 sq.mt.

VI Height less than 15 mt. and plot area 501 sq.mt. and above up to 1000 sq.mt.

VII Height less than 15 mt. and plot area more than 1001 sq.mt.

VIII Height above 15 mt. and up to 18 mt.

P To be provided.

X Not to be provided.

S Sprinklers to be provided if basement area is 200 sq.mt. or more.

FS Fully sprinkle red.

1. To be provided if seating capacity exceed 750.
2. To be provided if building is more than ground floor, first floor and total covered area exceed 1500 sq. mt.
3. To be provided in building where total covered area exceeds 1000 sq. mt.

   or

   Building is more than ground floor except group housing.
4. To be provided if building is ground floor, first floor and total covered area exceeds 300 mt.
5. To be provided if building is more ground floor.
6. To be provided in building except educational buildings.
7. In case seating capacity is 1000 persons minimum or covered area above 1500 sq.mt. or basement area 200 sq.mt. and more (other than places or worships).
8. To be provided fore E-4 and E-5 buildings but not required if building is fully sprinklered.
9. To be provided for E-4 and E-5 buildings.
10. 25,000 lt. capacity under ground water storage tank to be provided.
11. 50,000 lt. capacity under ground water storage tank to be provided.
12. To be provided where ever sprinklers are not installed.
13. Terrace tank of 5,000 lt. capacity to be provided, if sprinklers and installed. The capacity shall be accordingly increased.

Annexure: "B-II"

Fire Protection Requirements for Buildings in Level-II Category

No.	1.1.1.6.1.1.1 Measures	Group-A: Residential A5 : Hotels				Group-C: C2: Hospital		Group-D: Assembly D1, D2, D5	
		I	II	III	IV	V	VI	V	VI
1	Access	P	P	P	P	P	P	P	P
2	Means Of Escape	P	P	P	P	P	P	P	P
3	Compartmentation	P	P	P	P	P	P	P	P
4	Refuge Area	X	X	X	X	X	X	X	X
5	Emergency Lights	P	P	P	P	P	P	P	P
6	Exit Signs	P	P	P	P	P	P	P	P
7	PA System With Talk Back Facility	X	P	P	P	P	P	P	P
8	Moefa	X	P	P	P	P	P	P	P
9	Extinguishers	P	P	P	P	P	P	P	P
10	Hose Reel	P	P	P	P	P	P	P	P
11	Yard Hydrant	X	X	P	P	X	P	X	P
12	Down Comer	X	P2	X	X	X	X	X	X
13	Wet Riser	X	X	P2	X	P4	P	P5	P
14	Fire Detection System	X	P	P	P	P3	P	P	P
15	Automatic Sprinkler System	S	S	FS	F S7	S	FS	S8	FS
16	Under Ground Tank	X	X	P	P	P3	P	P8	P
17	Over Head Tank	P	P	P	P	P	P	P	P
18	Fire Pumps	X	X	P	P	P4	P	P8	P
19	Booster Pumps	P	P	P	X	P	X	P	X
20	Auto D.G. Set	P	P	P	P	P	P	P	P
21	MCB/ELCB	P	P	P	P	P	P	P	P
22	Hose Boxes	X	P	P	P	P4	P	P	P
23	Fireman's Grounding Switch	P	P	P	P	P	P	P	P

Annexure: "B-II" (Contd.)

Fire Protection Requirements for Buildings in Level-II Category

No.	Measures	Group-E: Business E1, E2, E4			Group-F: Mercan-tile	1.1.1.6.1.1.2 Group-G. Industrial G2				
		VII	VIII	IX	*1.1.1.6.1.1.2.1*	XI	XII	XIII	XIV	XV
1	Access	P	P	P	P	P	P	P	P	P
2	Means of Escape	P	P	P	P	P	P	P	P	P
3	Compartmentation	P	P	P	P	P	P	P	P	P
4	Refuge Area	X	X	X	X	X	X	X	X	X
5	Emergency Lights	P	P	P	P	X	X	P	P	P
6	Exit Signs	P	P	P	P	X	X	P	P	P
7	PA System with Talk Back Facility	X	P	P	X	X	X	X	X	P
8	Moefa	X	P	P	X	X	X	P	P	P
9	Extinguishers	P	P	P	P	P	P	P	P	P
10	Hose Reel	P	P	P	P1	P	P	P	P	P
11	Yard Hydrant	X	P	P	X	X	X	X	P	P
12	Down Comer	P3	X	X	X	X	X	P4	X	X
13	Wet Riser	X	P	P	X	X	X	X	P6	P
14	Fire Detection System	P3	P	P	X	X	X	X	X	P
15	Automatic Sprinkler System	S	S	FS	S	S	S	S	FS	FS
16	Under Ground Tank	X	P	P	X	X	P9X	P10	P	P
17	Over Head Tank	P	P	P	P1	P	P	P	P	P
18	Fire Pumps	X	P	P	X	X	X	X	P	P
19	Booster Pumps	P	P	P	P1	P	P	P	P	P
20	Auto D.G. Set	P	P	P	X	X	P	P	P	P
21	MCB/ELCB	P	P	P	P	P	P	P	P	P
22	Hose Boxes	P3	P	P	X	X	X	P	P	P
23	Fireman's Grounding Switch	P	P	P	P	P	P	P	P	P

Legend for Appendix "B-II"

I. Height less than 15 mt. and area up to 300 sq. mt. on each floor.
II. Height less than 15 mt. and area above 300 sq. mt. up to 1000 sq. mt. on each floor.
III. Height less than 15 mt. and area above 1000 sq. mt. on each floor.
IV. Height 15 mt. and above.
V. Height less than 15 mt.
VI. Height 15 mt. and above up to 30 mt.
VII. Height less 15 mt.
VIII. Height 15 mt. and above up to 24 mt.
IX. Height more than 24 mt.

X. Height less than 15 mt. and plot area up to 750 sq. mt.

XI. Height less than 15 mt. and plot area less than 250 sq.mt.

XII. Height less than 15 mt. and plot area 251 m2 and above up to 500 sq. mt.

XIII. Height less than 15 mt. and plot area 501 m2 and above up to 1000 sq.mt.

XIV. Height less than 15 mt. and plot area more than 1001 sq. mt..

XV. Height above 15 mt. and up to 18 mt.

P to be provided.

X not to be provided

S sprinklers to be provided if basement area is 200 m2 or more

FS fully sprinkle red.

1. To be provided if building is more than one floor.
2. To be provided in buildings above two floors.
3. To be provided if the building is more than ground floor, first floor and covered area exceeds 1500 sq. mt.
4. To be provided if building is more than first floor and the covered area exceeds 300 sq. mt.
5. To be provided for more than storeyed buildings and above.
6. To be provided if building is ground floor, first floor and above.
7. Buildings to be fully sprinklered if height exceeds 15 mt.
8. To be provided if seating capacity exceeds 1000 persons.
9. 25,000 lt. capacity under ground tank to be provided.
10. 50,000 lt. capacity a ground tank to be provided if riser is not provided.

Annexure: “B-III”

Fire Protection Requirements for buildings in Level-III Category

Sl. No.	Measures	Group F mercantile (F2,F3)			Group G Industrial (G3)				Group H Storage		Group J Hazardous	
		H<15m A>750M^2	H>15 m	UGS	I	II	III	IV	H<15m Single Storey	H<15m More than one Storey	H<15 m Single Storey	H<15 More than one Storey
1	**Access**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**
2	**Means of Escape**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**
3	**Compartmentation**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**
4	**Refuge Area**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
5	**Emergency Lights**	**P**	**P**	**P**	**X**	**P**	**P**	**P**	**X**	**P**	**P**	**P**
6	**Exit Signs**	**P**	**P**	**P**	**X**	**P**	**P**	**P**	**X**	**P**	**P**	**P**
7	**PA System with talk back facility**	**P1**	**P**	**P**	**X**	**X**	**X**	**X**	**X**	**X**	**P**	**P**
8	**Moefa**	**P1**	**P**	**P**	**X**	**X**	**X**	**P**	**X**	**X**	**P**	**P**
9	**Extinguishers**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**
10	**Hose Reel**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**
11	**Yard Hydrant**	**P**	**P**	**P**	**X**	**X**	**P**	**P**	**P2**	**P2**	**P**	**P**
12	**Down Comer**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
13	**Wet Riser**	**P1**	**P**	**P**	**X**	**X**	**P3**	**P1**	**X**	**P3**	**X**	**X**
14	**Fire Detection System**	**X**	**P**	**P**	**X**	**X**	**P**	**P**	**X**	**X**	**P**	**P**
15	**Automatic Sprinkler System**	**FS**	**FS**	**FS**	**FS**	**FS**	**FS**	**FS**	**FS4**	**FS**	**FS**	**FS**
16	**Under Ground Tank**	**P**	**P**	**P**	**P5**	**P6**	**P7**	**P**	**P6**	**P**	**P**	**P**
17	**Over Head Tank**	**P**	**P**	**X**	**P**	**P**	**P**	**P**	**P**	**P**	**X**	**P**
18	**Fire Pumps**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P4**	**P**	**P**	**P**
19	**Booster Pumps**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
20	**Auto D.G.**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**

	Set											
21	**MCB/ELCB**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**P**
22	**Hose Boxes**	**P1**	**P**	**P**	**X**	**P**	**P**	**P**	**X**	**P3**	**P**	**P**
23	**Fireman's Grounding Switch in Lifts**	**P**	**P**	**P**	**P**	**P**	**P**	**P**	**X**	**P**	**X**	**P**

Legend for Annexure "B-III"

U.G.S. Under ground shopping complex

i) Height less 15 mt. shopping complex

ii) Height less 15 mt. and plot area 251 sq. mt. and above up to 500 sq. mt.

iii) Height less 15 mt. and plot area 501 sq.mt. and above up to 1000 sq.mt.

iv) Height less 15 mt. and plot area more than 1001 sq.mt.

P To be provided.

X Not to be provided.

S Sprinklers to be provided if basement area is 200 sq. mt. or more.

FS Fully sprinkle red.

1. To be provided in building of more than one floor.
2. To be provided if covered area exceeds 1000 sq.mt.
3. To be provided in building above two floors.
4. To be provided in buildings if covered area is more than 200 sq.mt.
5. 50,000 lt. capacity underground state water storage tank to be provided.
6. 1,00,000 lt. capacity underground state water storage tank to be provided.
7. 2,00,000 lt. capacity underground state water storage tank to be provided.

Annexure: "C"

1. **Water Requirement Criterion:** Unless otherwise specified in Annexure B, water requirement for fighting in different categories of occupancies shall be based on following.

Occupancy Category	Sprinkler Design Discharge Density (lt./min/sq.mt.)	Sprinkler Design Area (sq.mt.)	Max. area coverage/ Sprinkler (sq.mt.)	No. of Hose Streams* Fully other Sprinkled	Duration of Discharge (Min.) Fully Wet Riser Sprinkled
LEVEL-I	02.5	084	21	2 4	45 45
LEVEL-II	05.0	360	12	3 6	60 90
LEVEL-III	10.0	225	09	3 6	90 90

Note: The discharge through a standard hose stream shall be taken as 567 lt./min.

2. Estimation of Total Water Requirements Fully Sprinklered Buildings

Occupancy Category	Sprinkler (lt.).	Riser (lt.)	Total (lt.)	Wet Riser cum Down Comer (lt.)
LEVEL-I	9,450	51,030	60,480 (60,000)	1,02060 (1,00,000)
LEVEL-II	1,08,000	1,02,060	2,10,060 (2,00,000)	2,04,120 (2,00,000)
LEVEL-III	2,02,500	1,02,060	3,04,560 (3,00,000)	3,06,180 (3,00,000)

3. Water Storage Tanks

1. The design of the water storage tanks shall be as laid down in National Building Code of India.
2. The capacity of underground water storage tank shall not be more than 85% of the total water requirement.
3. The capacity of overhead tank shall not be less than 15% of the total water requirement.
4. The entire water requirement can be provided in over head tanks and pumping requirements shall be finalized in consultation with Chie Fire Officer.
5. Under ground water storage tank shall not be provided in the set back areas.

Storage Requirements

Occupancy Category	Under Ground Static Tank		Over Head Tank	
	Fully Spkd. (lt.)	Riser (lt.)	Fully Spkd. (lt.)	Riser (lt.)
Level-I	50,000	85,000	10,000	15,000
Level-II	1.70,000	1,70,000	30,000	30,000
Level-III	2,50,000	2,50,000	50,000	50,000

4. Riser/Downcomer

1. The size of the riser/ downcomer shall be such that velocity of flow does not exceed 5 m/second subject to a minimum of 100 mm. diameter.
2. The number of riser/downcomer shall be calculated on the basis that if 30 mt. of delivery hose is laid, it reaches the farthest comer of the remotest compartment on the floor.
3. The riser/downcomer shall be provided in the staircase/staircase lobby in such a manner that it does not obstruct the means of escape.
4. Only single headed hydrants shall be used on the riser/downcomer.
5. The size of hose to be provided with the internal hydrants shall be 50 mm diameter and with 63 mm diameter instantaneous male/female couplings.
6. Diffuser branch shall only be provided in the hose boxes.
7. In case of partially sprinklered building tapping from the wet riser is permitted for sprinkler feed.
8. In case of fully sprinklered building separate rising mains and pumps shall be used for sprinkler system and wet riser.

5. Selection of Pumps

1. Pumping requirement shall be met by a single pump or combination of pumps.
2. If more than one pumps are installed to meet the pumping requirement they shall be so arranged that they come into operation one after another depending upon fall in pressure in

the mains and the combined pumping capacity shall be 20% more than the actual pumping capacity needed.

3. Jockey pump shall be selected to give minimum 3% and maximum 5% of aggregate pumping requirement at the same pressure to that of the main pump subject to maximum discharge of 450 LPM.
4. Standard pumps shall only be used having discharge capacity as 1800 LPM, 2280 LPM 2850 LPM & 4550 LPM.
5. The pump shall be capable of giving the pressure as shown in the table below:

Occupancy Category	**Pressure* At Terrace Level**	
	Fully Spkd. ***(Kgf./Cm2)***	**Riser*****(Kgf./Cm2)***
LEVEL-I	3.5	3.5
LEVEL-II	3.5	5.5
LEVEL-III	5.5	7.0

* Orifice plates shall be installed at the hydrants on rising mains / yard hydrants to ensure that the pressure does not exceed 7 *Kgf./Cm2.*

Annexure-"D"

Questionnaire for High Rise Buildings/Other Buildings

Fire Service Headquarters

1. Name of the building …….
2. Address of the building ……
3. Name and address of builder /promoter……
4. Name and address of owners /occupiers of individual flats
5. Plot area ……
   (a) Title…….
   (b) Land use (in case of residential building indicate no. of dwelling units……
6. Covered Area (at grade level) ……..
7. Height of tile building ……
8. a) Overall height (from grade level up to terrace level) ……
   b) Whether set back areas are conforming to unified building bye-laws ……
9. a) Number of Basement(please indicate level below grade in each case)
   b) If basement extends beyond the building line, please indicate the load bearing strength of the roof of basement)
   ……
   c) Area of the basement …….
   d) Whether any piazza is proposed? if so, details of the level of piazza and ramp etc. be indicated ……..
10. Number of floors (including ground floor) ……
11. Occupancy use (please mention separately, use for basement and floors)……..
12. Covered area of typical floor …….
13. **Parking areas (please give details) ……**
14. Details of surrounding properties / features

Compass direction In relation to the building	Type of Property/ feature	Height in case of building	Distance wall to wall from building	Any other information
North				
South				
East				
West				

15. Approach to proposed building width of the road and connecting roads, if any ……..

16. Please give details of water supply available exclusively for the fire fighting……

17. Has wet riser(s) been provided? If so, please indicate the number of risers and internal dia of each ……....

18. Has any down comer been provided? If so, please give details including pump capacity……..

19. Please indicate the present arrangement for replenishment of water for fire fighting……..

20. Is a public or other water storage facility available nearby? if so, please give the capacity and distance from your building , also please indicate if it is easily accessible……..…..

21. Please give any other information regarding availability of water supply for fire fighting ……

22. Have internal hydrants on each floor including basement (s) and terrace.

    a) No. of hydrants on each floor including basement (s) and terrace……..

    b) Bore and length of each floor including basement(s) ……

    c) Size (bore) and type of nozzle fitted to each hose reel……...……

d) Is the hose reel connected directly to the riser or to the hydrant outlet? …….…….

23. Has fire hose been provided near each hydrant? if so, Please indicate …….

a) The type hoses……..

b) The size (bore) of hose ……

c) The length of each hose …….

24. Have branch pipes been provided? if so, please indicate

a) The type of branch pipe……..

b) Size of nozzle fitted to each branch……

25 a) If the basement is used for Car / Scooter parking or storage. Has it been sprinkled?…….……..

b) Whether any cubicles proposed in the basement? If so, the area of each cubical be indicated? …….

c) Whether segregation/compartmentation of the basement has been provided? If so, please give details…….

26. Is the building equipped with automatic fire detection and alarm system? If so, please indicate

a) The type of detectors used ……..

b) The standard to which the detectors conform ……

c) The code to which the installation conform ……..

27. Have manual call boxes been installed in the building for raising an alarm in the event of outbreak of fire? If so, please give details……...

28. Has public address system been installed in the building with loudspeaker on each floor with talk back facility……

29. Has an intercom system been provided between the various floors and the fire control room in entrance lobby? …….

30. Has a fire control room been provided in the entrance lobby of the building?……..

31. How many staircases have been provided in the building? Please indicate in each case:-

a) Width of the stairway……...

b) Width of treads……

c) Height of risers ……...

d) If the treads are of the non-slip type……

32. What is the average occupant load per floor?…….

33. Whether fire tower has been proposed? …….

34. How many lifts have been installed in the building? Please indicate in each case:

a) The floors between which the lifts runs……..

b) The type of doors fitted to the lift Car and at each landing…….

c) Fire resistance raring of lift Car and landing doors, if known …

d) Floor area of the lift car……..

e) Loading capacity of the lift car …….

f) Has communication system been installed in the lift car? ……

g) Has a fireman ' s switch been installed in the lift for grounding it in the event of fire ……..

35. Have any stationary fire pump (s) been installed or pressuring the wet riser? If so, please indicate.

a) The number of pumps……..

b) The size of suction and delivery connection of each pump ……

c) The output of each pump ……..

36. Has the building been protected with sprinkler system, If so, detail of sprinkler pump…….. …

37. Has a standby source of power supply been provided? If it is through a generator, please indicate.

a) The capacity (output) ……..

b) The functions that can be maintained simultaneously by the use of the Generator, such as operating lift(s); fire pumps, emergency lighting etc. system; exit signs; PA system etc……..

c) Is the generator automatic in action or has to be started manually?.....

38. Has any Yard hydrant been provided from the building's fire pump? ……

39. Where more than one lifts are installed in a common enclosure have individual lifts been separated by fire resisting walls or 2 hours fire rating? ……

40. Has the lift shaft(s) lift lobby or stairwell been pressurized? If so, give details……

41. Has the lift lobbies and staircase been effectively enclosed to prevent fire/smoke entering them from outside at any floor? .....

42. Have all exits and direction of travel to each exit been sign-posted with illuminated signs? ……..

43. Has a false ceiling been provided in any portion of the building? If so, please indicate location and also mention if the material used for the false ceiling is combustible or non-combustible…….

44. Is the building centrally air-conditioned? if so, please indicate:

a) The material used for construction of ducts and its fittings……..

b) The type of lining used for ducts, if any……..

c) The type of lagging used for ducts, if any for insulating any portion of the duct; please also indicate how the lagging is secured……

d) If plenum is used for return air passage has it been protected with fire detectors? Please give details……

e) Has a separate A.H.U. been provided for each floor?

f) Whether automatic shutdown of A. H. U. is coupled with detection system/sprinkler system……

g) Is the ducting for each floor effectively isolated or is it continuous on more than one floor? ……

h) Are the fire dampers being provided?……..

45 Where are the switchgear and transformer located? If inside the building please indicate: …….

a) If the switchgear and transformer (s) have been housed in separate compartments, effectively separated from each other and other portions of the building by a four-hour's fire resistive wall? …….

b) What precautions have been taken to prevent a possible fire in the transformer (s) from spreading? ……

c) Are transformer protected by high velocity water spray system……...

46 I) Where electrical cables, telephone cables wet risers / down comers pass through a floor or wall has the spaces (apertures) round the cables /pipes been effectively sealed/plugged with noncombustible, fire resistance material?……

II) Ventilation

a) Whether natural ventilation is relied upon? If so, give details of the vents for the stairwell life shafts……

b) Whether mechanical ventilation has been proposed? If so, give details of the proposed system indicating the number of air changes for the basement and other floors……..

c) Whether mechanical ventilation is coupled with automatic detection system/sprinkler system? Please give details of the system…….

47. Please indicate the number and type of fire extinguishers provided at various locations and the arrangement for the maintenance of the extinguishers……..…….

48. Please indicate if all fire extinguishers bear the BIS mark……

49. Whether the refugee area has been provided? If so, the floor on which provided and the total area provided floor-wise……...

50. Are the occupants of the building systematically trained in fire prevention, use of fire extinguishers and emergency procedures? If so, please give details……

51. Does an emergency organization exist in the building? If so, please give details and append a copy of the emergency (fire) orders…….

52. Has a qualified officer been appointed for the building either individually or jointly with other building(s)……..

53. Has the building been protected against lighting? If so, does the lighting protection conform to any code? Please indicate details provision of MCB and ELCB in the building…….

54. The work has not been started on site and construction will be started only after final approval of the Authority / the position of construction at site is given below:……..…….

Name and address of the consultant with Registration No…….

Owner's Signatures	Signature of the Applicant / Architect
Name……	Name……
(In block letters)	(In block letters)
	Designation……..
	Organization……

Signature of Fire Consultant

Dated:

Name……..

(In block letters)

Remark of the concerned Authority. The proposal has been broadly examined. The above information is correct and the proposal is permissible as far as development Authority is concerned (Additional comments, if any, may be given below or attached):

The proposal can be considered by Fire Services at conceptual stage/is forwarded to Fire Service along with 3 sets of drawings which are according to bye-laws, Master Plan, Zonal Plan, and fire fighting regulations and policy instructions of Government. The proposal involves relaxation in respect of height/set backs/ ……The architect has been advised to furnish the requisite material and documents given in the attached list, within one week time directly to the Fire Service.

Signature of Authority

Name:

Designation and office Seal:

Appendix -A
(Bye laws 2.9.1)
(To be submitted in duplicate)

Form for Application to Erect, Re-Erect or to make Material Alteration in any Place in a Building

To

Commissioner/Vice Chairman/Secretary

Development Authority

Sir,

I hereby give notice on behalf of Shri……. (owner) that the owner intends to erect/demolish or make alteration in the building number or to on/in Plot No ……Block No…….. House No ……..situated at ……..Scheme ……..and in accordance with the building Bye-law No……and I forward herewith, the following plans and specification duly signed by me and by the owner.

1. Site plan
2. Building Plan
3. Service Plan
4. Parking and circulation plan.
5. Landscape Plan
6. General Specifications (in attached form)
7. Ownership Title (Lease/Conveyance/Sale Deed, etc)
8. Other document, as required

ii) The building plan has been prepared strictly as per the approved building Byelaws. The construction shall be carried out in accordance with the building plan and I shall be completely accountable for any lapse on my part up to within 6 months after obtaining completion certificate of the building.

iii) The Building permit fee as required under bye-laws 2.13 has been deposited vide receipt No ……dated. …… (Photocopy enclosed).

iv) I am aware that in the event of building being constructed in violation of the sanctioned building plan approval, the Authority shall have the right to take fiction against me as it may deem fit including referring the matter to Council of Architecture for taking disciplinary action against me.

……..	…….
Signature of the Owners	(Signature of Registered Architect/Engineer/Supervisor)
Name of owner(s)……..	Registration No. of the
Address of the owner(s)……	Architect/Engineer/Supervisor
	Address of the Architect/Engineer/ Supervisor
Encl: As stated above	Dated: ……..

Appendix A-1

(Bye laws 2.9.1)

Statement of the Proposal and Certificate

By the Owner and Registered Architect

Classification of the Proposal……..

(To erect/re-erect/demolition)

Scheme /Colony ……..……. Plot No. …….……...

Plot Area ……. sq.mt. Size (in meter)

Area Statement

Description	Permissible sq.mt.	Proposed sq.mt.	Remarks
Max. Ground coverage			
Basement			
Ground Floor			
First Floor			
Second Floor			
Third Floor			
Total Floor area			
Floor Area Ratio			
No. of Dwelling Units			

Maximum height (in meters)

Setbacks	As per approved Layout plan (mt.)	Proposed (mt.)
Front		
Rear		
Left		
Right		

Parking (for above 250 sq.mt)

Equivalent Car space @ 1.33 ECS per 100 sq.mt of permissible built floor area	Open Parking	Ground Floor covered parking	Basement parking	Total (sq.mt)

Area in sq.mt	**Area in sq.mt@ 23 sq.mt per ECS**	**Area in sq.mt @ 28 sq.mt. per ECS**	**Area in sq.mt @ 32 sq.mt. per ECS**	**Total (sq.mt)**
1	**2**	**3**	**4**	**5**

ii) Fee & Charges

a) Building permit fee Rs……

b) Use of City Infrastructure Charges Rs……

c) Additional floor space charges (provisional) Rs……

d) Peripheral charges (Provisional) only for Group IV CHBS Rs……

e) Any other charges (please specify) Rs…….

Total amount (as per the details above) Rs……

Receipt No…….. Dated……..

We hereby certify that

1. The plot in question forms part of the approved layout plan and its location size and area conform to the approved layout plan and lease/sale deed/NOC of the lease Administration Branch of concerned Development Authority.
2. Plot is lying vacant and no construction shall be started before sanction.

3. The plot is free from all encumbrances (owner responsibility).
4. The period of construction valid up to ……. As per the lease condition / further extension of time for construction granted by the lessor is valid up to …… Time construction obtained from the lease Administration Branch, Concerned Development Authority.
5. Size of each dwelling unit is not more than 300 sq.mt.

Signature of Owner(s)	Signature of Registered Architect
Name……..	Name……
(in block letters)	(in block letters)
……..	Registration No……
Address…….	Address…….
…….	……
Dated: ……..	Dated: ……..

Authority Letter

I hereby authorize Mr./Mrs.…… to collect the sanction whose signature is verified below.

Specimen signature of signature of the owner(s)/Registered architect

Mr./Mrs……..

Dated received…… Date ……

(Signature of authorized person / owner / Registered Architect)

Dated:…….. Remark, if any……

Appendix A-2

(Bye laws: 2.10.7)

Form for Specifications of Proposed Building

The purpose (Residence, Office, Restaurant, Hotel, Dharmshala, School, Hostel Cinema, Shop, Factory Others) for which it is intended to be used ……
……..…….……
…….

Details of coverage on respective floor are given below:

1. Basement Floor……
2. Ground Floor……
2. Mezzanine Floor……
3. First Floor…….
4. Second Floor……
5. Third floor……
6. …….
7. …….
8. …….
9. ……

Existing (sq.mt)	Proposed (sq.mt)	Total (sq.mt)

a) Approximate number of inhabitants proposed to be accommodated……

b) The number of latrines, Urinals, Kitchens, Baths to be provided……

c) The source of water to be used in the construction……..……

d) Distance from public sewer……..……

e) The materials to be used in construction Walls/Columns/Foundations/Roof/Floors……

Signature of Registered Architect/Engineer/Supervisor

Name…….…….

Registration No……

Address……..…….

…….……..

Appendix – A-3

(Bye laws:2.10.8)

Form for Supervision

To

The Commissioner/Vice-Chairman/Secretary

Development Authority

Sir,

I hereby certify that erection/re-erection demolition or material alteration in / of Building No……on / in ……Plot No……in Block No…… situated at …….. scheme……..…

shall be carried out under my supervision and I certify that all the materials (type & Grade) and workmanship of the work shall be generally in accordance with the general specification submitted along with and the work shall be carried out according to the sanctioned plans which also included the services like drainage, sanitary, water supply, and electrical.

Signature of Registered Architect

Engineer/Supervisor

……..

Name of Registered Architect/Engineer/Supervisor

(In block letters)……..…

Registration No. of Architect/Engineer/Supervisor.

……..

Address of Registered

Architect/Engineer/Supervisor

……..

Dated: ……

Appendix – A-4

(Bye laws: 2.13)

Undertaking for Payment of Other and Peripheral Charges

***Note: It should be on non-judicial stamp paper of specified amount attested by Notary Public / First class Magistrate*.**

Undertaking

I …… Son of Shri ……aged……..
Years residents of ……. Owner of Plot No……
in …….. Co-operative Housing Building Society Ltd…….. hereby undertake to pay the balance of peripheral and other charges as and when required by the concerned Authority and in this regard Authority's decision will be finally binding on me.

Executed by me as…….. on day of……...

……
Executant

Witness:

1……

2……

Appendix – A-5

(Bye laws No.2.9.4 J)

Affidavit-cum-Undertaking

(Affidavit of Architect on Rs. 2/- Non-Judicial Stamp paper of specified amount to be Attested by Notary Public/Metropolitan Magistrate)

I …… son of ……Architect by profession having office at…….. Do hereby solemnly affirm and declare as under:

1. **That I am a Licensed Architect/Engineer/Supervisor/Plumber duly registered with the Authority vide registration No. ……**

   or

   That I am an Architect by profession and duly registered with the Council of Architecture vide Registration No……..
2. **That I have been engaged as an Architect for preparing the building plans and to supervise construction in respect of Plot No……. Block No……situated at……...**
3. **That I have prepared the building plans in respect of the aforesaid plot.**
4. **That I have studied the layout plan of the colony and gone through the instructions,**

policy decisions and other relevant documents in respect of the plot and colony.

5. **That I have personally inspected the site. The plot under proposal forms part of the approved layout plan with respect to its location, size shape and area of the plot and proposed land use is also in conformity with the approved layout plan. The plot has been demarcated at site and the size, shape and area of plot available at site tallies with the approved layout plan.**
6. **That the ownership documents are in the shape of registered sale-deed/lease-deed in favour of the applicants and have been thoroughly examined and the ownership in favour of the applicant is in order.**
7. **That there is no construction in existence at the plot and no construction shall be started before sanction of the building plans.**
8. **That there is no encroachment on the Municipal land/road/other property and road widths as shown in the layout plan are available at site.**
9. **That the proposal are in conformity with the terms and condition of lease deed which is still valid and period of construction as per**

lease-deed and the extension granted by the lessor is valid up to……

10. That the proposal have been prepared strictly in accordance with the Building Bye-laws rules regulation and practice of the department and no misinterpretation on inference of provision of Building Bye-Law has been done while preparing the plans. The construction shall be carried out strictly in accordance with the sanctioned building plans and in case any deviation is carried out, I shall inform the concerned Authority within 48 hours.
11. That in case the owner dispenses with my services at any stage whatsoever, I shall inform the concerned Authority within 48 hours.
12. That the size of each dwelling unit is not more than 300 sq. mt.
13. That mandatory setbacks have been proposed and shall be maintained in accordance with the setbacks marked in the layout plan/Master Plan.
14. That before submission of the proposal, necessary information/clarification have been obtained from the concerned department of the concerned Authority. The plot is safe and is not affected in any scheme or the road widening. Building activities for residential use are allowed with number of storeys as per approved layout plan.
15. That no development/additional development/deficiency charges are payable, against this plot (in case development/additional development/deficiency charges are payable then its details be given in the separate para)
16. That no non-compoundable deviations shall be carried out during the course of construction.
17. That nothing has been concealed and no misrepresentation has been made while preparing and submitting the building plans.
18. That in case anything contrary to the above is found or established at any stage, the concerned Authority shall be at liberty to take any action as it may deem fit including revocation of sanction of building plans and debarring me for submission of building plans

with the Authority under the scheme and also lodge a complaint with the Council of Architecture for appropriate action.

Deponent

Verification:

I the above named deponent do hereby verify at ……on this……. of …….. 20…… that contents of the above affidavit are true and correct to my knowledge. No part of it is false and nothing has been concealed there from.

Deponent

Appendix : A-6

(Bye laws: 2.14.2(i))

1.1.1.6.1.1.2.1.1 Building Permit

File No…… Dated……..

To,

Subject: Sanction u/s……

Dear Sir or Madam,

With reference to your application dated…….. for the grant of sanction to erect/re-erect/add to/alteration in the building to carry out the development specified in the said application relating to Plot No…… Block No…….. situated in/at…… I have to state that the Authority subject to the following conditions and corrections done in the plans has sanctioned the same on……..

1. The plans are valid up to …… day…… Months…….. year …….
2. The construction will be undertaken as per sanctioned plan only and no deviation from the bye-laws will be permitted without prior sanction. Any deviation done against the bye-laws is liable to be demolished and the supervising Architect engaged on the job will run the risk of being black listed.
3. Violation of building bye-laws will not be compounded.
4. It will be the duty of the owner of the plot and the Architect preparing the plans to ensure that the sanctioned plans are as per prevalent Master Plan/Zonal Plan/Building Bye-laws. If any infringement of bye-laws remain unnoticed, the concerned Authority reserves the right to amend the plans as and when infringement come to the notice and concerned Authority will stand indemnified against any claim on this account.
5. A notice in writing shall be sent to Authority before commencement of the constructions of the building as per bye-laws. Similar notice will be sent to Authority when the building has reached up to plinth level.

6. The owner shall not occupy or permit to occupy the building or use or permit to use the building or any part thereof affected by any such work until occupancy certificate is issued by the concerned Authority.
7. Concerned Authority will stand indemnified and kept harmless from all proceedings in court and before other authorities of all expenses /claims which the concerned Authority may incur or become liable to pay as a result or in consequences of the sanction accorded by it to these building plans.
8. The doors and window leaves shall be fixed in such a way that they shall not, when open project on any street.
9. The owner will not convert the house into more dwelling units on each floor then the sanctioned.
10. The building shall not be constructed within minimum distance as specified in Indian Electricity Rules from voltage lines running on side of the site.
11. The land left open as a consequence of the enforcement of the setback rule shall form part of the public street.
12. The sanction will be void if auxiliary conditions mentioned above and other conditions whatsoever imposed are not complied.
13. The owner will use the premises for the use, which has been sanctioned.
14. The owner will not proceed with the construction without having the supervision of an Architect/Engineer as the case may be. If he\she changes his Architect\Engineer, he\she shall inform the Authority about the appointment of new Architect\Engineer within 48 hours, with a proper certificate from him.

Yours Faithfully

For ……

Encl: A set of sanctioned plan.

Appendix: A-7

(Bye laws: 2.14.2(i))

Form for Refusal of Building Permit

To

File No……. Dated …….

Sir.

With reference to your application No……. dated…….. for the grant of sanction for the erection of building/execution of work in House No……Plot No……..Block No…… Scheme…… Situated at …… I have you inform you that building permit under relevant provisions of the Act of…….. has been refused on…… on the following grounds.

1

2

3

4

5

Yours faithfully

For……

..

Authority.

Appendix A- 8

(Bye laws: 2.14.3)

Form of Revalidation

File No……. Dated…….

Shri /Madam ……

…….

…….

Subject: Revalidation of Building Plans relating to plot No……

Block No…….Scheme……

Dear Sir / Madam,

Block No.

1. With reference to your application dated…….. on the subject cited above, I am directed to inform you that your building plan which were sanctioned on……. vide file No…….. have been revalidated up to ……..
2. Original sanctioned plan submitted by you is also returned herewith.
3 Please acknowledge receipt.

Yours Faithfully,

For……

Authority

Encl: As above.

Appendix: A-9

(Bye laws: 2.15.1(2))

Form for Notice for Commencement of Work

To,

The …….

……Authority,

Dear Sir,

I hereby certify that the erection/re-erection/demolition of material alteration in/ of building No…….. on/in Plot No…… Block No……... situated at scheme ……., will commence on……. as per your permission vide office communication No…….. dated……. under the supervision of …….. Architect/Engineer/Supervisor/Group, License No…… and in accordance with the plans sanctioned.

Signature of owner……

Name of Owner……

Address of Owner…….……

…….

Dated……..

Appendix: A-10

(Bye laws: 2.15.3)

Information for Intimation of Completion of Work up to Plinth Level

To

The ……
……Authority,

Sir,

The construction up to plinth/column up to plinth level has been completed in Building No…… on/in Plot No…… Scheme No…….. Road/Street……Ward……. in accordance with your permission No……..dated……..under my supervision and in accordance with the sanctioned plan.

Yours faithfully,

Signature of Licensed Architect/Engineer/Supervisor

Name……
(In Block letters)
Address:……
……
Date:…….

Appendix: A -11

(Bye laws: 2.15.3)

Inspection Report

I……..working as a ……..with…… have carried out the inspection of Building No……..on/in Plot No…….. Scheme No.…….Road/Street ……ward…….. in accordance with permission No…….. dated…… The following deviation from the sanctioned plans have been noticed which are against the provision of Master Plan / Bye-laws are of non-compoundable nature.

Description of deviations noticed: ……

……

……

……

You may not proceed with further work till such time the deviations made are rectified and construction brought in conformity to sanction plans.

Yours Faithfully

For……

…….

…….

Competent Authority

Office No……..

Office Stamp……..

Date……

Appendix:A-12

(Bye laws: 2.16)

1.1.1.7 Form of Notice of Completion

(To be submitted along with prescribed fee for notice of completion and other relevant documents**)**

To

The …….

……Authority,

Dear Sir,

I/We hereby give notice that I/We have completed the erection of building/execution of the works in Plot No …… Block No…… Scheme…… situated at……. in pursuance of the sanction granted by the Authority vide File No……. dated…… I/We are enclosing all reports of the Authority inspection carried out during construction period.

2. Permission to occupy or use the building may be granted.

Yours Faithfully,

Signature of owner……

Name of owner ……

(In Block letters)

Address of the owner ……

……

Dated: ……..

Encl : As above

Appendix: A-13

(Bye laws: 2.16)

Form For Certificate of Architect/Engineer/Supervisor

(To be submitted along with notice of completion)

To

The …….

……Authority,

Dear Sir.

We hereby certify that the erection, re-erection or material alteration in/at building No…….. on in Plot No…… Block No…….Scheme…….situated at…… has been supervised by me and has been completed on ……. according to the plans sanctioned, vide office communication No……. dated ……. The work has been completed to our best satisfaction, the workmanship and all the materials (type & grade) have been used strictly in accordance with general and detailed specifications. All the drainage/Sanitary/Water Supply work has been executed under our supervision and as per Building Bye-laws. No provisions of the Building Bye-laws and condition prescribed or order issued there under have been transgressed in the course of the work. The building is fit for use for which it has been erected /re-erected or altered/constructed and enlarged.

2. Certificate:

i) Certified that the building(s) has been constructed according to the sanctioned plan and structural design (one set of structural drawings as executed is enclosed) which incorporate the provisions of structural safety as specified in relevant prevailing IS codes standards/Guidelines.

ii) Further certified that water harvesting as well as waste water re-cycling systems have been provided as per the sanctioned building plan.

iii) It is also certified that construction has been one under our supervision and guidelines and adheres to the drawings submitted and the records of supervision have been maintained by us.

3. Permission to occupy of use the building may be granted.
4. Any subsequent change from completion drawings will be the responsibility of the owner(s)

a) Signature of the owner with date
Name in block letters
Address

b) Signature of the owner with date
Name in block letters
Address

b) Signature of the structural Engineer (C) with date (for certificate 1)
(as defined in NBC of India)
Name in block letters
Address

d) Signature of the Supervisor/Engineer/ Group/ with date
Name in block letters, License No.
Address

Dated :……

Appendix:A-14

(Bye laws: 2.17.1)

File No……..

Plan No…….. Dated:……..

Shri/Miss/Smt…….

……

Completion-cum-Occupancy Certificate

With reference to your notice of completion dated…….. I hereby certify that building as per description below certified plan at Plot No…… Block No ……Scheme …….. situated at …….whose plans were sanctioned vide No…….. has been inspected with reference to building bye-laws in respect to the structural safety, fire safety, hygienic and sanitary conditions inside and in the surroundings and is declared fit for occupation and release of regular water and electricity connections. The description of the construction work completed is given as under:

Description of Construction Work Block Wise/Building Wise.

1. Block Building No.
2. Details of Completed Work floor wise.

Vice Chairman

Or

Commissioner of Authority

Appendix:A-15

(Bye laws: 2.17.1)

Form of Rejection or Compliance in Respect of Occupancy Certificate

File No…… Dated:……

Sh/Smt…….

…….

Subject: Occupancy Certificate in respect of Plot No……

Dear Sir *I* Madam,

1) With reference to your letter dated

2) With reference to your notice of completion dated

3) In continuation of this office letter of even No……..dated on the subject noted above, I am directed to inform you that your case bas been examined and occupancy certificate is rejected for the reasons as given below:-

Yours Faithfully

For…….

……Authority

1. ……..
2. ……..
3. ……..
4. ……..

Appendix: "B"

(Bye laws: 2.9.4. (a)

Affidavit/Undertaking

(For Handing Over Land Required For Road Widening)

That I/We have submitted building plans for construction of building on plot No……. Block No…… located at …… to the …….. under Sanction …… of the …….. Act for favour of sanction.

I/We undertake to hand over the land required for road widening as shown on site plan to concerned Authority free of cost as and when asked by……to do so.

I/We have already understood that the……is granting sanction on the basis of my undertaking.

If I/We fail to do so, the sanction so accorded shall be revoked and construction done as consequence thereof shall be deemed to have done unauthorisedly and shall be actionable u/s …….. of the ……. Act.

DEPONENT

Verification

I/We verify that the contents of the above undertaking are correct to the best of my knowledge and belief and nothing material has been concealed there from.

DEPONENT

1.1.1.7.1.1 Appendix: B-1

(Bye laws: 2.9.4. (f) & 4.5.5)

INDEMNITY BOND FOR BASEMENT

This Indemnity Bond is executed by Shri/Smt.……S/o, D/O, W/O Shri/Smt……R/O……in favour of Development Authority.

Whereas the executant has submitted to the concerned Authority the plans for, sanction of basement over Plot No…… under the_provisions of the Act and lie bye- laws made there under:-

And whereas the concerned Authority has agreed to sanction the aforesaid construction subject to the conditions that the owner shall indemnify the concerned Authority in the event of any loss or damage being cause to the adjoining building on account of the construction of the said basement either at the time of digging of its foundations or in the course of its construction or even thereafter and also against any claim of any concern thereto.

And whereas the executant has agreed to execute an indemnity bond to the above affect and also to abide by the terms imposed by the concerned Authority to the grant of sanction for construction of the basement.

Now this deed witnesses:

1. That in consideration of the sanction of the plans by…… for construction of the basement the

executant undertakes that he/she shall at all times keep……harmless and free from any liability, loss or damages/ flowing from any injury or damage caused to the adjoining built-up properties or to any person as a consequence of the construction of at the time of digging of its foundations or during the course of its construction or at any time thereafter.

2. The owner agreed and undertakes that in the event of any claim being made by any person or persons against the concerned Authority either in respect of the sanction granted by the concerned Authority to the owner for the construction of basement or in respect of the construction or manner of construction of the basement by the owner or the consequences flowing from the said sanction the executant shall be responsible and liable and not the concerned Authority.

3. The executant agrees and undertake to indemnify the concerned Authority fully in respect of any amount which the concerned Authority may be required to pay to any person either by way of compensation or damages or on any other account as a result of any claim or suit or any other proceedings concerning the sanctioning of the construction of the basement of the making thereof and also in respect of the costs and expenses which the concerned Authority may incur on defending any action.

4 Without prejudice to the above undertaking the executant hereby binds itself to pay to the concerned Authority to the full extent any amount which the concerned Authority may be required to pay to any person in connection with, relating to or concerning the sanctioning of the basement or the making thereof.

5 The owner further agrees and undertakes that this bond shall remain in full force and effect till the executant faithfully observes/performs the undertaking herein before contained.

In witness whereof the executant above named has signed this bond on this …….. day of ……. at……..

1.1.1.8 Indemnifier

Witness:

(Signatures)……

1. Name……
   Full Address……
   (Signatures)……
2. Name……..
   Full Address……..

Appendix –"C"

(Bye laws: 2.14.1(a))

PERFORMA TO BE SUBMITTED BY OWNER

1. Name, Status, and Address of the applicant
2. Name of the Architect with address with Registration number with Council of Architecture under the Architects Act, 1972.
3. Details of the property/plot
   a) Location
   b) Boundaries
   c) Area in sq.mt. with dimensions (net plot area)
   d) Width of the roads
4. Land use
   a) Master Plan
   b) Zonal Development Plan
   c) Approved Layout Plan
5. Title
   a) Free Hold
   b) Leasehold under notification for acquisition if lease hold permission of lessor for construction under the leasehold condition obtained.
   c) Whether under acquisition, if so give details.

6. Whether the plot/land is affected under the Urban Land (Ceiling & Regulation) Act, 1976. If so, copy of the NCO from the concerned Authority be furnished.

7. Proposals

   a) Land Use

   b) Coverage on each floor with proposed use of the floor space including basement.

   c) FAR

   d) Height

   e) No. of floors.

   f) Envelope controls/set backs

   g) Parking norms

Encl:

1. Ownership title
2. Permission to construct under the lease
3. Permission under the Land Ceiling Act, 1976.
4. Site/Location Plan
5. Tentative proposals to explain the scheme

Signature of Architect Signature of the owner

Name……

Name……..

Reg. No……..

Address……..

ADDRRESS……

……

…….

Appendix –"D"

(Bye laws: 5.3.2)

Number and Type of Lifts Required for Different Occupancies and Space for Electrical Installations

1. The number and type of lifts required depending on the capacity of lift, desired speed nature of operation are as given in table below:

Table: Number and types of lifts for non-residential Multistoried Building

S. No.	No. of floors	Capacity of lifts in person	No. of persons that can be carried by a lift									
			Speed m/s	In 6 min		In 30 min.		In 50 min.		In 60 min.	
				Manually Operated	Automatic	Manually Operated	Automatic	Manually Operated	Automatic	Manually Operated	Automatic
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	7	6	0.6-0.75	17	-	102	-	170	-	204	-
2	7	8	0.6-0.75	22	-	132	-	220	-	-	-
3	7	10	0.6-0.75	26	-	156	-	260	-	312	-
4	7	10	1.0	30	-	180	-	300	-	360	-
5	7	13	1.0	37	-	122	-	370	-	444	-
6	11	6	0.6-0.75	11	-	70	-	115	-	140	-
7	11	8	0.6-0.75	15	-	90	-	150	-	180	-
8	11	10	0.6-0.75	18	-	108	-	180	-	216	-
9	11	13	0.6-0.75	22	-	132	-	220	-	264	-
10	11	10	1.0	21	-	126	-	210	-	252	-
11	11	10	1.5	24	-	144	-	240	-	288	-
12	11	13	1.5	28	-	156	-	260	-	312	-
13	11	13	1.5	32	-	180	-	300	-	-	-
14	16	10	1.0	17	-	100	126	170	210	-	252
15	16	13	1.5	20	24	120	145	200	240	248	290
16	16	13	1.5	23	30	138	180	230	300	-	360
17	16	16	1.5	25	33	150	198	250	330	300	356
18	21	10	1.5	18	32	108	132	180	220	214	264
19	21	13	1.5	21	26	126	156	210	250	250	312
20	21	14	1.5	23	28	138	168	230	280	-	-

Note-1:

a) for all non-residential buildings, the traffic cleared in 50 minutes is considered adequate and is approved by Authority. As such for calculation the number of lifts required, the rate of the clearance of traffic in column 9 and 10 and the population may be taken into consideration.

b) In addition to total number of lifts required as above, provision of one lift of the same capacity may be considered to serve as stand-by.

Note-2: The population may be worked out on the basis of useful carpet area which the person occupy (excluding area of Verandah, Lobbies, Halls, Passages, Lavatory blocks, etc.)

Note-3: The population on ground and first floor may not be taken into consideration since these floors are not generally served by lifts.

Note-4 *0.75 meter per sec.* *Equivalent to 150 ft. per Min.*

1.00 meter per sec. *Equivalent to 200 ft. per Min.*

1.5 meter per sec. *Equivalent to 300 ft. per Min.*

Note-5 The height of buildings for lift installation i.e. the travel on the lift presumed in the above statements is as below:

7 floors	*21.0 mt.*
11 floors	*33.0 mt.*
16 floors	*48.0 mt.*
21 floors	*64.0 mt.*

S. No.	***No. of floors***	***No***	***Passenger unit capacity Persons***	***Speed in m/s***	***Landing Gate Type***	***Central System***	***Service Lift No.***	***Capacity Persons***	***Type of Gate***	***Central System***
1	*5 to 8*	*2*	*6*	*0.0 to 0.5*	*	*Automatic push button operation both from car and landing*	-	-	-	-
2	*9 to 11*	*2*	*8*	*0.6 to 1*	*	*-Do--*	*1*	*8*	--	*Push button car handle switch control*
3	*11 to 13*	*2* *1*	*8* *6*	*0.6 to 0.74*	* Power operated doors*	*--Do—and without collection system* *--do--*	*1*	*8*	-	*--do--*
4	*13 to 19*	*2* *2*	*8* *8*	*1* *1*	*-- power operated doors*	*--do—*	*1*	*8*	--	*--do--*

Table: Number and types of lifts for Residential Building

**** For buildings more than 15 mt. in height collapsible gates shall not be permitted.***

(see bye-law No. 7.9.1(f))

Appendix –"D-1"

(Bye laws: 5.3.2)

Space for lift Installation

The dimensions and relevant information for lift installations like lift well, pit depth, machine room, clearance from top floor landing to machine room flooring is given in table below:

Dimensions and required information for Lift Installation in Building.

Carrying Capacity of lift (persons) Number	Load (kg)	Lift speed	Dimension of Lift well front depth (In cm.)		(Cm)	Leading Pit Entrance (Cm)	Dimension of Machine Room			Clearance from top floor landing to machine room flooring cm	Imposed load in tones on top of lift well due to installation. It may be noted that figures do not include weight of the machine from floors and well, etc.
1	2	3	4	5	6	7	8	9	10	11	12
4	272	Up to & including 1 m/s	175	115	70	140	230	275	245	450	6.5
6	408	Do	195	135	80	140	230	335	275	450	7.0
8	544	Up to & including 1 m/s	200	170	80	150	245	395	275	450	8.5
10	680	Up to & including 1.5 m/s	225	170	90	150	245	395	305	470	10.5
13	884	--do--	235	188	90	150	245	425	335	470	13.0
16	1088	--do--	255	205	105	150	245	520	335	480	15.0
20	1360	--do--	255	220	105	150	245	520	335	480	15.0

Note: i) All lift well dimensions are minimum clear finished plumb requirements.

ii) Where more than one lift is located in the lift well, extra width of 10 cm. Separator beam should be provided.

iii) 1 m/s = 200 ft./min.

iv) The height of landing entrance should be 210 cm. (about 7 ft.) for all lifts.

Appendix – D-2

(Bye laws: 5.3.3)

D.2 Spaces for Electrical Installations

The spaces required for different electrical installations are given at 3.1 to 3.3

D.2.1 Electric Sub-station – The norms given in 3.1.1 and 3.1.2 shall be adopted for provision of space for sub-station.

D.2.1.1 Area Requirements for Sub-Station for buildings

Sl.No.	Total covered Area (in sq.mt)	Transformer Capacity (In KVA)	S/Stn. Size Required (In sq.mt)
1	2500	1 X 400	70
2	4500	1 X 630	70
3	8000	2 X 630	100
4	10,000	2 X 630	130
5	15,000	4 X 630	160
6	20,000	5 X 630	175
7	25,000	6 X 630	200
8	30,000	7 X 630	220

Note:

1. *For additional 1000 sq.mt. covered area, a load of 90 KVA will come up with 150 KVA TR. Capacity at 60 % loading.*
2. *For additional of one transformer as per covered area, a space of additional 16 sq.mt. is to be provided.*
3. *In case of any deviation in space size due to unavoidable circumstance, the same may be considered with the approval of Electricity Board.*
4. *The floor of the sub-station shall have cable trenches of 0.6 mt. depth, the layout for which will be given at the time of actual construction. For this purpose, a dummy floor of 0.6 mt. depth shall be provided to facilitate cutting/digging of floor for installation of equipment's and making subsequent changes in trenches. This floor shall be capable to withstand minimum load of 10 tones of each transformer mounted on flour wheels.*

The break-up spaces required for different installations in a sub-station are given as below:

1. Supply company's Switchgear room and or space of meters.
2. *Transformer Rooms:* The number and size of transformer rooms shall be ascertained from the total power requirements of the company. To determine the size of transformer and

clearance around a transformer, reference may be made to good practice (I.S.1887-1967 code of practice for installation and maintenance of Transformer). A 500 KVA transformer may be provided with a minimum space of 4 mt. X 4 mt.

If transformer is to be installed outdoor space shall be provided on similar considerations and adequate provision for safety enclosure is to be made. For transformer having large oil content (more than 2000 lt.) soak pits are to be provided in accordance with rule 64 of Indian Electricity Rules, 1956.

3. *High Voltage Switch Rooms* – In case of sub-station having one transformer, the owner is required to provide only one high voltage switch. In the case of single point supply for two transformers, the number of switches required is 3 and for 'n' transformers the number of switches is n+1. The floor area required in case of a single switch will be roughly 4 mt. X 1mt. and for every additional switch the length should be increased by 1mt.

4. *Low Voltage Switch Rooms* – The floor area requirement in respect of low voltage switchgear room cannot be determined by any formula.

5. *Room for Stand-by-Generator* – A room space not less then 6 mt. X 9 mt. may be provided for housing a standby Generator set of 50 KW.

D.2.1.1.A: Location of electric sub-station in basement of multistoreyed buildings:

1. The electric sub-station should be provided in the approved/sanctioned covered area of the buildings not below the first basement level and should be on the periphery of the building with clear independent round the clock approach having proper ramp with slope.

The ramp should be designed in such a manner that in case of fire no smoke should enter the main buildings. The exit from basement electric sub-station shall have self-closing fire/smoke

check doors of 2 hours. F.R. near entry to ramp. Additional exit shall be provided if traveled distance from the farthest corner of the ramp is more than 15mt.

2. The electric sub-station should be totally segregated from rest of the basement having 4 hours. F.R. wall and should have adequate internal lighting and ventilation. A perfect independent ventilation system of 30 air charges per hour linked with detection as well as automatic medium velocity water spray system for individual transformer shall be located outside the building at ground floor, fire control room shall be manned round the clock and shall also have and audio system in the basement as well as in the control room. No service such as water, sewer, air-conditioning, gas pipes or telegraphs services should pass through electric substation of the cable trench.

3. The rising mains should be of metal bus bars. The floor of electric sub-station should be 2 ft above the rest of basement floor and designed suitably to carry 10 tons of transformer weight on wheels also having provision of proper cable trenches 0.6 X 0.6 mt. depth. Dummy floor of 0.6 mt. depth be provided to facilitate laying of cables inside the building connecting to equipment. Fire retarding cables should be provided and cable trenches be filed with said cables. R.C.C. pipes at suitably places as required will be provided for cable entries to the sub-station spaces with suitable water proofing arrangement. A provision of 12 ft. clear height below beams should be made in the electric sub-station area along with adequate arrangement for fixing chain pulley block for a load of 15 tons. Provision of sumps shall be kept in the floor so that complete volume of transformer oil in the event of spillover could be accommodated. Sufficient arrangement to prevent spread of fire to oil pumps be made.

4. Transformers room and sub-station room shall be provided with steel shutters of 8’ X 8’ with suitable grills. Sufficient

arrangement for pumping the water out, in case of flooding should be made to minimize loss to switchgear and transformer.

5. In view of experience of installation of exhaust chimneys in the multi-storeyed buildings at undesirable locations, proper provision in the form of vertical exhaust leading to above terrace level should be made for the sub-station.
6. Electric sub-station space should be made available free of cost by promoters and should be free of seepage/leakage of water. There should be no combustible material kept in side or in the vicinity. Periodic inspection of electric sub-station shall be mandatory and violation of any bye-law will be dealt, sternly with penalty and immediate disconnection.

D.2.1.2. Other Requirements for Sub-station

1. The sub-station will preferably be located on the ground level failing which it can be in the basement floor in no case at higher level.
2. The entire space will be provided at one floor in continuation.
3. The minimum width of the sub-station space shall not be less than 6 mt.
4. The areas given above in respect of the different categories of rooms hold good if they are provided with windows and independent access doors.
5. All the rooms should be provided with partition up to the Ceilings and shall have proper ventilation. Special care should be taken to ventilate the transformer rooms and where necessary, louvers at lower levels and exhaust fans at higher level shall be provided at suitable locations.
6. In order to prevent storm water entering the transformer and switch rooms through the soak pits, the floor level of the sub-station shall be at least 15 cm above the highest flood water level that may be anticipated in the locality.

D.2.2 Cable Trenches Shafts Etc.

D.2.2.1 Suitable number of vertical shafts, rising mains, distribution boxes, etc. shall also be provided as per the requirements at suitable location.

Cable trenches with suitable handy covers for entry of the cables up to the substation onwards up to the street adjoining other building shall also be provided as per the requirements. These vertical shafts, rising mains, distribution boxes, cable trenches, etc. shall be so constructed as to be accessible only to authorized personnel. The rising mains and other installations in the vertical shafts, tap off boxes distribution boxes etc. required at each floor shall be provided, installed and maintained by the owner at their own cost.

Adequate enclosed space shall also be provided at each floor for installation of equipment's for distribution on respective floors such as distribution boxes, cut-out, and meter boxes and main switches.

D.2.2.2*Location of Switch Room: In* large installations other than where a sub-station is provided, a separate switch room shall be provided. This shall be located as closely possible to the electrical load center and suitable ducts shall be laid with minimum number of bends form the point of entry of the supply to the position of the main switchgear. The switch room shall also be placed in such a position that rising ducts may readily be provided there from to the upper floors of the building in one straight vertical run. In larger building, more than one rising duct and horizontal ducts may also be required for running cables from the switch room to the foot of each rising main. Such cable ducts shall be reserved for the electrical services only, which may, however, include medium and low voltage installations, such as call bell systems. Telephone installation should be suitably segregated.

D.2.2.3*Location and Requirement of Distribution Panels:* The electrical gear distribution panels and other apparatus, which are required on such floor may conveniently be mounted adjacent to the rising mains, and adequate space should be provided at each floor for this purpose.

D.2.2.4*Location and Requirement of PBX/PABX Room:* Information regarding provision and location of PBX/PABX room, telephone outlets and riser shall be ascertained form the relevant Authority.

Adequate space should be provided for installation of Sub-Distribution Board.

D.2.3. GENERAL

D.2.3.1 The maintenance of the built up space for electric sub-station, distribution equipment, vertical shafts and enclosure at each floor shall be done by the owner.

The standby arrangement for electricity supply up to and including the sub-station equipment and distribution pillars at the sub-station shall be provided compulsorily.

Appendix – "E"

(Bye laws: 2.14.5)

Qualification of Technical Personnel for Preparations of Schemes for Building Permit and Supervision

1.0 General

The qualifications of the technical personnel and their competence to carry out different jobs for building permit and supervision for the purpose of licensing by the Authority shall be as given in 2 to 6. The procedure for licensing the technical personnel is given in 6.

2.0 Town Planner

2.1 Qualification: The qualification for the town planner shall be those who are holding bachelor degree or post graduate degree or equivalent diploma in Town Planning from a recognized institution along with the valid membership of the Institute of Town Planners, India.

2.2 Competence: As provided in Building Bye-laws 2.11.2.

3.0 Architect:

3.1 Qualification: The qualification for architects shall be those who are holding bachelor degree or equivalent in Architecture and hold valid registration with the Council of Architecture under the Architects Act, 1972.

3.2 Competence: The architect is competent to carry out work related to building permit as given below and shall be entit led to submit.

i) All plans and related information connected with building permit

ii) Certificate of supervision for all buildings.

4.0 Engineer

4.1 Qualifications: The qualification for Engineer shall be degree or equivalent qualification in Civil Engineering / Municipal Engineering with valid membership (Civil) of the Institution of Engineers, India.

4.2 Competence: The Engineer is competent to carry out the work related to Building Permit as given below and shall be entitled to submit.

i) Structural details and calculations for all buildings,

ii) Certificate of supervision for buildings as in (i) above,

iii) Sanitary / water supply works for all types of buildings.

5.0 Structural Engineer

5.1 Qualification: The qualification of a Structural Engineer shall be degree in Civil Engineering or equivalent with post graduate degree in Structural Engineering or equivalent with valid corporate membership of Institution of Engineers, India.

5.2 Competence: The Structural Engineer is competent to carry out the work related to building permit as given below and shall be entitled to submit.

(i) Structural design /details and calculations for buildings according to sanction plan and structural design, which incorporates the provision of structural safety as a specified in prevailing BIS Code.

(ii) Certificate of structural supervision for buildings as in 5(i) above.

6.0 Supervisor

6.1 Qualifications: The qualifications for licensing of supervisor will be:

i) Three Years Architectural Assistantship or intermediate in Architectures from a recognized Institution and with two yeas experience.

ii) Three years Diploma in Civil Engineering from a recognized institution and with minimum two years experience; or

iii) Civil Draftsmanship from I.T.I with five years experience under a qualified Architect / Civil Engineer.

6.2 Competence: The supervisor shall be entitled to

i) Supervise construction of buildings on plots upto 100 sq. mt. for residential plots only.

7.0 Plumbers

Plumbers shall be licensed by the concerned Authority through examination of the candidates having the following minimum qualifications:

7.1 Qualifications:

i) A fair knowledge of English/Hindi/Urdu

ii) Knowledge of working drawings and dimensioned sketches

iii) Certificate of training from ITI for the trade, with minimum two years experience of execution of sanitary and plumbing works under any govt. Deptt./ Local body or a qualified Architect / Engineer.

iv) Experience of sanitary and plumbing works under any Government Department/Local Bodies or a qualified Architect/Engineer for a period of five years.

7.2 Competence

A plumber shall be competent to do the following jobs

a) Submission of sanitary plans up to 500 sq mt. plot size and 4 storeyed buildings.

b) Execution / supervision of sanitary works up to 500 sq mt. plot size and 4 storeyed buildings.

8.0 Electrician: As prescribed by the concerned electricity company.

9.0 Fire Consultant: As prescribed by Chief Fire Officer, Town/City Fire Service,

Appendix: "E-1"

(Bye laws: 2.11.1)

Empanelment of Architect – Rules

1. **Definition:** In these rules, unless the context otherwise requires:
   - **a)** **"Act" –** the Act of the concerned Local Body/Authority
   - **b)** **"Empanel Architect" –** A person empanelled by the Authority as per rules under these bye-laws as authorized person to sanction building plans of residential buildings up to 15 mt. in height and for plot size up to one hectare, forming part of an approved lay-out plan.
   - **c)** **"Person Authorized" –** means a qualified and duly registered Architect having a degree in Architecture or equivalent qualification and registered with the Council of Architects, India with minimum 5 years experience.
   - **d)** **Sanctioned Building Plans** means a building plan of a building/premises to be constructed on a plot and approved by the Competent Authority/ Architect in accordance with the provisions of Master Plan/Zonal development plan and Building Bye-laws.
   - **e)** **"Fee"** means a fee to be charged by the Authority/Architect for sanction of building plans.
2. **For the empanelment,** the qualified Architect shall submit list of projects handled with proof and credentials along with recommendations form the Council of Architects, India.
3. **The empanelment of an Architect** shall be for a period of two years and can be extended from time to time subject to review by the Authority at the end of every two years.
4. **The Architect shall be empowered** to sanction building plans of residential building up to 15 mt. height and for plot size up to one hectare, forming part of approved layout plan.
5. **In respect of sanction of building plans of Government buildings,** the plans shall be sanctioned by the Chief Architect/ Senior Architect

of PWDAP / the concerned Department of the Government, provided it conform to Master Plan/Zonal Development Plan, approved layout plan and Building Bye-laws.

6. **The Architect shall charge** building application fee, other charges as prescribed under Building Bye-laws and other charges as prescribed form time to time. He will be permitted to retain 50% of the building application fee towards his service charges and balance amount along with other charges shall be deposited with the Authority along with two sets of building plans and other required documents. If the Authority wants to raise any objection, the same shall be communicated to the Architect with in 30 days of filing the application with the Authority. The Architect while sanctioning the building plans shall take due cognizance of the objections raised by the Authority.

7. **Before sanction of building plans,** the Architect shall ensure and satisfied himself that various permissions as required the law from different Authorities have been obtained.

8. **The Empanelled Architect shall also ensure at the time of sanction of building plans as well as during the inspections at construction stage and also at the time of giving completion certificate** that there is no violation of Master Plan/Zonal Development Plan, Approved Layout Plan and Building Bye-laws and other related rules and regulations in force.

9. **In case it is found that there had been a violation** of Master Plan/Zonal Development Plan, approved layout plan and Building Bye-laws and other related rules and regulations in force at the time of sanction of building plans/ construction stage / issue of completion certificate, action for penalising the Architect shall be taken including removal from the panel and referring the matter to the Council of Architects of India for appropriate action.

10. **The Empanelled Architect shall be required to file a quarterly return** of building plans received for sanction, fee received, etc. to the Concerned Authorities. His work shall be monitored to check the backlog and performance.

11. **Before issue of a completion certificate** a joint inspection is to be carried out by the, Town Planner / convener of the building committee of the concerned Municipality Authority in this behalf and the empanelled Architect. Within 30 days of the joint inspection, the Architect shall be informed about the non-compoundable deviations to be removed and composition fee to be charged for minor deviations under the rules.

12. **Architect/ The Chief municipal Executive office or the Municipal Executive office shall issue the completion certificate** after having satisfied himself that non-compoundable deviations have been removed form the building and necessary composition fee has been deposited with the concerned Authority.

Appendix: "F"

(Bye laws: 6.11(i))

Penal Action for violation of provisions of Development Code of Master Plan, Zonal Regulation and Building Bye-laws.

(A) Non-Compoundable Items

Any deviations except those set in para "AA" hereunder, from the maximum, minimum prescribed limits regarding:

1. Coverage,
2. F.A.R.
3. Setbacks,
4. Open spaces,
5. Total height of the building
6. No. of floors,
7. No. of DUs & density
8. Parking norms,
9. Light and Ventilation provisions,
10. Use
11. All other provisions of these bye-laws except item given in para 'B' below shall not be compounded/regularized and shall have to rectified by altering/ demolition at the risk and cost of owner. Besides this any other action as per terms and conditions of lease and provisions of Act shall proceed.

(A.A) Compounding Excess Coverage/FAR

i) Deviations in the coverage/FAR to the extent of 5% of the permissible coverage/FAR or 13.5 sq.mt. whichever is less in building(s) use premises, other than building(s) use premises where 100% ground coverage and fixed height is allowed as per Architectural control forming part of comprehensive schemes like District Centre, Community Centres, Cluster Court Housing etc. may be compounded after levying penalty at the following Rates:

Rates of excess coverage/floor area:

Up to 5% of excess coverage/FAR a one time compounding fee equivalent to the land rated in the concerned locality applicable at the time of the application for compounding.

ii) For excess coverage / FAR for above 5%

Any excess coverage above 5% or 13.5 sq.mt whichever is applicable would be liable to demolish to that extent.

iii) Compounding at set back Infringements

The infringements of the set backs maximum to the extent of 30 cm (1 ft.) may be compounded by way of levying compounding fee at the following rates:

Infringements	**Residential Buildings**	**Non-Residential Buildings**
Upto 15 cm (6 inch)	Rs. 1000 per sq.mt. of area infringing the set back	Rs. 2500 per sq.mt. of area infringing the set back
Above 15 cm (6 inch)	Rs. 2000 per sq.mt of area infringing the set back	Rs. 5000 of area of the infringing the set back

(B.B) Compoundable Items

If a building or part thereof has been constructed unauthorized, i.e. without obtaining the requisite building permit from the concerned Authority as required under the building bye-laws, the same shall be compounded at the following rates provided the building or part thereof so constructed other wise conforms to the provisions contained in the Building Bye-laws and Master/Zonal Plan regulations. For this party shall have to submit the request for building permit in the prescribed procedure.

Rates:

a) Rs. 50 per sq.mt. of the covered area constructed unauthorized in residential building up to 500 sq.mt. Plot size.

b) Rs. 100 per sq.mt of the covered area constructed unauthorized in the building categorized below:

- All Govt. Public and Semi-Public and Utility Buildings.
- Religious, Institutional and Educational Buildings.

c) Rs. 250 per sq.mt. of the covered area constructed unauthorisedly

- Residential Building above 500 sq.mt. plot size, Group Housing and Guest Houses.

- Industrial Buildings:
- Storage buildings (underground or above ground)

d) Rs. 1000 per sq.mt. of covered area constructed unauthorisedly.

- Cinema and Theatre Building.
- Petrol Pumps (Filing / Service Station)
- Hazardous Buildings.
- Commercial / Business Buildings

1. The building not covered specifically under the above categories shall be compounded as decided by the Authority, considering the merit of each Individual case.
2. Items which are exempted form the calculations of the coverage and FAR e.g. cupboards, canopy, basement, and mezzanine, loft, watchman cabins, etc. but constructed unauthorisedly without obtaining prior permission from the Authority, but within the permissible limits shall also be compounded/regularized at the rate prescribed above.

ii) Deviations of the building bye-laws other than specified in (A) (Non-compoundable)

Deviation up to the maximum extent of 10% from the maximum/minimum prescribed limit (as prescribed by the building bye-laws) shall be compounded at the following rates:

a) In case of deviations of areas of various components of the building, the rate of penalty will be @ Rs. 50/- per 1% deviation.

b) For deviations in terms of height the penalty shall be @ Rs. 50/- per 1% of deviation for every 10 sq.mt. or part thereof of the affected area.

c) Deviations from the prescribed limit of width, length, penalty shall be @ Rs. 50/- per 1% of the deviation for every 10 sq.mt. or part thereof of the affected area.

Notes:

1) Notwithstanding the provisions above, no penalty shall be levied for the first 3% of deviation but in case the deviation limit exceed 3% penalty shall be levied at above rates for the total deviation up to 10%.

2) *The penalties of the above rates as given in (ii) (a), (b), and (c) shall be charged for each deviation and for every component of the building separately.*

d) *In case of increase in size of canopy in front open space form the prescribed limits of bye-laws the same shall be charged @ Rs. 100/- per sq.mt.*

e) *End walls up to 0.9 mt. in width in a terrace type construction constructed purely as an architectural feature Rs. 50/- each.*

f) *Enclosing of front balcony with jail wall which is being used as a part of stair case Rs. 500/- sq.mt.*

g) *(i) An open Urinal Wall up to 1.7 mt. height --------- No Penalty.*

(ii) Water storage Tank over open urinal with walls up to 1.70 mt. in height ------- No Penalty, if sanctioned. If not sanctioned, Rs. 500/- each.

h) *All roof projections beyond permissible limit of bye-laws as specified shall be counted towards FAR calculations if other wise the same do not infringe up to any other bye-laws.*

i) *Plinth steps in setback portion ---------- Rs. 100 each.*

j) *Extra slab in mumty constructed without sanction shall be compounded at the rate given in (B) (compoundable item) provided it does not infringe upon the provision of any other bye-laws.*

l) *Partition wall provided without sanction at any floor if the same are not infringing upon the provision of any other bye-laws --------- Rs. 50 per sq.mt. of the surface area of the wall (i.e. length X height)*

l) *Projections/sunshade/(not more than 0.45 mt. in width on public streets/roads over window opening above first floor shall be objected. However, at Ground Floor these shall be not permitted.*

Note:

The Authority if satisfied that there are other deviations of general nature, which are not described above, may fix rates for compounding such deviations. However, there shall be no further relaxation in FAR and coverage over that permitted above.

Appendix – "G"

(Bye laws: 6.8)

To Provide Facilitates in the Public Building excluding Domestic Buildings for Handicapped Persons

1. Definitions

Ambulant Disabled People:	Disabled who are able to walk but who may depend on prostheses (Artificial Limbs) orthoses (Calipers), Sticks, crutches or walking aids.
Non-Ambulant Disabled People:	Disabled people with impairments that confine them to wheelchair.
Wheel Chair:	Chair used by disabled people for mobility.

(i) Size of small wheel chair: 750 x 1050 mm

(ii) Size of large wheel chair: 800 x 1500 mm

2. Scope

These bye-laws are applicable to public buildings and exclude domestic buildings.

Building which shall provide access to ambulant disable and Non-Ambulant disabled are listed below. Distinction is made for buildings to be designed for the use of large wheel chairs and small wheel chair.

3. Building to be designed for Ambulant Disabled People

Higher Secondary School, Conference Hall, Dance Halls, Youth Centres, Youth Clubs, Sport Centres, Sport Pavilions, Boat Club Houses, Ice Rinks, Bowling Centres, Swimming Pools, Police Stations, Law Courts, Courts Houses, Sport Stadiums, Theaters, Concert Halls, Cinemas, Auditorias, Small Offices (the maximum plinth area 1400 sq.mt) Snack Bars, Cafes and banqueting rooms (for capacity above 50 dinners).

Note:

i) In sport stadiums provisions shall be made for non-ambulant spectators (small wheel chair)

ii) @ 1:1000 up to 10,000 spectators and @ 1:2000 for spectators above 10,000.

iii) *In Theaters, Concert Halls, Cinemas and Auditoria provisions shall be made for non-ambulant spectators (Small Wheel Chairs) @ 1/250 up to 1000 spectators and 1/500 for spectators above 1000.*

4. Building to be designed for Non-Ambulant Disabled People:

Schools for physically handicapped, cremation, buildings as mentioned in 3, Botanical Gardens, Religious Buildings, Old People Clubs, Village Halls, Day Centers, Junior Training Centres, Post Offices, Banks, Dispensaries, Railway Stations, Shops, Super Markets, and Departmental Stores.

Notes: Large wheel chair criteria shall be applicable on ground floors of the following building, post offices, banks, dispensaries, railway station, shops, supermarkets, and departmental stores.

5. Building to be designed for Non-Ambulant People (using small wheel chairs) Public lavatories in Tourist Sports, Clubs Motels, Professional and Scientific Institution, Museum, Art Galleries, Public Libraries, Laborites, Universities, Collage for further Education, Teachers Training Colleges, Technical College, Exhibition Halls Dentist Surgeries, Administrative Department of the Hospitals, Service Stations, Car Parking, Buildings Airports Terminals, Bus Terminals, Factories Employing Handicapped for Sedentary Works, Large Offices, (with plinth area abode 1400 sq.mt.), Tax Offices, Passport Offices, Pension Offices, and Labour Offices, Cafes, Banqueting Rooms and Snack Bars (For capacity above 100 dinners).

6. Buildings Requirements:

6.1 The following building requirements are to be provided for building mentioned above.

6.2 Site Planning

Access path form plot entry and surface parking to building entrance shall be minimum of 1800 mm wide having regular surface without any steps.

The parking of vehicles of disabled people two equivalent car spaces (ECS) shall be provided near entrance of 30 m from building entrance.

7. Approach to Plinth Level

Ramp shall be provided to enter the building, minimum width of ramp shall be 1800 mm with maximum gradient 1:12, length of ramp shall not exceed 9.0 m having 900 mm high hand rail on both sides

extending 300 m on both sides of ramps. Minimum gap from the adjacent wall to the handrail shall be 50 mm.

Entrance landing shall be provided adjacent to ramp with the minimum dimension 1800 X 2000 mm.

Minimum Clear opening for the entrance door shall be 1000 mm.

Threshold shall not be raised more than 12 mm.

For stepped approach size of tread shall not be less than 275 mm and maximum riser shall be 150 mm.

8 Stairways

Height of the riser shall not be more than 150 mm and width of the tread not less than 275 mm, nosing if provided shall not extend beyond 25 mm. Maximum number of risers on a flight shall be limited to 12.

9. Lifts

Whenever lift is required as per bye-laws, provision of at-least one lift shall be made for Non-Ambulant disabled (using small wheel chairs with the following minimum dimensions of lift).

Clear internal depth	1090 mm
Clear internal width	1750 mm
Entrance door width	910 mm

A handrail not less 600 mm long at 1000 mm above floor level shall be fixed adjacent to the control panel.

10. Toilets

10.1 One special W.C. in a set of toilet shall be provided for the use of disabled. No additional provision of W.C. is to be made for disabled.

Size of the W.C. shall depend on the category of disabled for whom it is has been provided.

All doors in W.Cs shall open outside.

The type of W.C. shall be European with seat height as 500 mm.

Handrails, where provided shall have min 25 mm dia.

10.2 Provision of W.Cs in buildings without lift:

Provision of special W.C. shall be made on all floors for buildings designed for ambulant disabled persons.

For buildings designed for non-ambulant disabled special W.C. shall be provided at Ground Floor. Size of W.C. shall depend on the type of wheel chair used by the disabled.

10.3 Provisions of W.Cs in buildings with lift:

Provision of Special W.C. shall be made on all floors. Size will depend on the category of disabled for whom it has been provided.

10.4 Toilet Details

10.4.1 For Toilets Designed for Ambulant Disabled

The minimum size of W.C. shall be 1075 x 1650 mm with a minimum depth of 1450 mm from entry door 900 mm. Long handrail on the side closer to W.C. with a clear width between the handrails shall be 900 mm and height of handrails shall be 800 mm from floor level.

Minimum size of the clear door opening shall be 780 mm.

10.4.2 For Toilets Designed for Non-Ambulant Disabled Small Wheel Chair

The minimum size of W.C. shall be 1350 x 1500 mm with a minimum depth of 1500 mm from entry door. 900 mm long handrail on the side closer to W.C. shall be provided. To provide movement space for wheel chair, W.C. seat shall be fixed towards one side to the opposite adjacent wall. The centerline of W.C. from the adjacent wall shall be 400 mm and minimum 950 mm from the other wall.

Minimum size of the clear door opening shall be 780 mm.

10.4.3 For Toilets Designed for Non-Ambulant Disabled Using Large Wheel Chair

The minimum size of W.C. shall be 1500 X 1750 with a minimum depth of 1750 mm for entry door. 900 mm long handrail on the side wall closer to W.C. shall be provided. To provided movement space for wheel chair, W.C. seat shall be fixed towards one side of the opposite wall. The centerline of the W.C. from the adjacent wall shall be 400 mm and a minimum of 1100 mm from the other wall. Min. size of clear door opening shall be 860 mm.

Appendix – 'H'

(Bye laws: 6.9)

Regulations for Resettlement and Jhuggi Jhonpri (JJ) Institu Upgradation

i) Density

The net density shall be up to 250 tenements per hectare.

ii) Minimum Plot Size

The Minimum Plot Size shall be 25 sq.mt. However, it can be 18 sq.mt. with 100% coverage provided 7 sq.mt. per tenement is clubbed for cluster space.

iii) External walls

115 mm thick external brick wall with or without plaster shall be permitted.

iv) Staircase

Single flight staircase without landing between the two floors shall be permitted.

v) Pathways

The width of path ways shall be as follows:

2 mt. width for pathways up to 30 m in length.

3 mt. width for pathways up to 50 m in length.

vi) Flushing System:

In water closets flushing system shall not be essential and toilets without this provision may be permitted.

vii) Water closets pan size:

The water closets seat shall be of minimum 46 m (18 inches) in length.

viii) Septic tank and leaching pit (soak pit)

A septic tank shall be provided with capacity 141.6 m liters (five cubic feet) per capita, where the municipal services are likely to be available within four or five years or so, pour flush water seal latrines (NEERI type) shall be permitted, where the municipal sewage system is not available and the water table in the area is not high.

Appendix – "I"

(Bye laws: 6.10.2)

Regulations for Low Income Housing on the lines of ISS-8888 formulated by the BIS (Bureau of Indian Standards)

1. ISS – 8888 deals with the requirements of low income housing, keeping in view of fire safety, health safety and structural safety in accordance to National Building Code and relaxation in the planning and general building requirements, which have bearing on cost of construction which needs to be reduced. The code is applicable for:
    a) Layout plan for low income hosing colonies to be developed either by public or by private agencies.
    b) Design for construction of building for such income group people either by public or by private agencies.

2. Keeping in view ISS-8888, the following provisions are incorporated in the Building bye-laws

Building bye-laws for low income housing based on ISS-8888 (1978).

Provision relating to layout planning

i) The type of development may be plotted development income housing/flatted development as low housing/block development as a group housing.

ii) Density: Residential density is indicated in terms of dwelling units per hectare as below:

Maximum Density for Low Income Housing

Sl. No.	**Density in dwelling units / ha for plinth area of unit of 33 sq.mt.**	**Density in dwelling units/ha for plinth area of unit of 20 sq.mt.**	**No. of storeys**
1	**2**	**3**	**4**
I	130	85	1
ii	250	170	2
iii	300	225	3
iv	250	260	4

Note:

1. *These densities are applicable to a cluster of dwellings up to 400, with a family of 5 members.*
2. *Vertical incremental housing shall be permitted in single ownership plot.*
3. *These densities includes provision for open spaces, convenience shopping, nursery and all internal roads and pathways, but do not include peripheral road around the cluster.*
4. *The minimum density shall be 75 per cent of the value given under column 2 and 3.*

** The development up to 3 storeys is generally recommended. The number of storeys shall be restricted to four only.*

iii) Size of the plot / plinth area

Minimum plot size shall be as follows with coverage not exceeding 75% with the details as below:

Minimum Plot Size	**Type of Development**
30 sq.mt.	Incremental housing with one room, cooking space and combined bath and W.C. on ground floor and future extension of one room and a bath on the first floor/ground floor.
40 sq.mt.	Two roomed house on each floor for Group Housing / Individual Ownership house.

Note:

1. *The minimum size of plots takes into account the need of incremental housing. In the case of cities (other than Metropolitan Cities) with population, less than 0.5 million, the size of the plots may be increased by 33.5 per cent*
2. *In exceptional cases in metropolitan cities with population more than one million the size of the plots may be brought down to 25 sq.mt. in case of low income housing colonies located in congested area or in areas as decided by the Authority.*

iv) Other Requirements

a)	Open spaces	0.3 ha/1000 persons
b)	Road area	10% to 20% of the site
c)	Nursery School	0.1 ha (one site) for 1500 population
d)	Shopping Centre	@ 4 shops per 1000 population is to be provided.

3. General Building Requirements for Low Income Housing As per I.S.8888-1978.

Sl. No.	Component of Building	Requirements
3.1	Habitable Room	
	(i) In case of one roomed house including space for cooking	Area 2.5 sq.mt Width 2.4 mt. Height 2.6 mt.
	(ii) Two roomed house	Area 6.5 sq.mt Width 2.1 mt. Height 2.6 mt.
	(iii) Height in case of sloping roofs	Avg. height 2.6 mt. Min. height 2.0 mt. (at eaves)
3.2	Kitchen	
	(i) Cooking alcove serving as cooking space	Area 2.4 sq.mt. Width 1.2 mt. Height 2.4 mt.
	(ii) Two roomed house	Area 3.3 sq.mt Width 1.5 mt. Height 2.4 mt.
3.3	Bathroom	Area 1.2 sq.mt Width 1.0 mt. Height 2.2 mt.
3.4	W.C.	Area 0.9 sq.mt Width 0.9 mt. Height 2.2 mt.
3.5	Combined bath and W.C	Area 1.8 sq.mt Width 1.0 mt. Height 2.2 mt.
3.6	Balcony	Min. width 0.9 m
3.7	Staircase	
	(i) 2 storeyed – Straight Flight Winding	Width 0.60 mt. (min) Width 0.75 mt. (min) Min. tread 22.5 cm. Max riser 20.0 cm.
	(ii) 3 storeyed or more Strait Flight Winding	Width 0.75 mt. (min) Width 0.90 mt. (min) Min. Tread 25.0 cm. Max riser 20.0 cm.
Notes A) the minimum clear head room shall be 2.1 mt.		
3.8	Plinth	Min. height 30 cm from the surrounding ground level
3.9	Lighting and Ventilation	(a) one – tenth of the room floor area for dry hot climate (b) one sixth of the room floor area for wet-hot climate

Appendix – "J"

(Bye laws: 10.5)

FORM No.3

Certificate of Structure safety

To.
……
……

Ref: - Proposed work of _____
(Title of the project)
C.S. No./R.S. No./F.P.No._____Inward No._____
at Village _____Taluka_____
Scheme No._____of_____(Village / Town / City)

Owner : _____
Address: _____
Tel No.: _____

I am a Registered Structural Engineer (RSE). This is to certify that I have been appointed as the Structural Engineer on record to prepare the Structural Design basis report, detailed structural design and detailed structural drawings for above mentioned project. I am fully conversant of my duties and responsibilities under the Regulations and assure that I shall fulfill them in all respects.

I have prepared and signed a structural design and prepared detailed structural drawings of the proposed building as per the latest Indian Standard Specifications, and as indicated in the Structural design basis report.

I undertake to supply the owner and the supervisor the detailed structural drawings. If my services are terminated, I undertake to intimate the Authority in writing.

Signature : _____

Reg. No._____ Date: _____

Name :_____

Address : _____

_____

Tel. No.: _____

Appendix – "K"

(Bye laws: 10.6.2)

FORM No.13

Certificate of Structure safety in Construction

Reference No.
Owner's Name : Location :
Submitted on : Received on :

The Chief Municipal Executive Officer
Urban / Area Development Authority.

Sir,

1. The building/s has / have been constructed according to the sanctioned plan.
2. The building/ s has / have been constructed as per
   - the detailed structural drawings and structural specifications prepared by the Structural Engineer on Record.
   - the detailed Architectural drawings and Architectural specifications prepared by the Architect on Record.
   - detailed drawings and specifications of all services
3. All materials used in the construction have been tested as provided in specifications and a record of test reports has been kept.

Signature of the Owner	Signature of Construction Engineer on Record
Date	Date
Name in block letter :	Name in block letters:
Address : _____	Address : _____
_____	_____
_____	_____

Appendix – "L"

(Bye laws: 10.5)

FORM No.14

Certificate of Completion by Structural Engineer

Reference No.

Owner's Name : Location :

Submitted on : Received on :

The Chief Executive Authority
Urban / Area Development Authority

Sir,

This is to certify that detailed structural drawings of the building/ s has / have been prepared on the basis of a detailed analysis and a detailed design carried out according to relevant previsions of the latest Indian Standard Codes, National Building Code and as indicated in structural design basis report.

Signature of the Owner	Signature of Structural Engineer on record
Date	Date
Name in block letters :	Name in block letters :
Address : _____	Address : _____
_____	_____
_____	_____

Appendix – "M"

(Bye laws: 10.11)

FORM No.16
Certificate of Structural Inspection Report

(This form has to be completed by registered Structural Designer after his site Inspection and verification regarding compliance of all recommendation by the owner, which in the option of the registered structural designer are necessary for safety of the structural)

I. Description by title and location of the property including T.P.No., F.P.No. etc.

II. Name of the present owner :

III. Description of the structure :

Class I or Class II (Briefly describe the property in general and the structure in particular)

(a) Function	**(b) Framed construction**							
	Resid-ence (with or without shops)	Apartments (with or without shops)	Office Build- ing	Shopping Centre	School, College	Hostel	Audit-oria	Factory
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
A. Load bearing masonry wall construction								
B. Framed structure								
Construction and structural materials	Critical load bearing element	Brick	RCC	Stone	Timber	Steel		
	Roof Floor	RCC	Timber	RBC	Steel	Jack-arch		

IV. Year of construction :
Year of subsequent additional or rectification's (Please describe briefly the nature of additions or rectification's).

V. Date of last inspection report filed : Last filed by whom (This does not apply to the first report).

VI. Soil on which building is founded :
i) Any changes subsequent to construction :
ii) Nearby open excavation :
iii) Nearby collection of water :
iv) Proximity of drain :
v) underground water-tank :
vi) R.W. Pipes out-lets :
vii) Settlements :

VII. The Super-structure (R.C.C. Frame structure) :
i) Crack in beam or column nature and extent of crack probable causes. :
ii) Cover spell :
iii) exposure of reinforcement :
iv) subsequent damage by user for taking pipes, conduits, hanging, fans or any other fixtures, etc. :
v) crack in slab :
vi) spalling of concrete or plaster of slab :
vii) corrosion of reinforcement :
viii) loads in excess of design loads :

VIII. The Super- Structure :
(Steel Structure) :
i) Paintings :
ii) corrosion :
iii) joint, nuts, bolts, rivets, welds, guest plates :
iv) bending or bucking of members :
v) base plate connections with columns or pedestals :
vi) loading :

(Please describe some of the major cracks, their nature, extent and location, with a sketch, if necessary.

IX. Recommendations if any

This is to certify that the above is a correct representation of facts as given to me by the owner and as determined by me after Site Inspection to the best of my ability and judgement.

The recommendations made by me to ensure adequate safety of the structure are complied with by the owner to my entire satisfaction.

(Signature of the Registered Structural Engineer

Date_____

Name of the registered structural engineer:

Registration No. Address:

Application Forms for Multistoried construction

SCHEDULE – 3

FORM – I

PART – I

BUILDING PLAN APPLICATION FORM

Form No.-_____

Authorised Signature

APPLICATION FOR PERMISSION FOR DEVELOPMENT OF BUILDING AND SUB-DIVISION OF LAND

From:
Name and Address
(in Block letters)
Tel No._____

For Office use only
Regd. No.
Scrutiny Fee

To

THE CHAIRMAN,
LOCAL PLANNING AUTHORITY
.....

Madam/Sir

I/We hereby apply for permission to undertake development and carry out:-

(a) Construction of_____storied building.
(b) Re-construction of an existing building
(c) Alteration/addition to the existing building;
(d) Revalidation/renewal of plan for construction of all_____ storied building;
(e) Sub-division of land
(f) _____(if any other please specify)

In respect of Plot No._____ Khata No._____ Village_____ of_____ Municipal Corporation/Municipal committee/NAGAR PANCHAYAT within the Urban Area of ..... The said land building shall be used for_____ purpose.

I/We enclosed herewith the following plans (4 copies in case of privately owned plots/ 8 copies in case of Govt. leased Govt. plots) and specifications duly signed by me and Architect/ Engineer/ Supervisor/ Group agency _____bearing Regd.No._____Licence/Empanelment No._____ who has/have prepared the plans, designs etc. and who will supervise the developments.

I/We the owner(s) of every part of the land/building to which this application relates, requests, permission for the above development may kindly be accorded.

Place:

Signature of Owner(s)

Date-

Name of Owner(s)

FORM – I
PART - II

FORM FOR SUPERVISION

I hereby certify that the development/erection/re-erection/demolition or material alteration in/of the building in respect of Plot No._____ Khata No._____ Village/Mouza_____of_____Municipal Corporation/Municipality/Nagar Panchayat shall be carried out under my supervision and I certify that all the materials (type and grade) and the workmanship of the work shall be generally in accordance with the general and detailed specifications submitted along with and that the work shall be carried out according to the sanctioned plans.

Signature of
Empanelled Technical Person

Name of the Technical Person

Address _____
_____
_____

Date: _____

FORM NO.-II

No._____,_____Municipal/ Nagar Panchayat Dated: _____

Permission is hereby granted in favour of;

Smt./ Shri_____for

(a) Sub-division of lands
(b) Institution of change of the use of land or building
(c) Construction of a_____ building
(d) Reconstruction of building
(e) Alteration of
(f) Alteration or additions in the existing building

_____(Specify)in respect of plot No._____, Khata No._____Village/Mouza._____ of _____Municipal Corporation/Municipality/NAC within the Development Plan Area of_____ subject to following additions/ restrictions.

(a) The land/ Building shall be used exclusively for_____ purpose and the uses shall not be changed to any other use without prior approval of Authority.
(b) The development shall be undertaken strictly according to plans enclosed with necessary permission endorsement
(c) Parking space measuring_____ sq. m. as shown in the approved plan shall be kept open and no part of it will be built upon.
(d) The land over which construction is proposed is accessible by an approved means of access of_____m. width.
(e) The land in question must be in lawful ownership and peaceful possession of the applicant.
(f) The applicant shall free gift_____ m. wide strip of land in the_____ Municipal Corporation/Municipality/ Nagar Panchayat for the further widening of the road to the standard width.
(g) The permission is valid for period of three years with effect from the date of issue.
(h) Permission accorded, cannot be construed as evidence in respect of right title interest of the plot over which the plan is approved.
(i) Any dispute arising out of land record or in respect of right/ title/ interest after this approval the plan shall be treated automatically cancelled during the period of dispute.

(j) Any other conditions.

By Order

Authorised Officer

Memo No._____/ , Dated_____

Copy along with _____ copies of the approved plans to
Smt./ Shri_____.

Authorised Officer

Memo No._____/ , Dated_____

Copy with a copy approved plan forwarded to the Executive Officer, ... Municipal Corporation/ Municipal committee/ Nagar Panchayat/ Executive Officer, Municipality for information.

Authorised Officer

Memo No._____/ , Dated_____

Copy forwarded to the Land Officer, G. A. Department/ Director of Town Planning, Arunachal Pradesh, Itanagar/ Enforcement Section

Authorised Officer

FORM-III

APPLICATION FOR DRAWING OF ATTENTION

From_____
_____
_____
(Name and address of the applicant in block letters)

TO

The Director Town Planning/ CHAIRMAN,
Municipal Committee/ Nagar Panchayat

Subject: Statutory Notice

Madam/ Sir,

I/We do bring to your kind notice that I/We had applied for permission to the ..... on_____ to undertake development with respect to plot No._____ Khata No._____ Village/Mouza_____ of_____Municipal Corporation/Municipality/ Nagar Panchayat within Development Plan Area of_____.My/ our application was registered vide No._____ Dated_____. Two months have elapsed since the submission of my/our application and I/we have not received any communication with respect to the said application.

Please take notice that if within a further period of one month from the date of receipt of this notice by you no communication either granting or refusing permission is received by me/ us, I/ we shall presume that permission as applied for has been granted in my/ our favour.

Yours faithfully,

Signature of the applicant(s)

FORM-IV

Form of Registered to be maintained

Sl. No.	Name and address of the applicant	Date of receipt	Date of permission with letter No.	Date of refusal with letter No.	Date of endorsement to Enforcement Branch	Date of return from Enforcement Branch	Date of sending to record room	Signature of the dealing Asst.	Signature of the S.O.

FORM-V

FORM OF NOTICE FOR COMMENCEMENT OF WORK

(TO BE FURNISHED BY THE PLOT OWNER(S) AND THE BUILDER/ DEVELOPER)

From: _____
_____
_____
(Name and address in Block Letters)

TO

THE Chairman /VICE-CHAIRMAN,
.....
.....

Sir,

I/We hereby give notice of the erection of building in respect of plot No._____ Khata No._____ Village_____ to be commenced on_____ as per the permission given in your letter No. _____ Dated _____ under the supervision, empanelled Architect/Engineer/ Structural Engineer_____,Regd.No_____ in accordance with the approved plan.

Yours faithfully,

Signature(s) of the Owner

Signature of Builder / Developer.

FORM – VI
PART - I

COMPLETION CERTIFICATE

From: _____
_____
_____
(Name and address in Block Letters)

TO

The Director Town Planning/ CHAIRMAN/ VICE-CHAIRMAN,

Sir,

I hereby certify that the development, of erection, re-erection or for material alteration in respect of the building on Plot No._____,Khata No._____Village/Mouza_____of_____ Municipal Corporation/Municipality/NAC within the Development Area of_____ has been supervised by me and has been completed on _____ according to the plans sanctioned vide No._____ dated _____.The work has been completed to my best satisfaction, the workmanship and all the materials(type and grade) have been used strictly, in accordance with the general and detailed specifications. No provisions of the code, conditions prescribed or orders issued there under have been transgressed in the course of the work. The land is fit for construction for which it has been developed or re-developed or the building is fit for use for which it has been erected, re-erected or altered, constructed and enlarged.
I hereby also enclose the plan of the building completed in all aspects.

Signature of
Empanelled Technical Person

Name of the Technical Person
Address _____
_____
_____

Date: _____

FORM – VI
PART - II

CERTIFICATE FOR EXECUTION OF WORK AS PER STRUCTURAL SAFETY REQUIREMENTS

With respect to the building work of erection, re-erection or for making alteration in the building on Plot No._____Khata No._____ Village/Mouza_____ of_____ Municipal Corporation/Municipality/Nagar Panchayat within the Development Plan Area of_____ I certify;

(a) that the building has been constructed according to the sanctioned plan and structural design(copy of the drawings as executed enclosed),which incorporates the provisions of structural safety norms as specified in Part- 6 (Structural Design) of the National Building Code of India, 2005 and other relevant codes; and

(b) that the construction has been done under my supervision and guidance and adheres to the drawings and specifications submitted and records of supervision have been maintained.

Any subsequent changes from the completion drawings shall be the responsibility of the owner

Signature of owner
with date

Signature of the Empanelled Engineer/Structural Engineer with date and Empanelment No.

Name: _____ _____

Address: _____ _____

FORM - VII

CERTIFICATE FOR STRUCTURAL STABILITY

With respect to the building work of erection, re-erection or for making alteration in the building on Plot No._____Khata No._____ Village/Mouza_____of_____Municipal Corporation/Municipality/NAC within the Development Plan Area of_____, I certify that the structural plans and details of the building submitted for approval satisfy the structural safety requirements for all situations including natural disasters like cyclone &earth quake etc., as applicable, as stipulated under Part- 6 (Structural Design) of the National Building Code of India, 2005 and other relevant codes; and the information given therein is factually correct to the best of my knowledge. I undertake responsibility with regard to supervision of the work at each stage of construction,(after laying of foundation &after casting of each floor) and submit the report to ..... regularly to effect that the building is being constructed conforming to the approved plan and as per the structural plan prepared by me. I will be responsible and liable for action by Govt. if the plan/design contain misrepresentation or fraudulent information and the construction is made in deviation of approved plan or if there is any structural failure due to wrong /unsafe structural design ,use of low quality material and/or poor workmanship endangering the in-mates7public.

Signature of owner With date	Signature of the Registered Engineer/Structural Engineer with date and registration No.
Name: _____	_____
Address: _____	_____

FORM-VIII
PERIODIC PROGRESS REPORT

(To be submitted by the Empanelled Structural Engineer/ Architect/Engineer)

From:

_____
_____

TO

THE PLANNING MEMBER,
.....
.....

Ref _____Municipaity/Nagar Panchayat approval letter No._____Dated _____

Madam/ Sir,

I/We hereby certify that the construction of the building up to foundation, plinth/ground floor/floors of the building plot No._____ Village/Mouza _____ has been supervised by me/us and has been constructed strictly conforming to the sanctioned plan and structural design as per the provision of NBC, 2005. The work has been done to my/our best satisfaction. All the materials used in construction of this building are strictly in accordance with BIS/ISI specifications and norms conforming to National Building Code, 2005 covering all the safety factors including earthquake and cyclone. I/we will be responsible and liable for action by Govt. if there is any structural failure and fire endangering the inmates and public.

Yours faithfully,

Signature of the
Architect/Engineer

Name

Empanelment No.

Signature of
Structural Engineer

Name
Empanelment No.

FORM-IX

No._____ / Dated th_____

REFUSAL OF PERMISSION FOR UNDERTAKING DEVELOPMENT OF PLOT NO. _____ IN MOUZA _____

To,

SMTI/SRI _____
_____
_____

Your reply to this office letter No. .....Dt..... has not been found satisfactory / You have failed to show any cause in response to this office letter No..... Dated .....

Hence, in exercise of the powers under Sub-Section .....of section-....., permission to undertake development on plot No..... Mouza..... Of ...../ Khurda/ Development Plan area is hereby refused on the following grounds.

1.....
2.....
3.....
4.....

Two copies of the plans are retained in this office for record and reference and the rest are returned herewith.

BY ORDER

AUTHORISED OFFICER

Memo.No...../ Dated.....

Copy to Municipal Commissioner, /Director of Estates, / Director town Planning (in case of lease plots).

AUTHORISED OFFICER

FORM - X

OCCUPANCY CERTIFICATE

The work of erection, re-erection or for material alteration undertaken in respect of Plot No._____ Village/Mouza _____ is completed under the supervision of_____ Architect (Empanelment No._____)_____Structural Engineer (Empanelment No._____) Supervisor_____, (Empanelment No. _____) as per the Completion certificate submitted. On inspection it is observed that the erection, re-erection or alteration undertaken with respect to above plot(s) conform/ do not conform the approved plan and the conditions imposed vide letter No._____dt_____.The building is permitted/not permitted for occupation for_____ occupancy subjected to the following

1.

2.

3.

One set of completion plans duly certified is returned herewith.

BY ORDER

Authorised Officer

FORM-XI

INDEMNITY BOND FOR BASEMENT

This Indemnity Bond is executed by Shri/Smt_____ S/O,D/O,W/O Shri/Smt_____R/O_____in favour of …….. Authority.

Whereas the executant has submitted to the concerned Authority the plans for,sanction of basement over Plot No._____ Mz / Vill_____ under the provisions of the Act and and Rules and Building Regulations made there under:-

And whereas the concerned Authority has agreed to sanction the aforesaid construction subject to the conditions that the owner shall indemnify the concerned Authority in the event of any loss or damage being cause to the adjoining building on account of the construction of the said basement either at the time of digging of its foundations or in the course of its construction or even thereafter and also against any claim of any concern thereto.

And whereas the executant has agreed to execute an indemnity bond to the above affect and also to abide by the terms imposed by the concerned Authority to the grant of sanction for construction of the basement.

Now this deed witnesses:

1. That in consideration of the sanction of the plans by ……. for construction of the basement the executant undertakes that he/she shall at all times keep authority free from any liability, loss or damages/flowing from any injury or damage caused to the adjoining built-up properties or to any person as a consequence of the construction of at the time of digging of its foundations or during the course of its construction or at any time thereafter.
2. The owner agreed and undertakes that in the event of any claim being made by any person or persons against the concerned Authority either in respect of the sanction granted by the concerned Authority to the owner for the construction of basement or in respect of the construction or manner of construct ion of the basement by the owner of the consequences flowing from the said sanction the executant shall be responsible and liable and not authority.
3. The executant agrees and undertake to indemnify the concerned Authority fully in respect of any amount which the concerned Authority may be required to pay to any person either by way of compensation or on any other account as a result of any claim or suit or any other proceedings concerning the sanctioning of the construction of the basement of the making thereof and also in respect of the costs and expenses which the concerned Authority may incur on defending any action.

4. Without prejudice to the above undertaking the executant hereby binds itself to pay to authority to the full extent any amount which authority may be required to pay to any person in connection with, relating to or concerning the sanctioning of the basement or the making thereof.
5. The owner agrees and undertakes that this bond shall remain in full force and effect till the executant faithfully observes/performs the undertaking herein before contained.

In witness whereof the executant above named has signed this bond on this_____ day of_____ at_____

Indemnifier

Witness:

(Signatures)_____

1. Name_____

Full Address_____

(Signatures)

2. Name_____

Full Address_____

(Signatures)