

Appendix - C - DEFINITIONS AND DETAILED REQUIREMENTS FOR OBTAINING DEVELOPMENT PERMISSIONS

C.1 DEFINITIONS

The following sub-chapter puts forth the definitions of various terminologies uses in the proposed Development Control Regulation in a comprehensive manner. Thus it should be understood that, in the proposed Development Control Regulations, unless the context otherwise requires, the terms and expressions defined as follows shall have the meaning indicated against each of them.

The terms and expressions not defined in these nomenclature shall have the same meanings as in the Bhutan Municipal Act, 1999 and the rules framed there under or as mentioned in National Building Code (NBC) of India, as the case may be unless the context otherwise requires.

C.1.1 **Act**

Shall mean the Bhutan Municipal Act, 1999

C.1.2 **Additions and/Or Alterations**

Shall mean any change in an existing authorized building or approved plans of a building, or a 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 wall or part of a wall, partition, column, beam, joist, or re-roofing, or re-construction of any kind, alterations to a floor, including a mezzanine floor, or any support, or a change to, or closing of any required means of ingress, or egress, or a change to fixtures, or equipment, as provided in these Regulations.

C.1.3 **Advertising Sign/Hoarding**

Shall mean any surface or a structure with any character, letter or illustration, applied there to and displayed in any manner whatsoever out of doors for the purpose of advertising, giving information regarding, or to attract the people to any place, cause, 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, hoarding or displayed in any space, or in or over any water body included in the limits of the notified area of the Implementing Authority.

C.1.4 **Air-Conditioning**

Shall mean the process of treating air to control simultaneously, or singly, its temperature, humidity, cleanliness and distribution to meet the requirement of an enclosed space.

C.1.5 **Amenities**

Shall mean roads, streets, open spaces, parks, recreational grounds, play-grounds, gardens, water supply, electric supply, street lighting, drainage, sewerage, public works and other utilities, communication network, etc. for the citizens' use and convenience.

C.1.6 **Apartment/Flats**

Shall mean residential buildings constructed in a detached or semidetached manner being designed as ground floor plus one or more upper floors and constructed as separate dwelling units with common staircase and other building services.

C.1.7 **Applicant**

Shall mean the registered owner(s) of a property who applies in the prescribed form to construct/alter/extend a building.

C.1.8 **Architect**

Shall mean a person with degree or diploma in architecture from an Institute, College or University accredited to impart teaching and to issue degree and/ or diploma, which is recognized by the Royal Civil Service Commission.

C.1.9 **Basement or Cellar**

Shall mean the lowest storey of a building having minimum half of the clear floor height of the basement or cellar below the lowest ground level. Where a plot has access from two different roads, the level of the lower road shall be accepted to be called a basement, if it is to be used exclusively for parking and utilities. On plots larger than 2500 Sq.Mts, where a star hotel or a multi-plex is to be constructed a basement may cover the entire plot, leaving a 1.8 meters margin on all sides.

C.1.10 **Betterment Charge**

Means a charge levied by the Implementing Authority for ensuring off-site services and amenities to the area.

C.1.11 **Building**

Meaning any structure for whatsoever purpose, and of whatsoever materials constructed and every part thereof, whether used as human habitation or not including foundations, plinths, walls, columns, floors, roofs, chimneys, plumbing and building services, fixed platforms, verandas, balconies, cornices or projections, part of a building or anything affixed thereto.



However, structures of a temporary nature like tents, hutments, etc. erected for temporary purposes or for ceremonial occasions, with the permission of the Implementing Authority, shall not be considered to be "buildings".

(a) "**Assembly building**" shall mean a building or part thereof where groups of people congregate or gather for amusement, recreation, social, religious, patriotic, civil, travel and similar purposes. Assembly buildings shall include theaters for drama and cinema, city halls, town halls, auditoria, exhibition halls, museums, "marriage halls", "skating rinks", gymnasia, stadia, restaurants, eating or boarding houses, places of worship, dance halls, clubs, road, air, or other public transportation stations.

(b) "**Business building**" shall mean any building or part thereof used for transaction or record thereof. Offices, banks and all professional establishments are classified as business buildings if their principal function is transaction of business and/or keeping of books and records thereof.

(c) "**Detached building**" shall mean a building with walls and roofs independent of any other building and with open spaces on all sides.

(d) "**Semi Detached Building**" shall mean a building detached on three sides with open spaces as specified in these Regulations. A superficial connection via a beam, wall, balcony, corridor, skybridge, or any other trivial connection will not qualify a building to be defined as "semi-detached"

(e) "**Educational building**" shall mean a building exclusively used for a school or college, recognized by the appropriate Board or University, or any other Implementing Authority involving assembly for instruction, education or recreation incidental to educational use, and including a building for such other uses incidental thereto such as a library, laboratory, fine arts facility, or a research institution. It shall also include quarters for essential staff required to reside in the premises, and buildings used as hostels and boarding solely captive to an educational institution whether situated in its campus or not.

(f) "**Hazardous building**" shall mean a building or part thereof used for, -

- i. Storage, handling, manufacture or processing of radio- active substances or of highly combustible or explosive materials or products which are liable to burn with extreme rapidity and/or producing poisonous fumes or explosive emanations.
- ii. Storage, handling, manufacture or processing which involves highly corrosive, toxic obnoxious alkalis, acids, or other liquids, gases or chemicals producing flame, fumes, and explosive mixtures or which result in division of matter into fine particles capable of spontaneous ignition.
- iii. Storage, handling, manufacture, experimentation, research, or processing which could cause any danger to the public health, hygiene or safety, as certified by the competent health and safety officials of the Royal Government of Bhutan.

(g) "**Industrial building**" shall mean a building or part thereof wherein products or materials are fabricated, assembled or processed, such as assembly plants, laboratories, power plants, refineries, gas plants, mills, dairies and factories.

(h) "**Institutional or public building**" shall mean a building constructed by the Royal Government, Semi-Government organizations, public sector undertakings, registered Charitable Trusts for their public activities, such as administration, education, medical, recreational and cultural, hostel for working women or men, or for an auditorium or complex for cultural and allied activities, or for an hospice, 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, custodian and penal institutions such as jails, prisons, mental hospitals, houses of correction, detention and reformatories, clubs, golf course, sports stadium, buildings and facilities constructed by the Royal Government for the promotion of tourism, such as inns, resorts, lodges, etc..

(j) "**Commercial / Mercantile building**" shall mean a building or part thereof primarily used for commercial purposes such as shops, stores, departmental stores or markets, for display and sale of goods or merchandise, including office, storage and service facilities incidental thereto located in the same building. Mixed use buildings with commercial areas on the ground floor and residential above shall be construed as Commercial building for the purposes of this document.

(k) "**Office building (premises)**" shall mean a building or premises or part thereof whose sole or principal use is for an office or for office purposes or clerical work. "Office purposes" includes the purpose of administration, clerical work, handling money, telephone, telegraph and computer operation; and "clerical work" including writing, book-keeping, sorting papers, typing, filing, duplicating, punching cards, tapes or machines, calculations, drawing, of matter for publication and editorial preparation of matter of publication.

(l) "**Residential Building**" shall mean a building in which sleeping accommodation is provided for normal residential purposes, with or without cooking or dining facilities, and includes one or more family dwellings, lodging or boarding houses, hostels, dormitories, apartment houses, flats and private garages of such buildings.

(m) "**Special Building**" shall mean

- i. a building solely used for the purpose of a drama or cinema theater, motion picture, drive-in-theater, an assembly hall or auditorium, town hall, lecture hall, an exhibition hall, theater, museum, a stadium, a "community hall, marriage hall;
- ii. a hazardous building;
- iii. a building of a wholesale establishment;
- iv. centrally air-conditioned building which is more than three floors,
- v. a building of more than two floors constructed on stilts,
- vi. a building of more than four floors.

(n) "**Storage Building**" shall mean a building or part thereof used primarily for storage or shelter of goods, merchandise and includes a building used as a warehouse, cold storage, freight depot, transit shed, store house, public garage, hangar, truck terminal, grain elevator, barn and stable.



- (o) "**Unsafe Building**" shall mean a building which,
- i. is structurally unsafe,
 - ii. is unsanitary,
 - iii. is not provided with adequate means of egress,
 - iv. constitutes a fire hazard,
 - v. is dangerous to human life,
 - vi. in relation to its existing use constitutes a hazard to safety or health or public welfare by reasons of inadequate maintenance, dilapidation or abandonment.
- (p) "**Wholesale establishment**" shall mean 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, warehouses.

C.1.12 Building Land Parcel

Shall mean a land/plot or part of a land/plot or combination of more than one land/plot over which a building is to be constructed as approved by the Implementing Authority.

C.1.13 Built-Up Area

Shall mean the area covered by a building on all floors including cantilevered portions, if any, but except the areas excluded specifically under these Regulations.

C.1.14 Building Inspector

Shall mean a technical person authorized by the Implementing Authority to inspect buildings and their premises during construction / renovation / addition / alteration.

C.1.15 Carpet Area

(Otherwise called "Net Internal Floor Area") shall mean the covered area of the usable rooms at any floor, excluding the area of the walls.

C.1.16 Implementing Authority

Shall mean any person or persons or Authority or Authorities authorized by the Competent Authority/Samtse Municipal Corporation/ D.U.D.E.S, as the case may be, to perform such functions as may be specified in these Regulations. Different persons or authorities may be authorized to perform different functions.

C.1.17 Chimney

Shall mean 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 the flue pipe.

C.1.18 Commercial Zone

Shall mean an area primarily intended for commercial and allied purposes.

C.1.19 Common Wall

Shall mean a structure joining two or more properties.

C.1.20 Combustible Material

Shall mean that material which when burnt adds heat to a fire when tested for combustibility in accordance with the IS: 3808-1966 Method of Test for Combustibility of Building Material, National Building Code, India.

C.1.21 Convenience Shopping

Shall mean shops each with a carpet area not exceeding 25 sq.m (except otherwise indicated) and comprising those dealing with day-to-day requirements, as distinguished from wholesale trade or retail shopping. It includes

- i. Food grain or ration shops, each with carpet area not exceeding 50 sq.m
- ii. Doma shops/kiosks
- iii. Tobacconists
- iv. Shops for collecting and distribution of clothes and other materials for cleaning and dyeing establishments
- v. Tailor or darning shops
- vi. Groceries, confectioneries, general provision shops, each with a carpet area not exceeding 50 sq.m
- vii. Hair dressing saloons and beauty parlors
- viii. Bicycle / scooter/ motorcycle hire and repair shops
- ix. Motorcar hires and repair shops not exceeding 50 sq.m.
- x. Vegetable and fruits shops
- xi. Milk and milk products shops
- xii. Medical and dental practitioners' dispensaries or clinics, pathological or diagnostic clinics and pharmacies, each with a carpet area not exceeding 50 sq.m
- xiii. Florists.
- xiv. Shops dealing in ladies ornaments such as bangles, cosmetics, etc.
- xv. Shops selling bakery products
- xvi. Newspaper, magazine stalls and circulating libraries
- xvii. Wood, coal and fuel shops, each with a carpet area not exceeding 30 sq.m
- xviii. Books and stationery shops or stores
- xix. Cloth and garment shops with areas less than 50 sq.m.
- xx. Plumbers, electricians, radio, television and video equipment repair shops and video libraries
- xxi. Restaurants and eating houses each with a carpet area not exceeding 50 sq.m
- xxii. Shoes and sports shops each with a carpet area not exceeding 75 sq.m.



xxiii. Hardware shops not exceeding 50 sq.m.

xxiv. Taxi stand office not exceeding 10 sq.m.

With the approval of the Implementing Authority, this list may be added to, or altered, or amended from time to time.

C.1.22 Corridor

Shall mean a common passage or circulation space including a common entrance hall.

C.1.23 Courtyard

Shall mean a space permanently open to the sky within the site around a structure or surrounded either partially or completely by a structure.

C.1.24 Common Plot / Land

Shall mean a common open to sky space exclusive of setbacks, margins, parking spaces and approaches, at the ground level of the building unit. The owner shall have to give an undertaking that the common plot shall be for the common use of all the residents or occupants of the building unit, free of cost.

On sanction of the development permission, the common plot shall deem to have been vested in the society/association of the residents/occupants. In case such society or association is to be formed, the possession/custody of common plot shall remain with Implementing Authority until such society/association is formed. The common plot shall not be sold to any other person and it shall not be put to any other use except for the common use of the residents/occupants.

C.1.25 Covered Area

Shall mean the area covered by a building on the ground floor.

C.1.26 Developer

Shall mean the person, who is legally empowered to construct or to execute work on a plot of land, building unit, building or structure, or where no person is empowered, the owner of the building unit, building or structure.

C.1.27 Development

Means the carrying out of building construction, engineering, mining, or other operations, in, over, or under land or water or the making of any material or structural change including demolition of building or reclamation of land or any change in use of the premises and includes redevelopment and layout and sub-division of any land.

Plotted Development : Means the carrying out of development leading to the subdivision of land into plots

Flatted Development : Means the carrying out of development on a site leading to the construction of flats

C.1.28 Development Charge

Means a charge levied by the Implementing Authority as per the provisions of the Bhutan Municipal Act, 1999 clause 95.

C.1.29 Development Permission

Means a valid permission, or authorization, in writing by the 'Implementing Authority' to carry out development, issued to a legally empowered developer, with due regard to the prevailing Act / Regulations in force at the time of issue.

C.1.30 Development Right

Means the right to carry out development of a building or land.

C.1.31 Deviation

Shall mean carrying out or undertaking a building construction or land development activity in departure from the sanction / approved plans, permissions or orders, irrespective of the degree of change.

C.1.32 Drain

Shall mean 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 buildings or yards appurtenant to the buildings within the same catchment. A drain includes an open channel for conveying surface water or a system for the removal of any liquid.

C.1.33 Dwelling Unit

Shall mean a shelter consisting of residential accommodation for one household. Provided that the minimum accommodation in a dwelling unit shall be one habitable room of minimum carpet area of 9 sq.m. with a minimum side dimension of 2.5 m and a WC. It may not have more than one kitchen or cooking space.

C.1.34 Enclosed Staircase

Shall mean a staircase separated by walls and doors from the rest of the building.

C.1.35 Engineer



Shall mean a person with a degree or diploma in civil and /or structural engineering from any recognized Institute, College, or University of Engineering recognized by the Royal Civil Service Commission.

C.1.36 Existing Building

Shall mean an authorized building or a structure existing before the commencement of these Regulations.

C.1.37 Existing Use

Shall mean authorized use of a plot of land, a building, or a structure existing before the commencement of these Regulations.

C.1.38 Exit

Shall mean a passage, channel of means of egress from any building, storey or floor area to a street or other open space of safety; horizontal exit, outside exit and vertical exit having meanings at (i), (ii) and (iii) respectively as under:

- i. "HORIZONTAL EXIT": - shall mean an exit which is a protected opening through or around at fire wall or bridge connecting two or more buildings.
- ii. "OUTSIDE EXIT": - shall mean an exit from a building to a public way, to an open area leading to a public way, or to an enclosed fire resistant passage leading to a public way.
- iii. "VERTICAL EXIT": -shall mean an exit used for ascending or descending between two or more levels, including stairways, smoke-proof towers, ramps, escalators and fire escapes.

C.1.39 External Wall

Shall mean an outer wall of a building not being a party wall even though adjoining a wall of another building and also shall mean a wall abutting on an interior open space of any building.

C.1.40 Escape Route

Shall mean any well-ventilated corridor, staircase or other circulation space, or any combination of the same, by means of which a safe place in the open air at ground level can be reached.

C.1.41 Fire and/Or Emergency Alarm System

Shall mean an arrangement of call points or detectors, or sensors, or sounders, and other equipment for the transmission and indication of alarm signals working automatically or manually in the event of fire.

C.1.42 Fire Proof Door

Shall mean 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. Fireproof doors for various purposes must conform to the specifications and performance standards as laid out in the concerned Indian Standards of the National Building Code, India.

C.1.43 Fire Pump

Shall mean 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 3.2kg/cm² at the topmost level of a multi-storied building.

C.1.44 Fire Resistance

Shall mean 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 restraint. The fire resistance test of structures shall be done in accordance with IS: 3809-1966 Fire Resistance Test of Structure.

C.1.45 Fire Separation

Shall mean 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.

C.1.46 Fire Service Inlet / Hydrant

Shall mean 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.

C.1.47 Fire Tower

Shall mean an enclosed staircase, which can only be approached from the various floors through landings or lobbies separated from both the floor area and the staircase by fire resisting doors. The specifications and performance standards of the enclosing walls, materials and doors shall be as per those stated in I.S.

C.1.48 Floor

Shall mean 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 a direct access to a street or open ground/ land shall be called the ground floor; the ground floor shall also be counted as a floor in defining the number of floors. (In the estimation of floors, the actual areas or extent of the floors shall have no consideration) The nomenclature of the other floors shall be as follows : the floor above the ground floor shall be termed as floor 1, with the next higher floor being termed as floor 2, and so on upwards.



C.1.49 Front

Front as applied to a plot; shall mean the portion facing the road and in case of plot abutting on more than one road the plot shall be deemed to front on all such roads / means of access.

C.1.50 Footing

Shall mean 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 large area.

C.1.51 Foundation

Shall mean that part of the structure, which is in direct contact with and transmitting loads to the ground.

C.1.52 Garage – Private

Shall mean a building or a portion thereof designed and used for the parking of vehicles.

C.1.53 Garage – Public

Shall mean a building or portion thereof, designed other than as a private garage, operated for gain, designed and/or used for repairing, servicing, hiring, selling or storing or parking motor-driven or other vehicles.

C.1.54 Ground Level

Shall mean the level of the crown of the existing nearest constructed road from where the principal vehicular access is taken or existing ground level within the plot, whichever is higher.

C.1.55 Group Housing

Shall mean a housing scheme wherein two or more independent dwelling units or buildings are constructed in an undivided parcel of land.

C.1.56 Hardship

Shall relate to the hardship arising due to the internal operation of the rules and not to the economic, social or personal condition of the applicant.

C.1.57 Home Occupation

Shall mean customary home occupation other than the conduct of an eating or a drinking place offering services to the general public, customarily carried out by a member of the family residing on the premises without employing hired labour, and for which there is no display to indicate from the exterior of the building that it is being utilized in whole or in part for any purpose other than a residential or dwelling use and in connection with which no

article or service is sold or exhibited for sale except that which is produced therein, which shall be non-hazardous and not affecting the hygiene or safety of the inhabitants of the building and the neighborhood, and provided that no mechanical equipment is used except that as is customarily used for purely domestic or household purposes and /or employing licensable goods. If motive power is used, the total electricity load should not exceed 0.75 KW. "Home Occupation" may also include such similar occupations as may be specified by the Implementing Authority and subject to such terms and conditions as may be prescribed. Under no case should an economic activity, deemed as a "Home Occupation" if it generates nuisance by way of sound, water, or air pollution.

C.1.58 Habitable Room

Shall mean a room occupied or designed for occupancy for human habitation and uses incidental thereto, including a kitchen if used as a living room, but excluding a bath-room, water closet compartment, laundry, serving and storing, pantry, corridor, cellar, attic, store-room and spaces not frequently used.

C.1.59 Hazardous Material

Shall mean: radio active substances and material which is highly combustible or explosive and/or which may produce poisonous fumes, explosive emanations, or storage, handling, processing or manufacturing of which may involve highly corrosive, toxic, obnoxious alkalis or acids or other liquids; other liquids or chemicals producing flame, fumes, explosive, poisonous, irritant or corrosive gases or which may produce explosive mixtures of dust or fine particles capable of spontaneous ignition.

Biological substances causing viruses, infections or which could cause uncontrolled bacterial growth harmful to humans, livestock, or plant life.

C.1.60 Height of Building

Shall mean the vertical distance measured from the level of the lowest natural ground level, which provides principal access to the development, up to the top of the finished level of the top most floor slab in case of flat roofs and up to the midpoint of the height of the sloping roof. The height of the sloping roof shall be taken as an average height of the relevant floor. The number of floors specification includes the ground floor. However the maximum height of the attic shall be limited to that given in the Critical Dimensions (see Concerned Section).

In addition to the precinct regulations, the height of buildings shall be governed by the "Guidelines on Traditional Architecture of Bhutan" and by the overall allowable building heights.



C.1.61 Height of a Room

Shall mean the vertical distance measured from the finished floor surface to the finished ceiling/slab surface. The height of a room with a pitched roof shall mean the average height between the finished floor surface and the bottom of the eaves and the bottom of the ridge.

C.1.62 Industrial Zone

Shall mean an area primarily intended for industries use or buildings and allied activities.

C.1.63 Institutional Zone

Shall mean an area primarily intended for institutional purposes.

C.1.64 Layout

Shall mean laying out a parcel of land or lands into smaller plots for building on, with laying of roads / streets, including formation, leveling, metalling or blacktopping or paving of the roads and footpaths, etc. and laying of the services and amenities such as water supply, drainage, street lighting, open spaces, etc.

C.1.65 Lift

Shall mean a mechanically guided car, platform or transport for persons and materials between two or more levels in a vertical or substantially vertical direction.

C.1.66 LIGHT HOMEWORKSHOP

Means a workshop wherein the work done or the machinery installed is such as could be done or installed in any residential area without detriment to the neighbourhood by means of noise, vibration, smell, fumes, smoke, soot, ash, dust or grit etc.

It will be subject to the following restrictions:

- i. Power used will be electrical.
- ii. Maximum power used will be 1.5 KW.
- iii. Maximum floor space occupied will be 20 sq.m.
- iv. It will be worked by the members of the family.
- v. Any part of the machinery including pulley, belt shafts etc. shall be attached to the walls or other parts of the building except the floor at which the same machinery is supported.

Such home workshop may be gold smithy, milk or curd churning, pills making, stitching embroidery, tailoring, vulcanizing, sewing machine, folding machine, milk-separation.

C.1.67 Light Industry

Means an industry in which the processes are carried out without detriment to the neighboring residential areas by reason of noise, vibration, smell, fumes, smoke, soot, ash, dust or grit. It will be subject to the following restrictions:

- i. Power used will be electrical

- ii. Maximum power used will be 10 KW, which may be enhanced up to 25 KW by the Implementing Authority in special cases of genuine expansion of existing factory, which may have reached the maximum limit of power.

- iii. Maximum floor space occupied shall not exceed 500 Sq.m.

- iv. It will be housed in a building suitable for the purpose. However, it shall not include the following industries:

Manufacturing or refining of ammonia, bleaching powder, chlorine, asphalt, brick, terracotta, gypsum, lime, plaster of Paris, coke, creosote, glucose, starch, dye, explosive or fireworks or storage thereof in excess of 50 Kg. fertilizers, gas (fuel or illuminating) in excess of three hundred cubic meters, gelatin or glue from fish or animal refuse, or offal, hydrochloric acid, nitric acid, sulphuric or sulphurous acid, lead black, linoleum or oil cloth, matches, pyrexilin or rubber or treatment thereof involving offensive odour, tar, turpentine or blast furnace, coal or junk yard, distillation of bores, coal weed or tar or manufacture of any of their distilled products, drop forages, fat grease lard of fallow manufactures, refining or rendering lout or grist mill, hot rolling mill, incineration, reduction, or dumping of dead animals, garbage or refuse except when accumulated and consumed on the same premises without the emission of odour, production or refining or storage above ground of petroleum or other inflammable liquids (except heating fuels), slaughtering of animals, tanning or curing or storage of raw hides and skins, tyre recapping.

C.1.68 Loft / Attic

Shall mean the space within the confines of the roof structure, above the ceiling of the top floor or an intermediate floor between two floors with a maximum height of 1.2 m measured between the bottom of the ceiling and the top of the loft and which is constructed and adopted for storage purpose. The loft if provided in a room shall not cover more than 20% of the floor area of the room.

C.1.69 Margin / Setback

Shall mean space fully open to sky provided at the ground level from the edge of the building wherein built-up area shall not be permitted except specifically permitted projections under this regulation.

C.1.70 Mezzanine Floor

Shall mean an intermediate floor with height not more than 2.3 m., between two main floors overhanging or overlooking a floor beneath and accessible only from the lower floor.

C.1.71 Municipal Boundary

Shall mean the boundary of Samtse as defined by the Royal Government / Competent Authority.

C.1.72 Non-Combustible

Shall mean not liable to burn or add heat to a fire when tested for combustibility in accordance with the IS: 3808-1966 Method of Test for Combustibility of Building Materials.

C.1.73 Obnoxious and Hazardous Industry

Means industry, which will create nuisance to the surrounding development in the form of smell, smoke, gas, dust, noise pollution, air pollution, water pollution and other unhygienic conditions.

C.1.74 Occupancy or Use

Shall mean the principal occupancy or use for which a building, or a part of it, is used or intended to be used, including contingent subsidiary occupancies; mixed occupancy building being those in which more than one occupancy are present in different portions of the building.

C.1.75 Occupancy Certificate

Shall mean an official document issued by the Implementing Authority certifying that the building is safe and fit for occupation.

C.1.76 Open Space

Shall mean an area forming an integral part of the plot, left permanently open to sky.

C.1.77 Owner

Shall mean person in whose name the land or property is registered as per the Land Records with the SMC and who receives rent for the use of the land or building or would be entitled to do so if it were let.

C.1.78 Parapet

Shall mean a low wall or railing built along the edge of roof or a floor.

C.1.79 Parking Space

Shall mean an area, enclosed or unenclosed, covered or uncovered, sufficient in size to park vehicles with space for movement. Parking spaces shall be served by a driveway connecting them with a street or alley and permitting ingress or egress of vehicles.

C.1.80 Partition

Shall mean an interior non-load bearing divider wall not more than one storey or part thereof in height.

C.1.81 Permanent Open Air Space

Shall mean air space permanently open 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.

C.1.82 Permission

Shall mean a valid permission or authorization in writing by the Implementing Authority to carry out development or a work regulated by the Regulations.

C.1.83 Plinth

Shall mean a portion of a building between the surface of the surrounding ground level and the finished floor surface immediately above the ground.

C.1.84 Plinth Height

Shall mean the height of the finished floor of the lowest floor level above the natural ground level.

C.1.85 Plinth Area

Shall mean the built-up covered area measured at the floor level of the basement or of any storey, including the walls.

C.1.86 Plot

Shall mean a piece of land enclosed by definite boundaries fixed by the Implementing Authority.

C.1.87 Porch

Shall mean a covered surface supported on pillars or otherwise for the purpose of a pedestrian or vehicular approach to a building.

C.1.88 Precinct Plan

Shall mean a geographical area designated in the approved Urban Development Plan/ Structure Plan for the purpose of regulating land uses within the approved municipal boundary.

C.1.89 Precinct-Use

Shall mean any activity/use, assigned to an area of land.



C.1.90 Public Purpose

The expression “Public Purpose” includes-

- i. The provision of village sites, or the extension, planned development or improvement of existing village sites;
- ii. The provision of land for town or rural planning;
- iii. The provision of land for planned development of land from public funds in pursuance of any scheme or policy of Royal Government and subsequent disposal thereof in whole or in part by lease, assignment or outright sale with the object of securing further development as planned;
- iv. The provision of land for a corporation owned or controlled by the Royal Government;
- v. The provision of land for residential purposes to the poor or landless or to persons residing in areas affected by natural calamities, or to persons displaced or affected by reason of the implementation of any scheme undertaken by the Royal Government, any local Authority or a corporation owned or controlled by the Royal Government;
- vi. The provision of land for carrying out any educational, housing, health or slum /bagos improvement and/or clearance scheme sponsored by the Royal Government or by any Authority established by the Royal Government for carrying out any such scheme or with the prior approval of the Royal Government,
- vii. The provision of land for any other scheme of development sponsored by the Royal Government or with the prior approval of the Royal Government, by a local Authority;
- viii. The provision of any premises or building for locating a public office, but does not include acquisition of land for Companies.

C.1.91 Registered Architect / Engineer / Structural Designer, Developer

Shall mean respectively a person registered by the Implementing Authority for the purpose of these Regulations as an Architect, Engineer, Structural Designer, Developer, under these Regulations or any other Rules prevailing for the area.

C.1.92 Recreation and Open Spaces

Shall mean an area primarily intended for active and passive recreational purposes.

C.1.93 Referral Authority

Shall mean an Authority created by the RGoB to which certain aspects of a proposed development may be required to be referred to, and a “no objection certificate’ obtained from, before the Implementing Authority scrutinizes/examines the proposal for giving approval.

C.1.94 Residential Zone

Shall mean an area primarily intended for residential purposes.

C.1.95 Residential Building

Shall mean a building used for human habitation including garages and out houses.

C.1.96 Residential Use

Shall mean a use of any building unit for the purpose of human habitation and includes similar activities like hotels, lodges, inns, guesthouses, and hostels.

C.1.97 Right Of Way

(ROW) shall mean an area reserved for road carriageway, central verge, footpath, roadside drains, avenue plantations and utilities.

C.1.98 Road/Street

Shall mean any expressway, highway, boulevard, street, lane, pathway, alley, stairway, passageway, carriageway, footway, square place or bridge, whether a thoroughfare or not, over which the public have a right of passage or access or have passed and had access uninterruptedly for a specified period, whether existing or proposed in any scheme, and includes all bunds, channels, ditches, storm-water drains, culverts, sidewalks, traffic islands, road-side trees and, hedges retaining walls, fences, barriers and railings within the street lines.

C.1.99 Road/Street-Level or Grade

Shall mean the officially established elevation or grade of the centre line of the street upon which a plot fronts, and if there is no officially established grade, the existing grade of the street at its mid-point.

C.1.100 Road/Street Line

Shall mean the line defining the side limits of a road/street.

C.1.101 Road Width or Width of Road/Street

Shall mean the whole extent of space within the boundaries of a road / the clear average width of the existing ‘right of way’, including the carriageway and footpaths, etc.. However, in cases where a regular line of street is prescribed by the Implementing Authority, such width shall be considered for the purpose of computing building height. When applied to a new road/street, as laid down in the city survey or development plan or prescribed road lines by any act or law and measured at right angles to the course or intended course of direction of such road.

C.1.102 Row Houses

Shall mean a row of houses with only front and rear open spaces

C.1.103 Sub-Division

Shall mean the division of a single plot or building unit into two or more parts.



C.1.104 Sanitary Inspector

Shall mean a technical person authorized by the Implementing Authority to inspect and regulate water supply, drainage and sanitation.

C.1.105 Set Back

Shall mean a distance between the plot boundary and building or the distance between buildings within a plot.

C.1.106 Service Establishment

Is wherein the work done or the machinery installed in such as would render service to the local residents and would satisfy their day-to-day residential needs and which does not create nuisance to the surrounding development in terms of noise, dust, water and air pollution. It will be subject to the following restrictions:

- i. Power used will be electrical.
- ii. Maximum power used to be 10 KW for residential zone and not more than 25 KW in commercial zone.
- iii. Maximum floor space occupied will be 50 sq.m.
- iv. It shall be detached and housed in a shop or a building specially designed for the purpose. Such establishment may be a fuel filling and/or service station, flour mill, bakery, laundry, air compressor unit, electrical motor, optical repair and watch repair shop, repair of musical instrument, carpentry, book-binding, printing press, paper-cutting, water cooling, and juice extracting unit, black-smithy, vulcanising, motor winding, cutting and nut cutting unit etc.

C.1.107 Service Road

Shall mean a road/lane provided at the front, rear or side of a plot for service purposes and includes a road / lane provided along a major road or expressway to cater to local traffic.

C.1.108 Shopping Centre or Commercial Centre

Shall mean group of shops, offices and/or stalls designed to form market/office complex.

C.1.109 Stair Cover

Shall mean 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 the weather, and not to be used for human habitation.

C.1.110 Storey

Shall mean 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.

C.1.111 Tenement

Shall mean an independent dwelling unit with a kitchen, or a cooking space.

C.1.112 Tenement Building / Ownership Flats

Shall mean a residential building constructed in a detached manner, or in a semi-detached manner, or as ownership flats in a building unit, each being designed and constructed for separate occupation with independent provision of bath and WC.

C.1.113 Travel Distance

Shall mean the distance from the remotest point of a building to a place of safety, be it a vertical exit or an horizontal exit or an outside exit, measured along the line of travel.

C.1.114 Transferable Development Right

Shall mean a development right to transfer the potential development on a site, designated for public purposes in a structure plan or local area plan. It is expressed in terms of total permissible built space, calculated on the basis of the 'Base FAR' allowable on that site / plot, and utilizable by the owner or transferred to someone else, from the present location to specified areas as per the structure plan or local area plan. It is allowable in lieu of compensation for the acquisition of the site / plot, free from all encumbrances, by the Implementing Authority.

C.1.115 Urban Control Zone

Shall mean a defined peripheral area immediately outside the municipal boundary as fixed by the Competent Authority and restricted for development activities.

C.1.116 Village Square

Village Square shall include activities such as community shopping centre, market, office building, cinema, small hospital, playground, swimming pool, town hall, open air theatre, civic and cultural facilities, library, higher secondary school, parking plots, public utility and service buildings such as post office, fire station, police station, religious building and building of public uses.

C.1.117 Water Closet (Wc)

Shall mean a privy with an arrangement for flushing the pan with water, but does not include a bathroom. It shall not be smaller in floor area than one square meter.

C.1.118 Water Course

Shall mean a natural channel or an artificial channel formed by draining or diversion of a natural channel meant for carrying storm and wastewater.

C.1.119 Warehouse Or Godown

Shall mean a building the whole or a substantial part of which is used or intended to be used for the storage of goods whether for storing or for sale or for any similar purpose. It is neither a domestic nor a public building, nor merely a shop if so used, not a store attached to and used for the proper functioning of a shop.

C.1.120 Wholesale Trade

Shall mean a business or enterprise, which operates on the basis of buying, receiving, transiting or taking goods from the producers and selling, trading, distributing such goods and products to retailers, convenience shops, etc., but not to the end users. Any trade where ninety percent of the premises used is for the storage of bulk goods, cartons and crates of goods, dissembled goods or goods to be passed on to retail units or direct sales outlets shall be deemed to be a Wholesale Trade use /activity.

C.1.121 Window

Shall mean an opening, other than a door, to the outside of a building, which provides all or part of the required ventilation.

- viii. The position of buildings and of all other buildings and construction which the applicant intends to erect.
- ix. The means of access from the street to the buildings or the site and all other building and constructions which the applicant intends to subdivide.
- x. Yards and open spaces to be left around the subdivided buildings to secure free circulation of air, admission of light and access.
- xi. The width of street in front and of the street at the side or rear of the subdivided building.
- xii. The direction of north point relative to the plan of the site or the buildings.
- xiii. Any physical feature such as trees, wells, drains, pipelines, high-tension lines.
- xiv. Existing streets on all sides indicating clearly the regular line for streets if any prescribed under the Structure Plan and passing through the building units
- xv. The location of the building in the plot with complete dimensions.
- xvi. A plan indicating parking spaces, if required under these regulations.
- xvii. The positions of the building units immediately adjoining the proposed development.
- xviii. The position of every water closet, privy, urinal, bathrooms, cess pool, well or cistern in connection with the building other than those shown in the detailed plan.
- xix. The lines of sewers on the site and/or building, the size, depth and inclination of every sewer and the means to be provided for the ventilation of the sewers.
- xx. The position and level of the outfall of the sewer.
- xxi. The position of sewer, where the sewerage is intended to be connected to sewer.
- xxii. Tree plantation as prescribed under the regulation.

C.2 LIST OF DETAILS TO BE SHOWN ON PROPOSED LAND DEVELOPMENT PLAN/ SUBDIVISION PLAN

- i. The boundaries of the plot and plot level in relation to neighbouring road level.
- ii. The highest and lowest levels of the plot and average slope with direction thereof.
- iii. The position of the plot in relation to neighboring streets and name of the streets.
- iv. Width of the proposed streets and internal roads.
- v. Sub-division of the land or plot or building unit with dimension and area of each of the proposed sub-divisions and their use in conformity with these regulations.
- vi. Dimensions and areas of open space and common amenities plots provided for under these regulations.
- vii. All the existing buildings and other development standing on or under the site.

C.3 LIST OF DETAILS TO BE SHOWN IN DRAWINGS / PLANS FOR OBTAINING BUILDING PERMISSION

Drawing guidelines

Drawings with complete design information and details, but not limited to the following, shall be submitted to the Competent Authority for scrutiny and approval.

Architectural drawings

- i. Site plan shall be drawn to scale and shall include the position of the proposed building in the plot showing the dimensions of the plot boundaries, set back lines and showing the approach road, location of septic tanks, soak pit, roof drainage, and drainage plan. The site plan shall clearly show any proposed widening right of way: no build line where a 30



- m. or a 15 m. clearance is required from rivers, major streams, minor streams, cliffs, ledges, etc. are required (for safety and environmental protection)
- ii. Site plan shall include a schematic drawing showing information on adjacent plot like building line, permanent features, drainage, access road, septic tank and soak pit location.
- iii. Layout plan of each floor, elevations of all sides of the building, sections through toilets and staircases, details of doors, windows, traditional cornices, railing/parapet, opening and other methods of ventilation, details of toilet and kitchen.
- iv. Drawings shall have proper title block indicating name of owner, type and number of storey, location, date, revision number and date, scale, and north direction.
- v. The following minimum scales shall be followed:
 - Site plan 1:500
 - Elevation/plan/section 1:100
 - Stair case/toilet/kitchen details 1:50
 - Door/windows/cornice details 1:25

Structural drawings

- i. A copy of design calculation notes.
- ii. Design codes used shall be listed on the drawing.
- iii. Loads (assumed or actual) shall be listed on the drawing.
- iv. Material properties shall be listed on the drawing.
- v. Assumed soil bearing capacity or soil investigation report shall be attached.
- vi. Foundation plan, truss layout plan showing truss and purlin spacing, beam and slab layout plan for each floor showing clearly the staircase opening, shaft opening and any other openings and depressions.
- vii. Concrete and reinforcement details for foundation, beams, slab, staircase, lintel, cornice, projections, zhu and rabsey, wall, etc.
- viii. Truss elevations and connection details showing the holding down details.
- ix. Details of separation gap indicating the location of such gap on the plan wherever required
- x. Details of splice locations and splice length for beams, columns, slab and staircase.
- xi. For Load bearing walls, details of plinth band, lintel band, roof band including vertical bars at corners, opening jambs, wall junctions to be shown.
- xii. Foundation details indicating depth of foundation and plinth level.
- xiii. Dimensions shall be clearly indicated for all structural members
 - Anchorage of beam bars in an external beam – column junction
 - Column ties and Beam stirrups details
 - Retaining details in case of foundation founded on different levels
- xiv. Drawings shall bear proper title block indicating name of owner, type and number of storey, location, drawing title, date, revision number.

- xv. Structural design with reference to the seismic criteria's as per the norms of the high risk Zone-V, world seismic action map.

Electrical Drawings

- i. Single line diagram of total electrical system showing incoming terminal point and distribution network.
- ii. Electrical layout plan showing positions of light points, power points, any other outlets, switches and wiring diagram.
- iii. Tapping off junctions, switchboards, and distribution circuits for power and lighting from SDB and phase distribution (in the case of multiphase installations) shall be indicated clearly on the wiring layout plan.
- iv. Sub distribution boards showing circuits and respective loads and protection devices.
- v. Power distribution boards for large multi-storey buildings showing floor-wise distribution from main control board and incoming power line.
- vi. For multi-storied / complex buildings, design calculations shall be submitted.

Additions and/or alterations to existing installations

The following information shall be submitted for additions and/or alterations to existing Installation:

- i. Polarity test results
- ii. Insulation test results
- iii. Earth continuity test results
- iv. Earthing test results
- v. Capacity, condition and specification of existing spare circuits
- vi. Rating, specification and condition of existing incoming mains control gear
- vii. Composite (existing and proposed) layout plans for all floors

Note: For factories, relevant by laws shall be followed as per Bhutan factory, electricity rules or relevant international standards.

The proposed Legend shall show the following

- Type and wattage of fixtures
- Type of SDBs
- Type of PCBs and connected load
- Type of MCBs
- Switches and Switchboards
- Junction boards

Compound Electrification work

- i. Fixture and fitting specification
- ii. Foundation details for support poles etc.
- iii. Terminal box details.



- iv. Size and type of cable proposed to be used.
- v. Single line diagram showing
 - Connections
 - Phase distribution
 - Circuitry

Telephone connections

Submitted drawings shall indicate symbols and legend. All points, junctions, routes ducts, telephone terminal cabinet are to be clearly indicated.

Drainage and Sanitation Drawing

- i. Plan showing Kitchen, bathroom and WC outlets.
- ii. Plan showing location of septic tank and soak-pit or sanitary pipe layout to the nearest sewer line, including manholes, wherever it exists.
- iii. Drainage layout plan connecting to the nearest storm water drain.
- iv. Sewer design shall be in accordance with plumbing code of practice.
- v. Materials and sizes of pipeline.

Water Supply

- i. Layout plan of internal plumbing system of each floor with details of pipe sizes and material.
- ii. Water meters shall be provided for each dwelling unit.
- iii. Plumbing design shall be in accordance with plumbing code of practice.
- iv. Materials and sizes of pipe line

C.4 REGISTRATION OF ARCHITECT, ENGINEER, STRUCTURAL DESIGNER, DEVELOPER

Application for Registration

The Implementing Authority shall register Architect, Engineer, Structural Designer, Developer, Application for registration as Architect, Engineer, Structural Designer, Developer, in a prescribed form. Registration shall be valid for the period of five years or part thereof and shall be renewable or part thereof.

Revocation of Registration

A registration shall be liable to be revoked temporarily or permanently by the Implementing Authority if the registered person is found guilty of negligence or default in discharge of his responsibilities and duties or of any breach of any of these Regulations.

Provided that he shall be given a show cause notice and afforded reasonable opportunity of being heard by the Implementing Authority for the purpose of these Regulations.

Duties and Responsibilities

General Duties and Responsibilities Applicable To All

- i. They shall study and be conversant with the provisions of the Bhutan Municipal Act, 1999, the rules made there under, the Samtse Development Control Regulations - 2005, and the other instructions circulated by the Implementing Authority and the provisions in force from time to time along with the instructions printed/mentioned on prescribed application forms and permission letter.
- ii. They shall inform the Implementing Authority of their employment/assignment / resignation for any work within 7 days of the date of such employment / assignment / resignation.
- iii. They shall prepare and submit all plans either new or revised when necessary, required documents and other details they are required to do so in a neat, clean and legible manner and on a durable paper properly arranged and folded in accordance with the provisions prevailing time to time.
- iv. They shall submit plans, documents and details without any scratches or corrections. Only small corrections will be permitted with proper initials. They shall correctly represent all the site conditions including grown up trees.
- v. They shall personally comply with all requisitions/ queries received from the Implementing Authority in connection with the work under their charge, promptly expeditiously and fully at one-time. Where they do not agree with requisitions/ queries, they shall state objections in writing; otherwise for non-compliance of any requisition/query within stipulated time, the plans and applications shall be filed forthwith, and shall not be re-opened.
- vi. They shall immediately intimate to the owners the corrections and other changes they make on the plans, documents and details as per requisitions/queries from the Implementing Authority.
- vii. They shall clearly indicate on every plan, document and submission, the details of their designation such as registered Architect, registered Engineer, registered Structural Designer, etc. with registration number, date, full name and their address below the signature for identification.
- viii. They or their authorized agent or employee, shall not accept the employment for preparation and submission of plans-documents and supervision of any work if the same is intended or proposed to be or being executed or already executed in contravention of



these Regulations and any orders made there under and any Regulations or rules for the time being in force.

- ix. The registered person shall apply for undertaking the responsibility for the particular work in the forms prescribed by the Implementing Authority.
- x. The registered person shall provide the information and undertaking for the work undertaken by him in the forms prescribed by the Implementing Authority from time to time.

A. ARCHITECT

Qualification and Experience

A person holding a Bachelors Degree in Architecture/Diploma in Architecture (Equivalent to Bachelors of Architecture) with 2 years experience.

Scope Work and Competence

- i. Preparation and planning of all types of layouts and submission drawings and to submit certificate of supervision and completion for all types of buildings.
- ii. Supervision and execution of construction work as per specifications and drawings prepared by authorized registered structural designer and engineer.

Duties and Responsibilities

- i. He/she shall be responsible for making adequate arrangements to ensure not only that the work is executed as per the approved plans but also in confirmation with the stipulations of the National Building Code standards for safe and sound construction and non-hazardous, functioning of the services incorporated in the building and for making adequate provisions for services and equipment for protection from fire hazards as per the stipulations of the National Building Code, India, in the buildings and shall obtain N.O.C. from the Chief Fire Officer or concerned designated Authority/consultant before applying for occupation certificate.
- ii. He or she shall, on behalf of the owner, apply for the progress certificates, completion certificates and the occupation certificate and obtain the same as required under the regulations.
- iii. If the services of the registered architect are terminated, he shall immediately inform the Implementing Authority about his termination and the stage of work at which his services have been terminated. The registered architect appointed as replacement of the preceding architect shall inform about his appointment on the job, and inform the Implementing Authority of any deviation that might have occurred on the site with reference to the approved drawings and the stage at which he is taking over the charge.

After Implementing Authority has inspected the site for his report, the newly appointed architect shall allow the work to proceed under his direction.

- iv. The registered architect appointed on the work shall inform the Implementing Authority immediately on discontinuation of the services of the registered/structural designer, construction contractor, clerk of works, site supervisor, plumber or electrician and shall not allow the work to continue till the vacancy is filled by appointment of another person and the certificate of appointment of such person is submitted in the office of the Implementing Authority.
- v. He or she shall instruct the relevant agency that adequate provisions are made for ensuring the safety of workers and others during excavation, construction and erection.

Registration

- i. The registration fee if any shall be payable as prescribed by the Implementing Authority from time to time.
- ii. The Implementing Authority may black-list an architect in case of serious defaults or repeated defaults and shall inform The Royal Institute of Bhutanese Architects to take suitable action against such person under the provisions of The Royal Civil Service Commission. The registration shall be liable to be revoked temporarily or permanently by the Implementing Authority in such cases of negligence or default.

B. ENGINEER

Qualification and Experience

A degree in Civil Engineering or any equivalent qualification, recognized by The Royal Civil Service Commission. In addition to the qualifications stated above, the applicant should have at least five years experience in professional work if he is a holder of a Diploma in Civil Engineering/or equivalent.

Scope of Work and Competence

- i. Preparation and planning of all types of layouts and submission drawings and to submit certificate of supervision and completion for all types of buildings.
- ii. Supervision and excavation of construction work as per specifications and drawings prepared by authorized registered structural designer.
- iii. He/she can prepare and submit structural details and calculations for buildings of load bearing structures.

Duties and Responsibilities

As per the duties and responsibilities as specified for architect, with reference to engineer in place of Architect.



Registration

- i. The registration fees if any shall be payable as prescribed by the Implementing Authority from time to time.
- ii. If he/she is found negligent in his/her duties and responsibilities. The Implementing Authority may black-list an Engineer in case of serious defaults or repeated defaults and shall inform The Royal Institute of Bhutanese Engineers, to take suitable action against such person. The registration shall be liable to be revoked temporarily or permanently by the Implementing Authority in such cases of negligence or default.

C. STRUCTURAL DESIGNER**Qualification and Experience**

A Degree in Civil Engineering or any equivalent recognized by The Royal Civil Service Commission. In addition to above qualification, the applicant should have at least five years experience in structural design, two years of which must be in a responsible capacity in form of structural designer.

OR

A Master's degree in structural engineering from a recognized institute and at least two years experience in structural design work.

OR

A Doctor's degree in structural design from a recognized institute and at least one year experience in structural design work.

Scope of Work and Competence

To prepare and submit structural details for -

- i. All types of Buildings.
- ii. Special structures.

Duties and Responsibilities

- i. To prepare a report of the structural design
- ii. To prepare detailed structural design and to prescribe the method and technique of its execution strictly on the basis of the National Building Code, India, or relevant international standards.
- iii. To prepare detailed structural drawings and specifications for execution indicating thereon, design live loads, safe soil bearing capacity, specifications of material, assumptions made in design, special precautions to be taken by contractor to suit the design assumptions etc. whatever applicable.
- iv. To supply two copies of structural drawings to the site supervisor.
- v. To inspect the works at all-important stages and certify that the work being executed is up to the satisfaction of the Architect/Engineer.

- vi. To certify the structural safety and overall structural soundness of the building to the Architect/Engineer.
- vii. To advise the Owner/Architect/Engineer for arranging for tests and their reports for soil, building material etc. for his evaluation and design consideration.
- viii. He shall prepare the revised calculations and drawings in case of any revision with reference to the earlier submission of drawing and design in a particular case.
- ix. To submit the certificate of structural safety and overall structural soundness of building to Implementing Authority.

Registration

As specified for architect, with reference to structural designer place of Architect.

D. DEVELOPER**Qualification and Experience**

The person/firm acting as Developer shall be of proven merits and experience.

Duties and Responsibilities

- i. Any person acting, in the capacity of the owner shall be the bonafide owner or authorized agent of the owner for developmental work proposed. He shall satisfy the Implementing Authority that he is the actual owner of the property of the authorized agent of the actual owner to undertake total responsibility as the owner, employer and manager of the property and its development and of all the assets and liabilities of the property and the project.
- ii. He shall appoint a registered Architect/Engineer to plan, design, prepare drawings and specifications and to direct the execution of the work in accordance with the requirements of these regulations.
- iii. The appointment of the registered Architect/Engineer shall mean that he has authorized the Architect/Engineer to do all things necessary and to take all adequate measures for preparing the design, drawings and specifications for the project and to appoint on his behalf appropriate persons to act as registered, clerk of works site supervisor, required for the proper execution of the project and to retain on behalf of the owner any other specialist or expert required on the work of the project.
- iv. He/Architect/Engineer shall give written information to the Implementing Authority about the commencement of the execution work. He shall see that the registered Architect/Engineer fulfills all requirements of Implementing Authority.
- v. He shall not cause or allow any deviations from the approved drawings in the course of the execution of the project against the instruction the instruction of Architect /Engineer /Site Supervisor/Clerk of Works/Structural Designer and shall bear all responsibility for



- any irregularity committed in the use and function of the building or its parts for which the approval has been obtained.
- vi. He shall inform the Implementing Authority immediately if the services of the Architect/Engineer appointed on the project are terminated or has ceased to function due to any reason and shall not allow any work to proceed till another Architect/Engineer is appointed on the project.
 - vii. When no registered construction contractor or site supervisor is required to be appointed and not appointed he shall be responsible for their duties and responsibilities under the Regulations. .
 - viii. He shall not commence the use of building or shall not give the possession to occupy the building to any one before as pertaining the occupancy certificate from the Implementing Authority.
 - ix. He shall provide adequate safety measures for structural stability and protection against fire hazards likely from installation of services like electrical installation, plumbing, drainage, sanitation, water supply etc. wherever required under the regulations.
 - x. He shall exhibit the names of registered persons only, on site and no additional names will be exhibited/displayed.
 - xi. He shall explain the construction design and its intended use as per approved plan only, to the prospective purchaser of the premises under construction.

C.5 **SUMMARY OF CRITICAL DIMENSIONS**

Maximum Carpet Area (sq.m.) of shops in Convenience Shopping Centers

General	-20 Sq.mts
Food grain or ration shops	-50 Sq.mts
Groceries, confectioneries, general provision shops	-50 Sq.mts
Medical and dental practitioners' dispensaries or	
Clinics, pathological or diagnostic clinics and pharmacies	-50 Sq.mts
Wood, coal and fuel shops	-30 Sq.mts
Cloth and garment shops	-50 Sq.mts
Restaurants and eating houses	-50 Sq.mts
Shoes and sports shops	-75 Sq.mts
Taxi stand office	-10 Sq.mts

Dwelling Unit

At least one room of minimum carpet area of 20 sq.m., with a minimum side dimension of 2.5m and a WC.

Habitable Room

Minimum height - 2.7 m measured from finished floor to finished ceiling.

Minimum width - 2.5 m.

Light Home Workshop

Maximum floor space - 20 sq.m.

Light Industry

Maximum floor space - 500 sq.m.

Loft / Attic

Maximum height - 1.2 m.

Maximum area - 30% of the floor area of the room.

Mezzanine Floor

Maximum height - 2.5 m.

Service Establishment

Maximum floor space - 50 sq.m.

Water Closet (WC)

Minimum floor area of one square metre.

Temporary kiosks

Maximum dimensions for "temporary" public telephone booths, milk booths, and newspaper stalls - 2 m. X 2.5 m.

No Development Zones

All areas within 20 m along the identified natural storm water drain course

Crèche

Any construction site with minimum plot area - 2000 sq.m

Safety on Site

Any site wherein construction goes above 10 meters in height is deemed to be a "Hard Hat" site and every person on that site shall wear a hard hat at all time.

