



UNIT III –BUILDING BYE LAWS

BUILDING BYE LAWS

The rules and regulations set by the development authority for the development of a particular area in a proper manner by regulating construction and architectural aspects of building. The development authority does not approve a plan of building if it is not in compliance with the bye laws.

These laws vary from one property to other. Like for instance, rules set for construction of commercial property are different from that of residential property.

OBJECTIVES UNDERLYING THE BUILDING BYE LAWS

It's main objective is pre planning of building construction activity.

It provides proper and efficient utilisation of area of property to achieve maximum efficiency in construction.

It emphasis on orderly growth of the area and prevent haphazard development

These laws provide health and comfort to the people residing in the building.

These laws provided each building with proper approaches towards light, air and ventilation.

It encourages disciplined and systematic growth of building and towns

PRINCIPLES UNDERLYING THE BUILDING BYE LAWS

Classifying the building with unit as a family and mentioning the requirement.

Classify rooms according use and then specifying minimum standard of each room with respect of size, height, floor area, ventilation and light.

Specify height of compound wall and location of gate wall

Controlling projection in marginal space

Insisting on suitable Floor space Index or Floor Area Ratio

Specify suitable arrangements with respect to drainage and water supply.

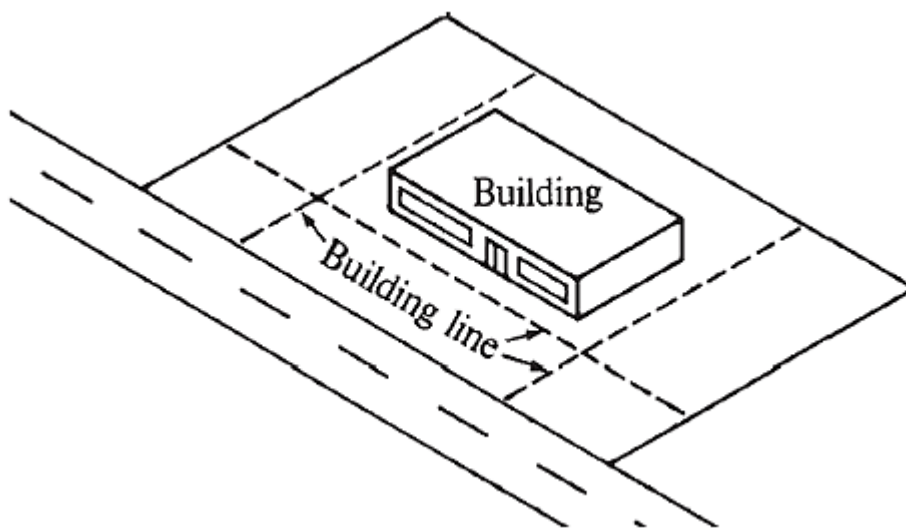
Specify set-backs, light plan and margin.

Specify the minimum size of plots, their dimension and figure.

The bye-laws and regulations govern the following building aspects:

Set-back or Building line:

The frontage margin or open space in front of the abutting road is called as set-back or building line. Beyond this line, nothing can be constructed towards the plot boundaries.



The Need for Building line:

1. If absolutely necessary, the land contained in set-back may be acquired for the purpose of widening of the road.
2. The setback at corner improves visibility and impart safety to the moving traffic.
3. The space of setback can be used as a parking place or for developing a garden.
4. It provides protection of buildings from street disturbances.
5. It reduces the danger of fire by increasing the distance between the opposite buildings.

Floor Space Index or Floor area ratio:

The ratio of the total floor area inclusive of all the floors to the area on which the building stands in known as the floor space index or floor area ratio. It controls the

development activity on the plot. It can be used as a measure to check the density of the population.

Floor area ratio = (Gross Floor Area) /(Area of the plot)

For example, if the total floor area of a building across two floors is 300 sq m and the plot area is 200 sq m,

$$\text{FAR} = 300/200 = 1.5$$

Built-up area or Covered area:

The plot area minus the area due for open spaces is known as the built-up area. Following are the limitations of the built-up area mentioned in the National Building Code.

No.	Plot Area	Maximum permissible built-up area
1	Less than 200 sq m	60% with two-storeyed structure
2	200-500 sq m	50 % of the plot area
3	500-1000 sq m	40 % of the plot area
4	more than 1000 sq m	33.33 % of the plot area

Size of rooms:

Considering the health and proper ventilation, NBC has fixed a certain minimum area for individual rooms and apartments as below:

S. No.	Type of Room	Minimum area
1	One habitable room	9.5 sq m width 2.4 m
2	Two habitable room	Minimum area of one room 9.5 sq m and of other 7.5 sq m width 2.4 m
3	Kitchen only	4.5 sq m width 1.8 m
4	kitchen with store room	5.5 sq m width of kitchen 1.8 m
5	Kitchen cum dining room	9.5 sq m, minimum width 2.4 m
6	Bathroom	1.8 sq m or minimum size 1.5 m x 1.2 m
7	Water Closet (w.c.)	1.1 sq m
8	Bath WC combined	2.8 sq m, minimum width 1.2 m

Hight of rooms and Buildings:

As per NBC, the general criteria to determine the height of a building is 1.5 times the width of the street to which the building abuts on its front side.

- For street width of 8-12 m, the building height should not be more than 12 m

- For street width more than 12 m, the height of a building should not be more than the width of the street and in case more than 24 m.

Lighting and ventilation of Rooms:

For sufficient lighting and ventilation of rooms of buildings, opening like windows and ventilators or direct opening should be provided.

- The area of such openings excluding the area of doors should be minimum 1/10th of the floor area for dry and ho climate and minimum 1/6th of the area for wet hot climate.
- The aggregate area of doors and windows should not be less than 1/7th of the floor area of the room.

Note: *Foor area means built-up area excluding areas of walls.*

Water supply and sanitary positions:

Certain minimum water supply and sanitation convenience like water taps, sink, water closets washbasins etc. shall be provided as per NBC for different types of buildings.

Structural Designs (Size and section):

Each structure should be designed for safe loads, earthquake resistance, bearing capacities etc. as per relevant IS codes and NBC.

Some general thumb rule for structural design:

- **Depth of foundation:** 0.75 m to 1.0 m for single-storeyed building below ground level and 1.0 m to 1.3 m for two-storeyed building.
- **Width of the foundation of the wall:** Double the thickness of the wall just above the plinth and then add 30 cm to it will give the width of the foundation.
- **Concrete in Foundation of the wall:** It should be nearly equal to 5/6th the thickness of wall above the plinth.