Sequence of construction of a building

Objectives: At the end of this lesson you shall be able to
- **parts of a building**
- **list the sequence of construction**
- **explain the levels of different parts of building**
- **draw and indicate the parts.**

Introduction

A Building consist of sub-structure and superstructure. Foundation, Plinth, walls, floors and roofs are the main structural components of the building. Each of these components is an essential part of a building and requires due consideration in design and construction for their functional performance.

Parts of a building

The sectional view of a building shows all constructional details from the foundation level to the top of roof such as total height and different levels i.e. depth of foundation, plinth level ground floor level, thickness of wall, window sill level, floor to ceiling height, window / door height, chajja level, roof top level, parapet level and coping.

The sequence is listed form foundation

1 Foundation
2 Plinth
3 Plinth course
4 Sill
5 Door & window
6 Lintel
7 Floors
8 Roof
9 Parapet
10 Coping

1 Foundation

It is the lowest artificially prepared part, below the surface of the surrounding ground, which is in direct contact with sub-starter and transmits, all the loads to the sub-soil.

2 Plinth

It is the middle of the structure, above the surface of the surrounding ground up to the surface of the floor, immediately above the ground.

3 Plinth course

It is top most course at plinth level which is finished flush with the surface of ground floor.

4 Sill

It is the horizontal member comprising concrete, stone or wood to give support to the vertical members of wooden window. It helps in shedding rain water from face of wall.

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5 Door & window

Door is a frame work of wood, steel, glass. The purpose of door to give access to the users of the structure and free movement into and outside the structure. The door provide a good ventilation. Windows are constructed for providing light and ventilation in the building.

6 Lintel

A horizontal member of stone, wood, brick, steel, rein forced brick, R.C.C etc above the opening to support the masonry or load above, it is called lintel.

7 Floors

Floors are horizontal elements of a building structure which divide the building into different levels for the purpose of creating more accommodation.

8 Roof

A root is the uppermost part of a building which is supported on structural members and covered with a roofing material. The main function of a roof is to enclose the building and to protect the same from the damaging effects of weather such as rains, wind, snow etc.

9 Parapet

It is the wall built around a flat roof which acts as a protective wall for the users of the terrace. In case of pitched roof, the parapet wall is used to conceal to gutter at coves level.

10 Coping

The coping is covering of bricks or stones which is placed on the exposed top of on external wall to prevent seepage of water through joints of top most course in a wall.

Parts of a building (Fig 1)

Buildings: Building is not only a "SHELTER" but:

1 Energy saving

2 Efficiency improving

3 Environment friendly

4 Users friendly

5 Building can be defined as the three dimensional shape or form in the space, resting on the earth, secured to the earth by foundation for stability.

Different stages in the life of building

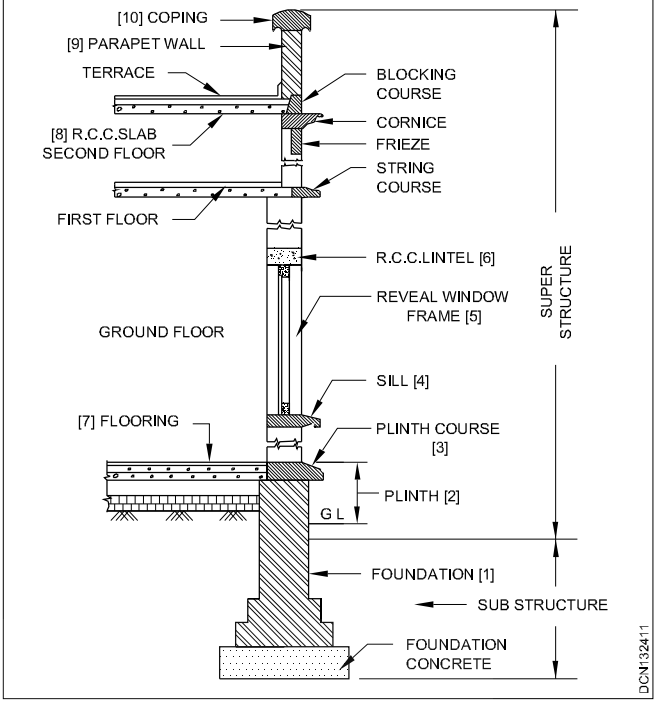
Planning: Decides the initial form

Designing: Decides the final form

Drawing: Tool to convert requirements into reality.

Construction: Conversion of two dimensional drawing into three dimensional structure. It is engineering in action, hence needs Construction Management.

Fig 1



Occupation: Environment Design Evaluation is essential after occupation to assess achievements in Planning, Designing and Construction by observing behavior of user and by obtaining user's views.

Maintenance and preservation: Preparation of maintenance programme to maintain livability throughout the life of the building by observing effect of Sun, Rain, Wind, and Human Behavior on building materials and construction.

Masonry

Objectives: At the end of this lesson you shall be able to
- **define masonry**
- **identify the components of masonry**
- **explain the materials required for masonry**
- **list out the classification of masonry.**

INTRODUCTION

The term masonry is used to indicate the art of building the structures either in stone or brick or combination of materials such as stones, bricks, tiles, concrete block etc. Even though new principles of construction and new materials are adopted in the construction process, masonry has got highest importance in the building industry. Masonry is normally used for the construction of foundation, walls, pillars and other structural components of buildings.

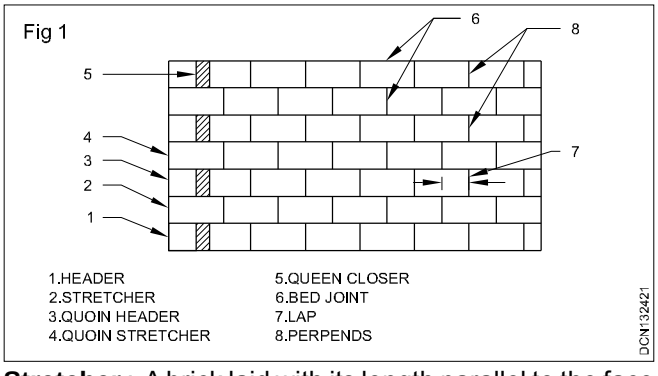
MASONRY

Masonry is the art of binding building blocks (stone, brick, or other building blocks) with binding material or an assemblage of masonry units properly bonded together with mortar.

COMPONENTS OF MASONRY

Technical Terms:

Fig 1



Stretcher : A brick laid with its length parallel to the face of the wall

Header : A brick laid with its breadth or width parallel to the face of wall

Bed : The lower surface of the brick when laid flat

Bed joint : The horizontal layer of mortar up on which the bricks are laid