

**Notes by-**

**Pravin S Kolhe,**

BE(Civil), Gold Medal, MTech (IIT-K)

**Assistant Executive Engineer,**

**Water Resources Department,**

**[www.pravinkolhe.com](http://www.pravinkolhe.com)**

# **CONSTRUCTION MANAGEMENT**

## **ASSIGNMENT NO. 09**

PER. DATE: 23/09/2003

SUB. DATE: 30/09/2003

Assignment NO. 9.

Q.1. What is mean by site layout? Explain the Factors affecting it.

Before starting a construction work, a site layout plan is prepared, which indicates the site arrangement to facilitate the work to proceed in a smooth & orderly manner. The basic requirement of a const<sup>n</sup> on job, namely men, materials & machines must be controlled & placed at the site in such a manner that :

a) The machines are placed in most advantageous position.

b) The materials are stored near to the place of utilisation of their

c) Adequate storage & other site accommodation is available. There is optimum manner of layout of the site that results in max. efficiency.

The activity at the site keep on changing with progress in work & therefore planned layout should be periodically reviewed & adjusted to suit changing needs of the site activities.

An overall idea of type & extent of work & the manner in which it is to be carried out first through a careful study of construction plans. A knowledge of principles of storing & stocking & placing equipment is essential for the preparation of good job layout.

Factors affecting job layout:

2.

The site layout depends upon:-

- 1) Nature and type of work.
  - 2) Site conditions.
  - 3) Methods used for its execution.
- 1) Every job has its own peculiarities such as nature type & extent of the work. & these affect job layout. The nature & extent of requirements of supporting facilities such as for repair & maintenance of equipment & availability of materials also affect considerably site arrangement.
- 2) The topography of site, its location & size also affect job layout. The layout on an undulating site often the site is too small unable the requirements to be fulfilled & nearly site may have to be obtained for small storage & other purposes.
- 3) The job layout also depends upon methods adopted for construction.



2. Explain in details For site of ten multistoryed buildings, various factors a site engineer must consider:

- i) During planning phase for internal site transport
- ii) RCC work in progress.

Various factors that a site engineer from a private contractor must consider are:

- 1) First duty of a site engineer is to prepare job layout
- 2) The construction plans, specifications, contract documents & other available material describing the job are carefully studied to get an idea by nature & extend of work.
- 3) A scale drawing is then prepared showing outlines of job to be construct.
- 4) The entry & exit points as well as area to be used for various temporary facilities such as office, snacks, store house, material stocks excavated earth, machinery, equipment, repair shed, parking boys, reinforcement structure, fabrication, casting bags, carpentry & form work fabrication personal facilities such as canteen, toilets, drinking water supply, labour huts, cranes & fire safety measures are other essential requirements of construction are marked on drawing.

- 5) In building location of each area, the principles of storage of materials & equipment as well as factors which affects the job layout are kept in view.
- 6) The problem of allocating spaces for men, materials & machines to be trackled seperately for each site.

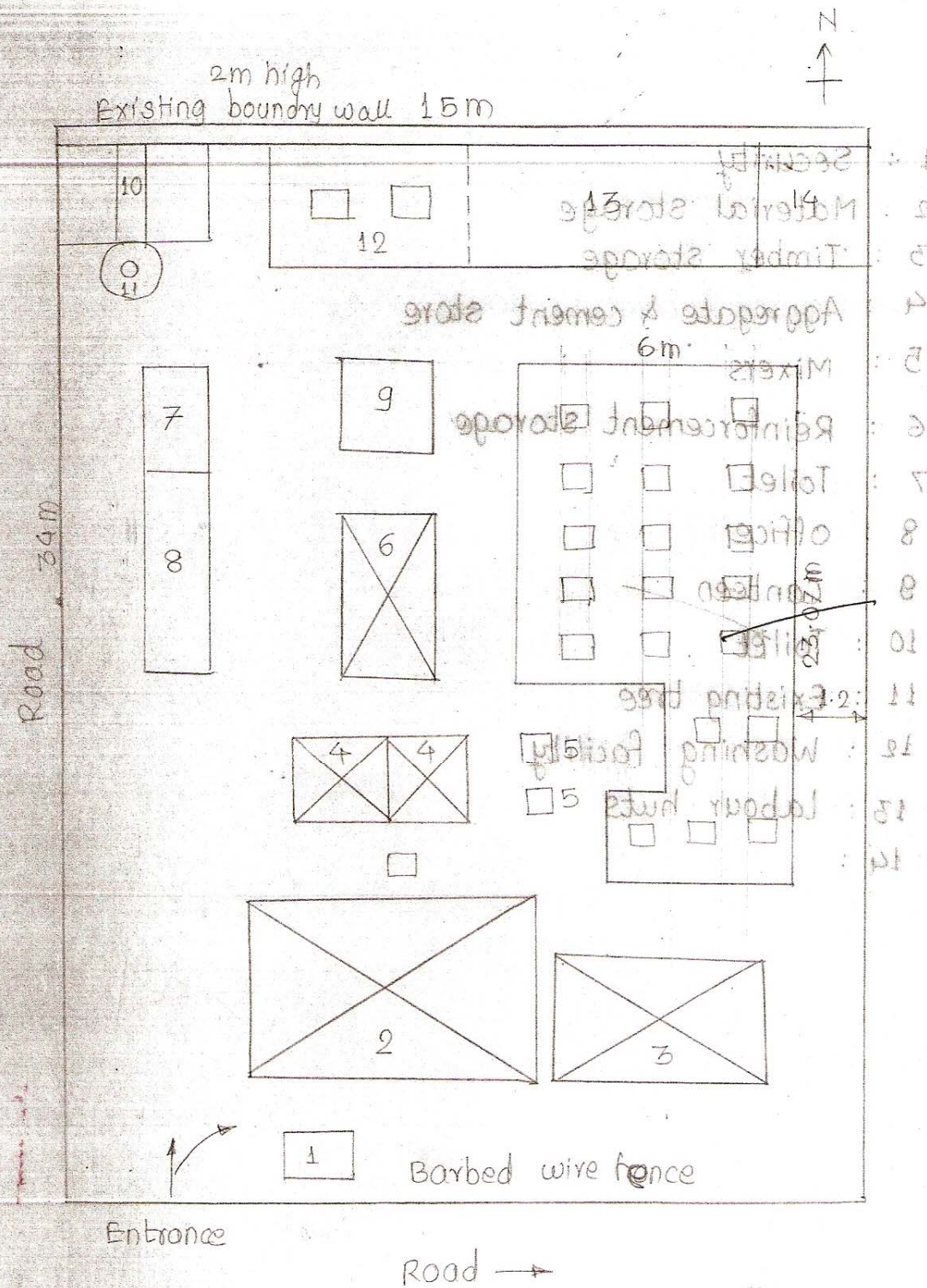
Q.3. For a building comprising of basement plus three floor above propose a suitable site layout, for site with following data:

- 1) Plot size :  $15 \times 34 \text{ m}$
- 2) Location within pune munciple corporated limit.
- 3) Ground coverage :  $150 \text{ m}^2$
- 4) Site margin as per rule.
- 5) completion period : 1 year.
- 6) show infrastructure facilities in layout.

$$\text{Plot area} = 15 \times 34 \text{ m}$$

$$\begin{aligned} \text{Construct}^n \text{ area} &= 6 \times 23.07 \text{ m} \\ &= 150 \text{ m}^2 \end{aligned}$$





Badhar  
30/03/03

- 1 : Security
- 2 : Material storage
- 3 : Timber storage
- 4 : Aggregate & cement store
- 5 : Mixers
- 6 : Reinforcement storage
- 7 : Toilet
- 8 : office
- 9 : Canteen
- 10 : Toilet
- 11 : Existing tree
- 12 : Washing facility
- 13 : Labour huts
- 14 :