



PLANNING AND DESIGNING OF FRUIT AND VEGETABLE MARKET – CASE STUDY

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Abstract: The need for the development in today's life is becoming an important part to compete with others. Our country is growing towards developed country from developing country. Infrastructural development is playing vital role in development process.

Our project includes a small contribution of us in making our city a developed one. The vegetable market which we choose for the proper development and planning is located in Deopur area near Datta Mandir Chawk. A lot work to do on it. The condition of that market is similar to one which was 10 years ago. There is no development since decades. It includes lot of issues to work on & it needs to be developed by working on all the aspects of development. According to present rush in the market it needs development as early as possible.

In this project, we are going to study all that issues, Requirements of the people, Survey work for the area calculation, Planning and designing to provide various facilities in the market. We are going to prepare the detailed plan of a proposed market with respect to all the rules and regulations. And in the final Stage, a estimate with all the quantities of materials & rate analysis of it with approximate estimated amount of construction is going to be calculated.

Index term: Consumers' Positive Orientation, Consumers' Satisfaction,

Consumers' Positive Orientation, Consumers' Satisfaction, Introduction The vegetable market in Deopur, Dhule, near the Bombay Agra highway is really congested. The place was really unhygienic. The vegetables were laying in dust and dirt, thus we decided of developing a clean and hygienic small Vegetable Market.

Generally there are 3 vegetable markets in cities, but some vegetable market are well planned, constructed in which all facilities are provide like stalls for selling vegetables, drinking water, electrification, drainage system, loading and unloading space for material, parking system for vehicles carrying vegetables, sellers ,buyers, proper disposal etc. Sometime vegetable market is a open space in which sellers sell their vegetables sitting on ground which causes unhygienicness .Fresh vegetables get dirty, dusty due to lot of dust .Sometime the input of vegetables is more than the requirement of buyers , this is because of availability of large quantity of vegetables in the market.

The following chapters broadly review the background to the design approaches that can be adopted in formulating projects for the construction of new markets and the improvement of existing markets. Although much has been written on the subject of marketing, there is a dearth of information on the practical aspects of market planning. There is a particular need for a simplified methodology for planning and design which would act as a "drawing-board aid" and provide a systematic approach to the preparation of development proposals. For general application, a manual needs to be very broad in scope, taking into account the wide range of issues (economic, social, environmental, planning, engineering and management) that are involved with any market expansion and improvement program.

Literature review

. D. Dabhade, N.A.Hedaoo, L. M. Gupta and G. N. Ronghe (2009), this paper presents a study on, time and cost wise feasibility of steel framed composite floor building. Today, fast track construction is a rapidly growing economy and therefore time saving in construction can compensate significant proportions of the overall construction cost. This paper presents a study on, time and cost wise feasibility of steel framed composite floor building. A case study considered for this work is 10 storied multilevel cars parking building. A major feature of this building is post-tensioned composite steel beams having span of 16m. Considering same plan, floor area, floor to floor height and loading conditions, this existing building is designed and constructed by other two ways viz. precast concrete frame with precast concrete floor and steel frame with precast concrete floor. While designing the above structure with precast concrete frame with precast concrete floor, one additional column is introduced in between 16m span lengths to the overall plan to suit the design criterion. The study shows that the time savings of 55.3% is achieved due to use of steel framed composite floor construction rather than precast framed with precast concrete floor and 14.3% time than that of steel framed with precast concrete slab. The construction of steel framed composite floor building saves time, which leads to an overall savings in net cost.

P.S. Pajgade and A.N. Shah (2013) describes steel-concrete composite systems have become quite popular in recent times because of their advantages against conventional construction. Composite construction combines the better properties of the both i.e. concrete in compression and steel in tension, they have almost the same thermal expansion and results in speedy construction. This paper includes comparative study of R.C.C. with composite (G+15) storey building. Comparative study includes deflections, bending moments in x & y direction, axial force & shear force in columns & beams, size and material consumption of members in composite with respect to R.C.C. sections, also the comparison of cost of R.C.C. and composite construction is carried out, saving in saleable area, benefit of extra floor & benefit in terms of rent in composite construction is carried out. A steel concrete composite beam consists of a steel beam, over which a reinforced concrete slab is cast with shear connectors. The composite action reduces the beam depth.

Mahbuba Begum, Md. Serajus Salekin, N.M. Tauhid Belal Khan and W. Ahmed (April 2003), give steel-concrete composite construction has gained wide acceptance world wide as an alternative to pure steel and pure concrete construction. Composite action increases the load carrying capacity and stiffness (i.e. reduces the deflection). The concrete forms the compression flange the steel provides the tension component and shear connectors ensure that the section behaves compositely. During construction, the beam is designed to resist concrete dead load and the construction load (to be treated as a temporary live load)..

Ali Shariati, N. H. RamliSulong, MeldiSuhatril and Mahdi Shariati (2012), deals with the study of an attempt has been made to review various types of shear connector in composite structures. This review tries to identify the shear connectors that are most relevant to composite structures.

Methodology

Identifying the need for markets

The process starts with understanding the marketing system and the different types of rural markets as well as their relationship to settlement patterns. This understanding is then used to identify the need for market improvements.

Steps

1. Identify market channels in rural areas
2. Define responsibility for decision-making
3. Review planning considerations
4. Identify market improvement options.

Assessing market trading requirements

The next stage is to assess probable supply and demand conditions for the identified markets. Limited surveys may be required to estimate market throughput, so as to allow design to proceed

Steps

1. Decide on design information needed
2. Assess supply and demand
3. Estimate the market's throughput

General survey of the market

Steps

1. Taking into account the number of vegetable and fruit sellers present there everyday.
2. To calculate the average number of customers and their vehicles.
3. To identify the problems due to unavailability of needed public services in that area.
4. To identify the problems which are faced by the people who live close to that area by interacting with them.

Calculating the area of the market

Steps

1. Calculation of the area of the market by doing the plane table surveying and by field measurements to prepare site plan.

Calculation of space available

Steps

1. To calculate the space which is available for use or for the planning purpose as per the norms.

Planning and Design of market

Steps

1. To do a proper planning work of the market as per the norms and to decide the position of selling blocks , sanitary blocks , drinking facilities , space for circulation , parking etc.
2. To calculate the dimensions of different units which we are going to provide as per requirement.

Design and Estimation

Steps

1. Design work of the market and calculation of quantities of materials required such as cement, bricks, steel, roof coverings etc.
2. To do a rate analysis of all the quantities and prepare a complete estimate.

Results

4.4 Planning Of Proposed Market

Functional units:

● Commercial shops

Size of 1 shop – 3.7m x 3.7m

Total no. Of shops provided – 30

● Stalls for vegetable sellers

Size of 1 stall – 3m x 2m

Total No. provided – 60

● Stalls for fruit sellers

Size of 1 stall – 3m x 2m

Total no. Provided - 16

● Water storage masonry tanks

Size – 4m x 3m (2)

● Washing place

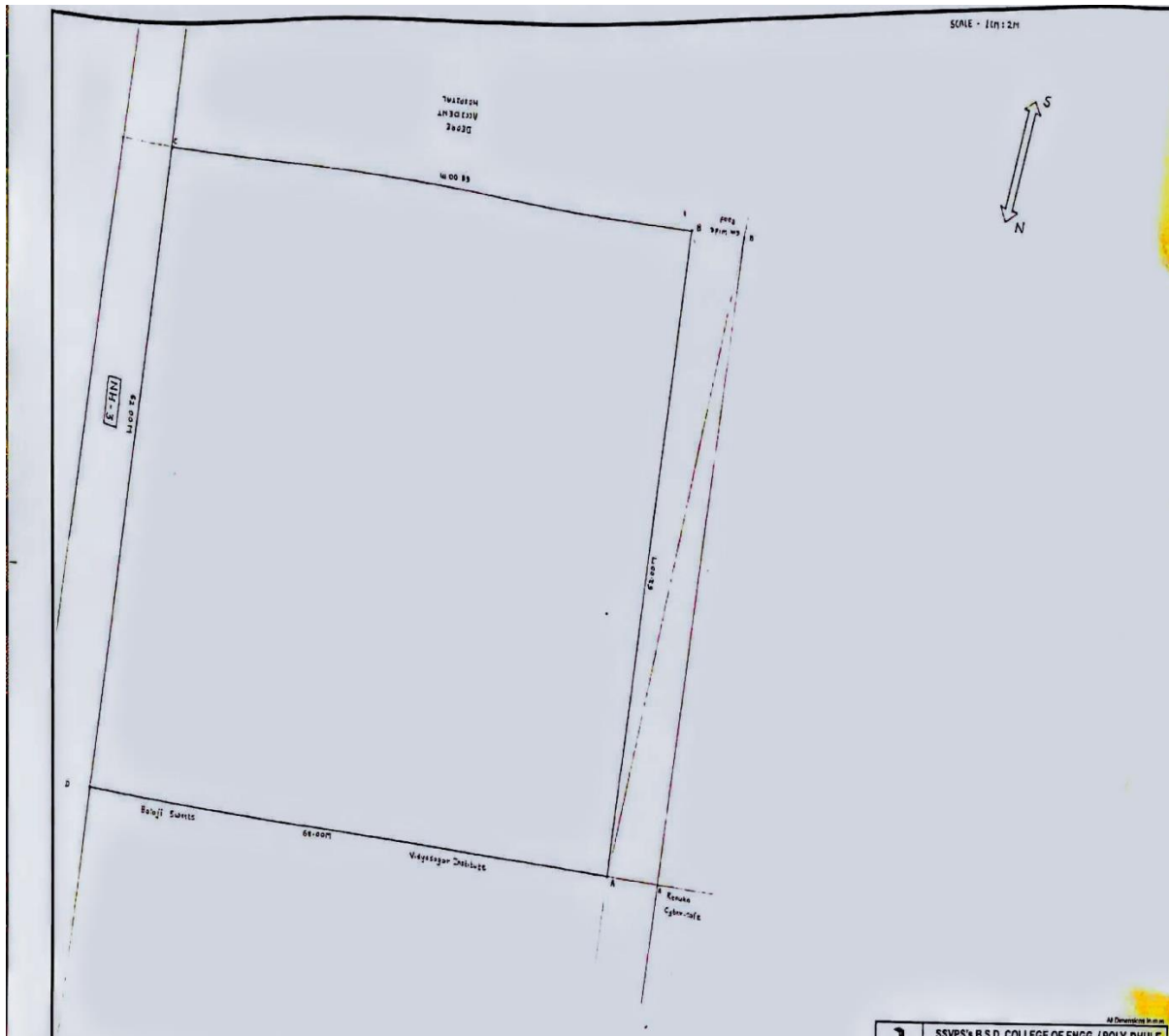
Size – 4m x 2m (2)

● Toilet blocks

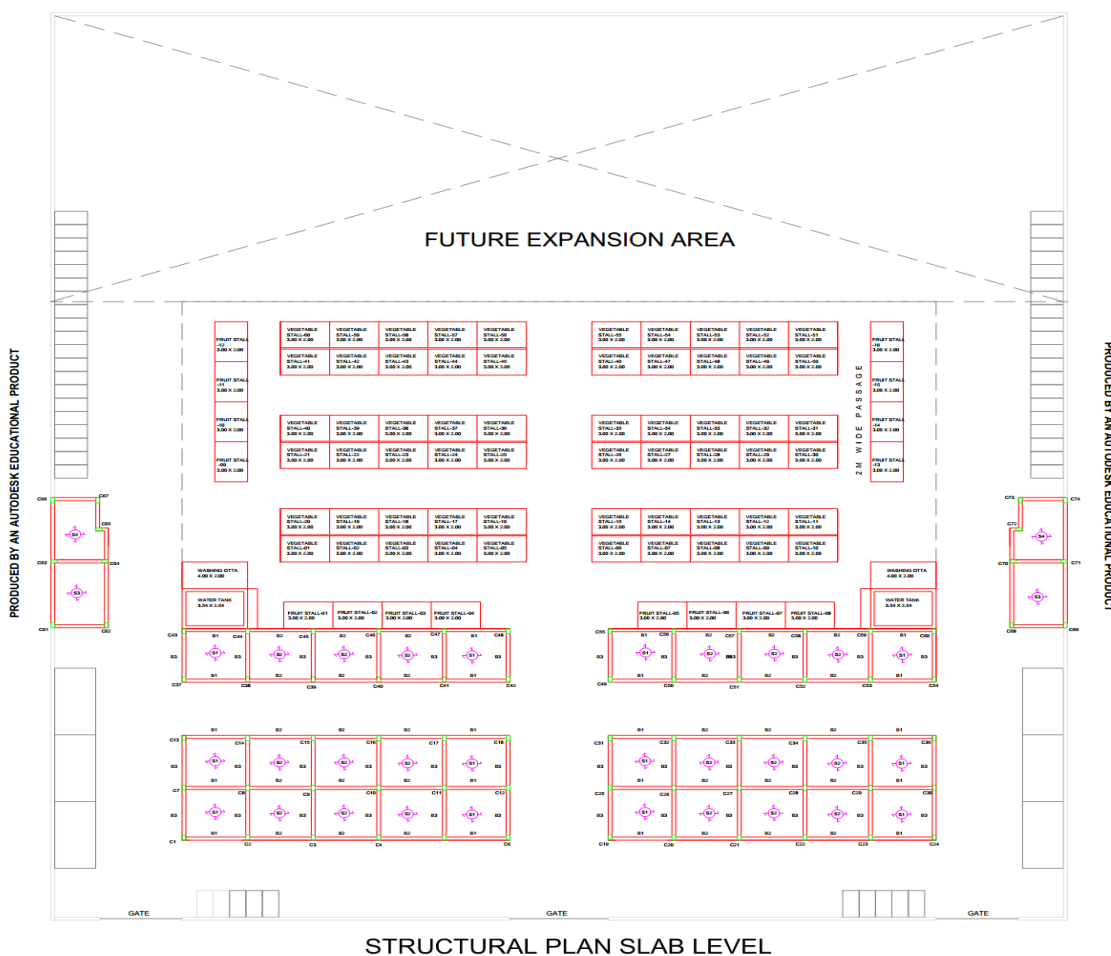
Size –

For Gents : 4.70m x 3.12m (2)

For Ladies : 2.60m x 4.50m (2)



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STRUCTURAL PLAN SLAB LEVEL

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Conclusion

The aim of our project was to contribute a little by working on the development of the present condition of vegetable market situated in our city which definitely need to be developed and to get converted into a well arranged and a well planned vegetable market with the provision of all the requirements and facilities. The only solution to this problem was to work on it by investing some time, money, ideas and efforts which will definitely be going to help the buyers and sellers over there. Also it is going to be a huge income source for the government authorities of the city.

In the first stage, we performed a general opinion survey of the site on which the present market is located. In the opinion survey, we asked the sellers, buyers and the neighbours living in that area about their opinions on this. We came to know the problems they are facing and the lack of facilities in the market.

In the next stage, we performed a cadastral survey to get the site details and to plot the boundaries. Then we started to work on the planning procedure of the market with the help of clauses given in D Class DCR Gazette.

This is how we came to know the proper planning procedure which has to be followed and the facilities which are made compulsory by the government to be provided during the planning for various kind of works. This helped us to improve our knowledge about planning work.

In the next stage, a new proposed market plan was prepared. With the help of that plan and some structural plans, we prepare the estimate of the project work to calculate the approximate cost of the proposed market which is Rs 53,06,555/- This whole expenditure is required for the construction of the proposed market which can be balanced by collecting the monthly rents from the shopkeepers, fruits & vegetables sellers in the form of revenue.

Money collected in the form of revenue can be used for providing other facilities, cleaning & maintenance,

for the future development or for the developments of other works in the future by the government authorities.

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