

COMPREHENSIVE PLANNING AND DEVELOPEMENT OF BASRHI BUS STAND

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ABSTRACT

Due to increasing number of populations of city and increasing number of passengers there is need to modify previous bus stand for current as well as future requirements. The site of bus stand is near Police Station, Tuljapur Road Barshi. The proposal of the project is to design and development the bus terminal at Barshi with proper passenger facility, a bus service facility, which can handle more buses per hour and can accommodate more bus parking, along with a commercial building in the proposal number of destinations is going increased. Moreover, there is no proper passenger facility, or proper arrival and departure bays & the terminal does not portray a good image to passenger.

So, the aim of this project is to design a bus terminal structure which caters inter-district passenger and solve traffic flow problem of that area. This dissertation will describe the proposal of the terminal with elaboration of the background and proposed design consideration.

Keyword Planning, Designing, Estimation, Development

1. INTRODUCTION

A bus stop is a designated place where buses stop for passengers to board or alight from a bus. The construction of bus stops tends to reflect the level of usage, where stops at busy locations may have shelters, seating, and possibly electronic passenger information systems; less busy stops may use a simple pole and flag to mark the location. Bus stops are, in some locations, clustered together into transport hubs allowing interchange between routes from nearby stops and with other public transport modes to maximize convenience.

The first ever recorded bus stop was in Bishops Stratford and was believed to be constructed in 1890, linking Bishops Stratford to the town of Colchester Public transport holds center stage in the urban transport agenda. A well-functioning and sustainable city cannot be achieved without strengthening its public transport system. Infrastructure plays a vital role in the operation of an efficient, convenient and safe transit system (Trans Link

Transit Authority 2011). When transit infrastructure is designed to enhance passenger experience, its attractiveness is ensured, making it a viable alternative to private motorized transport.

The National Urban Transport Policy (NUTP) (MOUD 2006) recognizes that city dwellers are of utmost importance and that all plans must be centered on their common benefit. With reference to a focus on public transportation, the NUTP document emphasizes the following means:

1. Encouraging greater use of public transport and non-motorized modes by offering Central financial assistance for this purpose
2. Enabling the establishment of quality focused multi-modal public transport systems that are well integrated, and provide seamless travel across modes
3. Establishing effective regulatory and enforcement mechanisms that allow a level playing field for all operators of transport services, and enhanced safety for the transport system users
4. Building capacity (institutional and manpower) to plan for sustainable urban transport, and establishing knowledge management system that would service the needs of all urban transport professionals, such as planners, re-searchers, teachers, students etc.

The NUTP envisages a scenario wherein all city residents have access to jobs, education, recreation, and other such needs within urban limits, in a safe, afford-able, quick, comfortable, reliable and sustainable environment. At present, lack of robust public transport infrastructure renders Indian cities struggling to cope with increasing mobility requirements. Numerous research and studies have documented the ill-effects of a poor or dysfunctional public transport system and associated infrastructure. Characteristic among these ill effects are higher dependence on private motorized modes, and higher congestion, pollution and accidents. These effects which ultimately reduce quality of life are attributed to the lack of mobility options.

1.1 Current State



2. OBJECTIVE

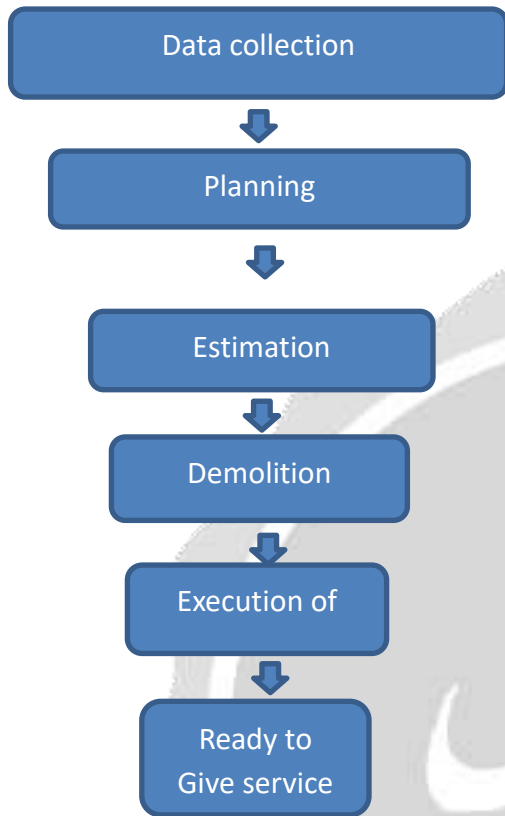
- To develop the infrastructure of bus stand.
- To design a bus stand with facilities for increased number of proposed buses and passenger.
- To generate own revenue for bus stand.
- To provide well connectivity of buses between rural and urban areas.
- To provide affordable, safe and sustainable passengers transport service.
- To introduce computerized transport management system.

3. SCOPE OF PROJECT

We will prepare good planning and design for following:

- Provide good next generation bus stand of future population.
- Make public transport easier and comfortable.
- Provide better connectivity to rural areas.
- Private transportation can be reduced.

3.METHODOLOGY



3.1.Data Collection

Previous Data	Current Data
POPULATION 1971 = 62,374	POPULATION 2021 = 4,62,162
NO. OF BUSES = 35 – 40 PER DAY	NO. OF BUSES = 350 – 400 PER DAY
NIGHT HAULT = 10 – 12 PER DAY	NIGHT HAULT = 30 – 40 PER DAY
NO. OF PASSENGERS = 7000 - 8000	NO. OF PASSENGERS = 15000 - 20000

3.2. Planning

MAP OF EXISTING BUS STAND



Fig 2.1

PLAN OF EXISTING BUS STAND



Fig 2.2

PLAN OF PROPOSED WORK



Fig 2.3

3.3.Estimation

Estimate by Plinth area method and Typical Bay method

1) Plinth Area Method: -

Estimate for built up Area and platform:

Area of Shops = 1101 sq.m

Area of parcel office = 138 sq.m

Area of waiting room = 0.9 sq.m

Area of W. C = 1120 sq.m

Area of platform = 228 sq.m

Area of hall = 2499.9sq.m

= 3000 sq.m

Plinth Area Rate = 1500 /sq.m

Approximate = Plinth x Plinth Area

Estimate Area Rate

Approximate = 300 x 1500x10.75

Estimate

Approximate = 4,500,000 /-

Estimate

Typical Bay Method: -

Approximate = 39 x 100

Estimate

Approximate = 34,29,250

Estimate

Estimation For Bitumen Carpet

Area of Bitumen Carpet = 13580 sq.m

Approximate = Plinth x Plinth Area

Estimate Area Rate

Approximate = 13580 x 1500 x 10.75

Estimate

Approximate = 20370000 /-

Estimate

Cost of bus stand = 45,00,000 /-

Cost Of Bitumen Carpet =29,19,70,000/-

TOTAL COST OF BUS STAND:

33,49,70,000 /-

Total Estimated Cost with Considering Charges: -

- 1) Water Supply Charges
4% of Estimated cost
= (4/100) x 336970000
= 13,47,88 /-

- 2) Electrification Charges
8% Estimated cost
= (8/100) x 336970000
= 13,47,88

- 3) Contingencies 4% of Estimated Cost
= (4/100) x 336970000
= 13,47,88 /-

- 4) Work Charge 2% of estimated Cost
Establishment

= (2/100) x 336970000

= 67,39,40 /-

Total Charges = 53,91,520 /-

Demolition Charges:

Demolition Rate = 25 / sq.ft

Built up area of existing = 2309 sq.m
bus stand

Demolition Charges = 2309 x 10.76 x 25

Demolition charges and = 621121 /-

Transportation charges

TOTAL COST OF PROJECT

= 336970000 + 2110920 + 621121

TOATAL COST OF PROJECT

= 33,97,02,041 /-

TOTAL COST IN WORDS : THIRTY-THREE CRORES NINTY SEVEN LAKHS TWO THOUSAND AND FOURTY ONE

3.4. Demolition

We know that every structure is designed for a specific life period, generally 100 years. The existence of the structure after the service life period is very dangerous to its occupants and surrounding buildings. Therefore, it becomes essential to demolish the building. Demolition is the tearing-down of buildings which involves taking a building apart while preserving the valuable elements for re-use. There are various methods of demolition. The building is brought down either manually or mechanically depending upon the method used for demolition of buildings. Equipment's used for demolition work are hammers, hammers, excavators, bulldozers, wrecking ball and the explosives used are dynamites and detonators etc. which is generally preferred for tall buildings. The various steps involved before the demolition process includes surveying of the demolition site, removal of hazardous material and safety precautionary measures. The study also includes the precautionary measures regarding machinery or equipment's, scaffolding, public safety, and worker safety. Various strategies of demolition waste have been reported in literature for implementing good practices for demolition of buildings.

So, we must demolish the previous bus stand for the development to reconstruct the new bus stand on that site.

3.5. Execution Of Work

A good construction plan is the basis for developing the budget and the schedule for work. Developing the construction plan is a critical task in the management of construction, even if the plan is not written or otherwise formally recorded. In addition to these technical aspects of construction planning, it may also be necessary to make organizational decisions about the relationships between project participants and even which organizations to include in a project. For example, the extent to which sub-contractors will be used on a project is often determined during construction planning. In developing a construction plan, it is common to adopt a primary emphasis on either cost control or on schedule control as illustrated in Fig. 9-1. Some projects are primarily divided into expense categories with associated costs. In these cases, construction planning is cost or expense oriented. Within the categories of expenditure, a distinction is made between costs incurred directly in the performance of an activity and indirectly for the accomplishment of the project.

3.6. Ready To Give Service

After the all of this operations bus stand will be ready and it will be supervised by the government officials is there is no any illegal construction expecting the approved plan or details after this all technical asnctions and supervision the bus stand will be ready for the to give service to the passengers.

4. EXPECTED OUTCOME

- Bus stops offer great scalability. A relatively low cost of entry allows local organizations.
- Passengers and all public in bus terminal will not suffer from any query because all units in bus stand are properly placed.
- Over the next 50 years there is no need of reconstructing the bus stand.

4. CONCLUSIONS

- Infrastructure Developed.
- Circulation of more number of passengers and buses can be done as compare to previous conditions of bus stand.
- Bus stand Own revenue can be generated through shopping complex constructed near bus stand.
- Numbers of buses have increased so we can connect every village to the city.

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SOFTWARE

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