

A Review Paper on Feasibility of traffic in Kharghar Node

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Abstract: The growing demand for public transport in cities has serious effects on urban ecosystems, especially due to the increased atmospheric pollution and changes in land use patterns. An ecologically sustainable urban transport system could be obtained by an appropriate mix of alternative modes of transport resulting in the use of environmentally friendly fuels and land use patterns. Transport, because of its pervasive nature, occupies a central position in the fabric of modern urbanized society. In most of the countries, this has been a story of evolutionary change with new transport development replacing the old transport system in response to perceived socio economic needs of the people.

This project involves a case study for the feasibility of traffic in Kharghar node. The feasibility study involves the solution which are physically and economically possible to perform. We aim to provide a solution to the traffic problems, which have increased in the last few years due to rapid urbanization and industrialization. With this the increase in population has caused rapid growth in private and commercial vehicles affecting the traffic. Hence we aim to undergo a study where the multidimensional parameters will be considered, causing the issue and find a feasible solution. The solutions will be carried out in the most efficient and time saving manner, where the public transportation and road ways will be efficient to reduce the traffic. The problem which has been identified, will be resolved as per the demand and nature of the problem rather than just stating the previous study conclusions.

Keywords: Feasibility study, cost benefit analysis, traffic scenario, time saving travel.

1. INTRODUCTION

In this fast moving technological world, urbanization and industrialization has gained serious attraction. Mobilization of resources entirely depends upon transportation. Proper channelization and effective planning of transportation is essential for successful development of our community. Mass Transportation satisfies all the aspects thus providing much importance to the movement of traffic in a rapid way. The main interpretation that usually follows the term feasibility is one of the following: the case in which an alternative option, a strategy plan, a design or a different location is proved economically preferable; the case in which an alternative option is deemed appropriate in social or environmental terms and the case in which probable construction and operation of a project can be financially viable as well as manageable. A feasibility study is a multidimensional set of actions which aims to analyse and evaluate a project in order to determine if its construction is feasible. Such a study refers to the assessment of results which concern the economic forecast in relation to other important factors, such as socioeconomic efficiency and environmental impact.

2. PROJECT DETAILS

The case study for the feasibility of traffic in Kharghar node is done by performing some points as follows:

1. Location Assessment
2. Demand analysis
3. Cost-Benefit Analysis

A. LOCATION ASSESSMENT:

This involved a through survey of the location to get a rough idea to understand the surrounding and other aspects of the location. The need of assessment was to ensure what was the root cause that was responsible to cause traffic. The density of traffic, and the demand period of parking time around the location, as well as pedestrians' accessibility to cross the road, are differential variables regarding whether a probable traveller will be attracted to use an alternative option if it was brought into use. The location assessment was done with the help of Google maps, on spot survey and with the help of pictures taken by members of the group.

B. DEMAND ANALYSIS:

Demand forecasting is an important step in a feasibility study as it assess the necessity of the project. The broad coverage of areas, advanced connectivity and the placement of crossing are factors that increase the demand for the use of an alternative solution. The outcomes of the demand forecasts are necessary as they contribute to the determination of elements such as the roadway capacity, skywalk for the pedestrian, alternative route for heavy vehicles and traffic control unit office. This stresses the importance of the precision in forecasting demand, to ensure that the project undertaken is not a waste of time and finance.

C. COST BENEFIT ANALYSIS:

The economic appraisal of transportation projects is interlinked with cost - benefit analysis, as it is a main index regarding the value of investment. Through a comparison between costs and benefits by using the benefit cost ratio (BCR), the economic net present

value (ENPV) and the economic rate of return (ERR), the social value of the project can be produced. The value of travel time savings is considered to be a key characteristic for transport studies as it occupies 50-70% of the total benefit.

Content	No of vehicles per hour/Week							Total
Pedestrian's								
Two-Wheeler's								
Four-Wheeler'								
Truck's / Bus								

Note: Readings taken for peak time

a. Morning

b. Evening

c. Week

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