

Planning for urban arterial road

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Abstract — To better planning for sustainable planning and implementation of development for any urban area. This research work is fulfilling a link between public need and planners need where some strategy is needed to adopt during planning for efficient and sustainable development. In different countries of world, people live, and every city to city people's thinking and behaviour changes and sometimes it is common for everyone, largely at regional level. As a responsibility of the planner; they should provide a proper degree of service to facilities available for all users. It is believed that a planner can control it through strategic development planning and alternative planning base.

Some strategy formulated and implemented successfully in one city may not be applicable to another city with the same concept as well as it change with urban land use and different territories . It raises a scope to change some parameters depending on the situations observed at different urban areas. Here, Surat was declared as the World's Fourth Fast Growing City during the last decade. Recent observations during past five years depict undisciplined behaviour of road used on city's streets, roads, crossing, at signals; drivers and other locations. So need of planning for each zone is also different. Here study is need for arterial road a case of udhana main road located in surat's south zone. Where main workers flow is high compare to city's other zone and here I will generate alternative planning proposal based on detail survey of this existing facilities, and PCU count and give planning proposal for this road.

Index Terms— urban arterial road, traffic, mass transportation.

I. INTRODUCTION

The city is itself appraisal base on a first impression of city, which is city having transportation service and facilities of road user, road traffic, city people, whatever is see at time of arrival in city. Many planning strategy, policy and tools are available today; to control accessibility, pavement design, and traffic problem solution. Many planning alternative are available for detect a problem. But to choose best planning or themes to shoot a basic problem of congestions on road, bad scene on road cause of behaviour of road users. Of course we have a planning tools, techniques, and measures but problem identification and suitable technique for particular site is different with site and spot as vehicles and users. We are generally shooting a problem with common idea and common application of technique for whole. As our transport system becomes more and more important to our economic and social well-being. But here they become more crowded and more congested, collapsed, and disrupted. Technology and engineering provide solution, but complete solution will need to take account of the users need & the transport network. Our role as a planner is to understand how people take decisions about the alternative routes to their destinations. The users of transportation service and planning think by many people that planning is main role for distribution of facility and transportation services. Even users think that the problems happens cause of lake of planning & engineering and insufficient enforcement. But as a planner we can identify a root of problems and can try to set a strategy planning for inconvenience of users. Problem on road cause of different users, psychology of user, education level, user's time factor, age, profession, gender, driver, walker, hawkers, religious factor, carts on road these all are with relation to road pattern ,regulation & legislation, vehicle type, right of way, pavement design, intersection, rotary, signals, parking facility, accidents, mass transportation system, road width, fly over, skywalks, underpasses etc. These things are interrelating to each other and generate huge complex matrix for our urban areas. India have many rules, regulation, organisations, authorities and legislation, for control this problem of road transportation services like R.T.O, IRC, UDPFI, constitution, NUTP, etc. To mitigate the problems at particular situation in many countries, responsibility for service provision in a wide range of sectors, such as health, education, housing and so on, is devolved to regional or local authorities. As a result, not only national government, but also the regional and local tiers of government are likely to use transportation planning strategy to help them plan for the provision of services.

II. OBJECTIVE

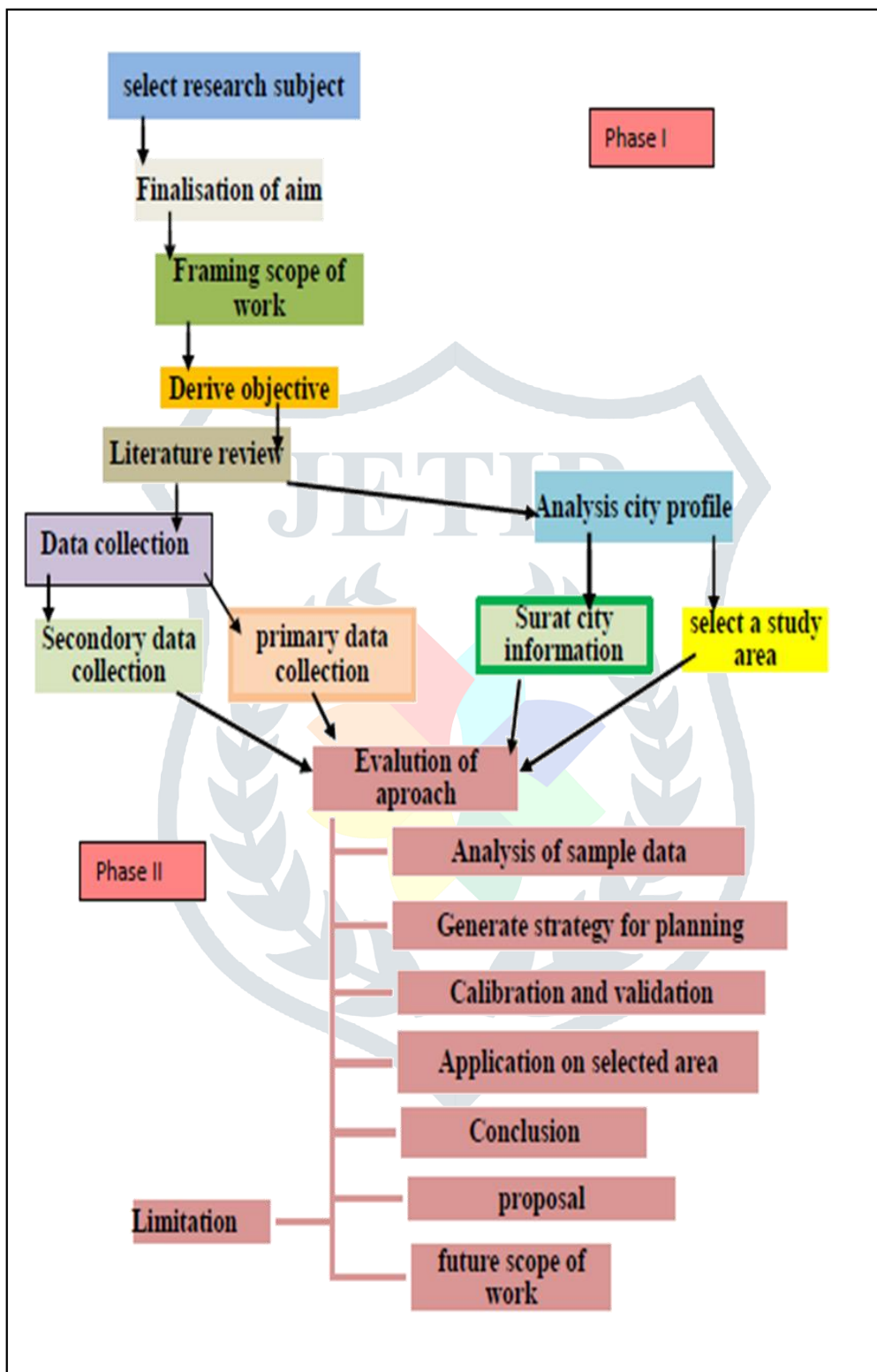
1. To decrease traffic and reduce congestion at intersection.
2. Improve non-motorised transportation facilities and better planning for rapid transportation system.

III. SCOPE OF WORK

The present work is to study about transportation planning and helping for generate a new planning proposal and strategy based on detail traffic survey and problem identification. And it can applicable to old organic development of city and new town planning

schemes, too. Throughout this planning; we can control congestion and accidents, we can also achieve a sustainable transportation planning and effective results, too.

IV. METHODOLOGY



V. LITERATURE REVIEW

There are many transportation pattern is existing but way of achieve its best result for users satisfaction and impression of city is based on planning quality, and sustainable and uniformity of driver behaviour for that particular services. At India we can observe many land use structure and development of city, villages, mega city, metro city and to connecting urban and rural area as well as a big factor affecting a people lives in urban area 286 million people as per 2011 census and these public feels by daily activity, profession, economic status, social status, and many thing are dealing with this people. And it's change with time, socio economical

level, age, profession, marital status, behaviour of people effect on road traffic with them excitement, nervousness, sad, emergency for accident, may be late for job, and may be medical emergency. Breaking a rules and non-suitable planning for transportation is affecting here to chance of accident and traffic, cause of all this factor many people loss their time for some silly mistakes which happens daily used and done by the people for them adjustment. But here we can control over this situation by well transportation planning strategy. There are many facility planning can be describe for provide an effective and efficient land use planning.

1. As per Geetam tiwari Urban transport for growing cities, Macmillan publication, edition, 2002pp.3,7-8.

This term indicate that wide roads do not solve the problems. But worse than that, they create a city very different from that we want: a low density suburban city that cannot be served by efficient low cost, high frequency public transport. Other desirable characteristics for suburban development are:Empty, lonely streets;Children and elderly become dependent on others for their mobility;Construction and maintenance of enormous road networks absorb most public funds, leaving parks, culture, education and other worthy cause underfunded;For Labour and industrial area is look-in so backward & manner less but economic cycle for the city, too. and road pattern and planning of road is negligible at same place; Environmentally, suburban land use and fuel consumption patterns are undesirable.

2. B RaghuramKadalia, Dr. P Vedagirib, Effect of Vehicular Lanes on Pedestrian Gap Acceptance Behaviour, A Research Scholar, Indian Institute of Technology 2013.”

They had written his research work that Walking is a key element of balanced transportation system that has often been ignored when planning any transportation facility. Pedestrians select appropriate gaps in vehicular creek depending on their demographic, vehicle and pedestrian characteristics with roadway geometry. Pedestrians are crossing a typical urban two lane undivided road, then they may search more near gaps in traffic creek instead of far gaps. Pedestrians need to search vehicular gaps in each lane with respect to direction of travel while crossing more number of vehicular lanes. Such pedestrian behavioural aspects need to be studied to understand the pedestrian gap acceptance while crossing more number of vehicular lanes. With this in mind, the objective of this study is to model pedestrian gap selection behaviour while crossing six lane divided road. The pedestrian gap acceptance behaviour has also been modelled to find out the pedestrian critical gap during road crossing by using multiple linear regression technique with effect of pedestrian behavioural characteristics. Probability of pedestrian gap acceptance has also been modelled considering pedestrian decision making process based on the discrete choice theory. To develop these models, field survey has been conducted at urban six lane divided un-controlled mid-block location at Worli in Mumbai, India. The real video data was used to set up pedestrian behavioural characteristics as explanatory variables for the model. The most important explanatory variables such as vehicular gap size, movement of pedestrian from the curb or median, rolling gap (pedestrian rolling over available small gaps), type of gap, pedestrian speed change condition and pedestrian waiting time have been included in the developed model. Further model transferability is checked with other location and it has been observed that the pedestrian gap acceptance behaviour models developed in this study represents quite well the pedestrian behaviour at urban six lane divided uncontrolled midblock location. The inference of these models will be useful to assess existing facilities and suggest suitable corrective measures to improve pedestrian safety.

3. Bruce G. Simons-Morton, Ed.D., M.P.H. Keep Your Eyes on the Road: Young Driver Crash Risk Increases According to Duration of Distraction. Nov.2013

Secondary task engagement that distracts the driver is a contributing factor to motor-Vehicle crashes among adults. However, the association between eye look duration and crash risk with learner teenage drivers has not been determined. Secondary task engagement that distracts the driver is a contributing factor to motor vehicle crashes among adults. However, the association between eye glance duration and crash risk with novice teenage drivers has not been determined. There is growing recognition that distraction is a contributing factor in many motor vehicle crashes. Those eye glances away from the forward roadway involving secondary tasks increased the likelihood of CNC. The longer the duration of eye glance away from the road the greater the risk, regardless of type of secondary task. Education and policy discouraging secondary task engagement, particularly for prolonged periods, is warranted.

(4) Sudipto Mukherjee, sankarasubramanian hariharan, anoop chawla are presented at workshop in Delhi that urban areas have a major share of vulnerable road user fatalities. Pedestrians and vehicles are just not harmonious. However basic understanding of the effect of vehicle design on pedestrian injuries on has been known since 1966 but manufacturers did not give enough attention as didn't give value to the car and was not govern by legislation. A car is made for a pedestrian safe car that limits the injury. And car speed limit not exceeds to 40 km/hr. in urban area or may design a car for urban car.

VI. STUDY AREA JUSTIFICATION

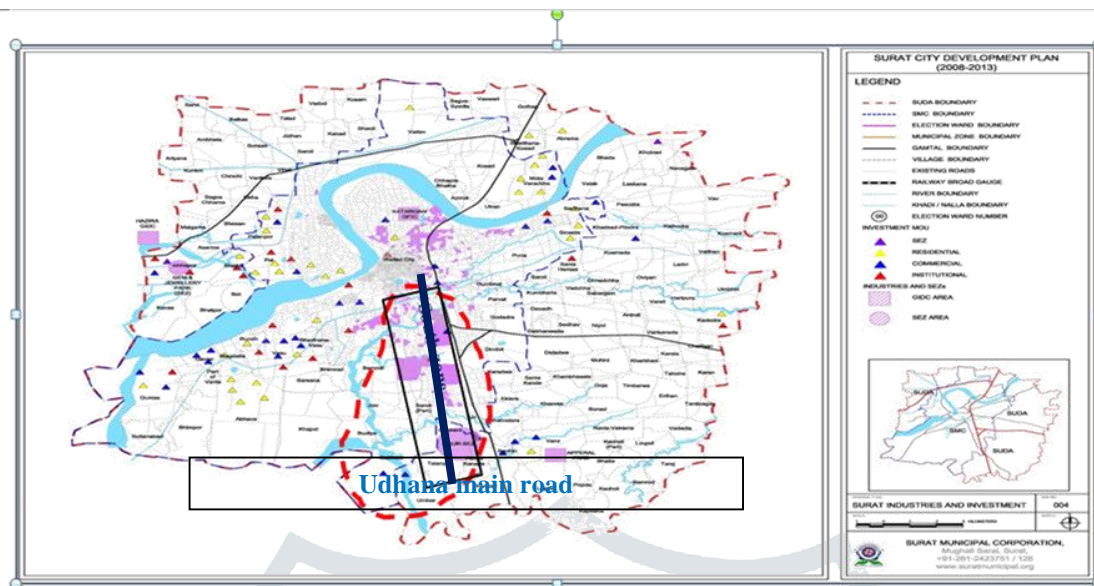


Figure 3-6 Surat city and south zone indication

Source: - Surat city development plan (2008-2013)

Here Udhana is having high level of industrial area and main workers where labour used this road in high volume and people are having much trouble cause of congestion here. So need of this road planning for pedestrian cyclist, NMT, rickshaw and BRTS.

VII. CONCLUSION

Industrial main workers and economic cycle of the city is directly relating to industrial area of the urban space and this planning help to generate sustainable and efficient transportation. Here peak hours and rickshaw drivers are feeling very difficulties cause of traffic and congestion.

VIII. ACKNOWLEDGEMENT

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IX. REFERENCE

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