CHAPTER 7
SUMMARY AND CONCLUSION

7.1. Summary

An urban master plan consists of co-ordinated plans of settlements, major streets, transportation facilities, parks, recreation, educational and other facilities like market, shops, trading centres and industrial areas, all arranged in such a way that they would function most efficiently and economically and also at the same time enhance the beauty of the urban area. But despite having the master plans, like most of the towns in India, the towns of Assam are also facing almost unmanageable problems of road traffic, resulting in congestion, noise and degradation of the overall environment of the urban areas.

It is found that 27 towns of Assam have adopted their master plans (up to 2010) and 5 of them have revised their plans. These master plans generally have a brief chapter on urban transport. But planning and development of road infrastructure, regulations for vehicles, licensing procedures, comprehensive traffic management and operations of transport undertakings continue to be in isolation. There are neither clearly defined and continuing transport policies nor a well developed system to ensure their implementation.

Planners and administrators have now realised the fact that transport planning is a major foundation for and an important component of urban master planning. In fact, the efficiency of any urban system depends largely on the ease with which people and goods are able to move from one place to another. So the success of urban planning should not only give importance on developing the essential facilities, but also on the access to them.

The existing master plans of different towns of Assam provide a good idea about the future perspective, vision and the zoning regulation for the individual towns. They are visionary documents that consist of coordinating plans of different urban activity sector. The main objective of these master plans is to achieve a balanced growth and to avoid haphazard development in the town. Master plans are produced by professionals. As such, they continue to follow basically the theme of top-down urban management. Apart from a little potential in the consultation phase, the community is effectively excluded from taking an active part in the planning process.
There is a provision for the formulation of an efficient traffic circulation plan in each and every master plan adopted by the towns of Assam. The basic goal of such a plan is to achieve maximum utilisation of the road network and the transportation system for quicker movements of goods and people within the planning area. As a matter of fact, the proposed land use for transport purpose in each of the master plans encompasses more area than the existing one. However, these master plans fail to specify whether the enhancements can fulfill the growing demand for urban transport in these towns. It is also not entirely clear as to what is the dominant policy structure in the urban master plans of Assam. The master plans also fall short of stating any clear policy objectives for the redevelopment and re-densification of inner town/ city areas.

The collected urban master plans of Assam reveals that they are broad brush techniques covering the location and lay out of land uses and through different regulations specify the spacing between buildings. In that sense, they become no more than a tool of property-led urban regeneration. In this regard our observation in some of the towns in Assam having master plans suggests that such an approach creates very little in terms of new activities and leads to a situation, where the existing business move around seeking better premises and preferable financial arrangements. In the sector of transport too, the continuing growth of traffic has led to congestion, pollution and other detrimental effects. So, this study tries to focus on two basic questions i.e. to what extent transport planning has been made a part of the formulation of the urban master plans in Assam and secondly, in the absence of such a formulation, how to arrest the resulting traffic problem?

In a state like Assam, lacking in resources and expertise as well as skilled man power the local authorities are addressing the traffic related problems mostly by ad-hoc measures. But such measures have produced results, which are at variance with results produced by more rational methods. So, while examining the master plans adopted by different towns of the state, the present study aims at formulating a method especially suitable for such cases.

While reviewing the literatures related to the current state-of-the-art in transport planning, it is found that most of the transport planning agencies are now focusing on to the reduction of travel demand and much adopted planning tool has been the simulation models.
These computer based models are primarily based upon the four step planning process of trip generation, trip distribution, modal split and trip assignment. However, the analytical complexity, data requirements and significant demands on computational resources on one hand and the cost of data collection on the other limit their use in the case of small towns of Assam. Literatures also reveal that while more and more focus have been devoted on the development of complex computer modelling tools, less attention is focused on simpler models. There also lies a research gap between the simplified models and the approaches that are not based on computer software for the use of small towns.

The goal of this research was not to develop a new model or approach. Rather, it intended to use an existing simple approach, which is not based on any computer software and wanted to focus on how to use it in the context of present situation of the towns of Assam. This research used the approach adopted by Buchanan as an example of a simpler modelling approach that could be applied to support urban planning decision-making. It is worth mentioning that this is the pioneer study on the long-term problems of traffic in urban areas by the steering group and working group appointed by the Ministry of Transport, Her Majesty’s Stationary Office (HMSO), London in 1963, entitled ‘Traffic in Towns’. For the purpose, the present work resorts to a case study town (Tezpur) to illustrate how this simpler approach can be used for certain town planning decision making categories.

Having studied the physical setting and analysed the present situation regarding different aspects of traffic of the case study town (in a like manner as did by Buchanan), the present work tried to find out the shortfalls, so that probable solutions can be suggested. It also had projected the population, number of vehicles, probable number of trips and modal choice by using easy to do methods for different zones recognised for the study. Then after having set the future direction, where the heterogeneous traffic will be continued and bicycles will remain popular, the study wants to stress on the fact that despite the situation of low per-capita income and low capacity for capital intensive infrastructure compared to that of the advanced nations, road efficiency, quality and road safety has to be promoted in the towns of Assam. Moreover, the present study focuses on three policy issues for transport. They are Best practice, Policy innovations and Sustainable development. Similarly, it stress on the concentration and mix of land uses to form the basis for land use
policy objectives. In order to provide a theoretical framework for integration of both these policy objectives, the present study proposed a model that constitutes a system of integrated transport and land use policy objectives. The model indicates two possible ways of improving accessibility – a spatial and a transportational one. In other words, improved accessibility can be achieved in two ways: (i) by reducing the distance traveled (i.e., by reallocating the destinations in space) and (ii) improving the transport system (so that the journey becomes quicker and safer).

The analysis of the conditions prevailing in the case study town and its future directions indicate that there emerges the need for better strategies. In this regard, by following Buchanan the present study envisages an efficient primary network, which is capable of discharging the heavy load of different types of vehicles even at the peak hour. The main principles for this network are (i) removal of through traffic by means of by-passes and (ii) environmental management on a big scale. For the town centre the main principle would be if the environment is sacrosanct, and if no major reconstruction can be undertaken, then accessibility must be limited.

7.2 Findings of the study

The examination of the existing road networks in the drafts of some of the urban master plans of Assam shows that in terms of road density the towns of Assam (which is only 2-3 km/km²) are lagging behind other Indian towns (for instance, Delhi has a road density of 19.22 km/km²). However, it is also true that the question as to the degree of road extension these small towns need and the area to be covered by the new roads must be answered first by carefully evaluating the future demand for traffic.

Most of the roads in each of the master plans under study are unsurfaced and the average ratio between surfaced and unsurfaced roads is only about 3:7. This is really a matter of concern.

The computed connectivity indices for the existing as well as proposed roads of some of the master plans under study show that in terms of degree of connectivity the towns present a poor picture. For instance, the computed alpha index for the road networks in some of the master plans range from as low as 2.92% to 22.14%. The towns have, however, shown an increase in the connectivity indices in their proposed networks. But, in terms of
degree of connectivity, they are low. Again, not a single master plan has any indication of proper study regarding the proposed links. Furthermore, the links that are to be added in these proposed networks are only the possible links, the construction of which will be further determined by many other factors including the financial one.

The physical observation of some of the networks shows that the strength of the existing network in terms of degree of connectivity is further aggravated by the overall condition of the roadways. Most of the roads are narrow. Lack of sidewalks forces pedestrians to walk on the shoulder or the roadway itself. Moreover, cyclists and other slow movers also use the same shoulder and often they have to spill over onto the roadway itself. This creates additional safety problems. Uncontrolled on-street parking exacerbates the situation by narrowing further the right of way (R/W) for moving traffic. Many roads are in a dismal state of disrepair, often unpaved and riddled with potholes. It was also observed that there has been a general lack of modern traffic signals, even in situations where they are warranted.

As an answer to the first research question (Chapter 2), formulated for the present work, it is found that the master plans of Assam are yet to follow a modern approach of urban planning. As far as the problem of transportation is concerned, the master plans of Assam have only a brief chapter on transport dealing with the existing and future transport facilities of the town concerned. But, no master plan under study have any sign of proper transport planning for tackling the traffic problems, nor have they taken transport planning as a basis for the future development policy decisions.

Again, to answer the research question whether the reciprocal influence between land use and transport was taken into account or not (Chapter 2), it is found that the urban master plans in Assam are devoid of any noteworthy land use-transport coordination to tackle the future demand for travel and there by the growth of traffic during the plan period.

A study of the master plans of Assam reveal that though the plans have a brief chapter on urban transportation and there is a provision for the formulation of an efficient circulation plan, these plans propose short-term programmes to cope mainly with the present transport difficulties. Though it is seen in some of these master plans that they have done a preliminary survey of traffic volume, but, no other plans except for the revised
master plan for Guwahati are found to be based on any scientific study. Further, no plans were found to be based on sound traffic engineering and management measures. The master plans also fall short of stating any clear policy objectives for the redevelopment and re-densification of inner town/city areas.

The study of the master plans and the appraisal regarding the road traffic planning of a few of them in Chapter 3, reveals that except for the revised master plan for Guwahati, no other plans attempted any proper study on the traffic demand and proposed the plan accordingly. Even the revised master plan of Guwahati also fails to indicate the differential demands that arise in different parts of the city. However, it is appreciable that the plan had distributed the estimated population among various traffic zones and estimated the probable densities of these zones at the horizon year, which may give an idea about the probable trip that would be generated. Furthermore, all these plans are seen to have stressed on the removal of existing problems and physical enhancement of the network, but not on managing the transport demand.

The central research question of this work is concerned with the problem of managing moving traffic and parking in the towns of Assam by an affordable approach that support the master planning process. While searching for an approach suitable for managing the traffic problems of these towns, the study of the current state-of-the-art in transportation planning shows that within the transportation planning process, the entire set of transportation forecasting modelling has been developed. But, while vast resources have been spent in the development of more complex computer modelling tools, less attention has been focused on simpler approaches. The high cost and large data requirements to run large-scale models have necessitated the use of simpler approaches that can be adopted for the small towns. So, for tackling the traffic related problems the present work preferred to take the help of the approach suggested in famous 'Traffic in Towns', 1963 (popularly known as Buchanan Report after Professor Colin Buchanan), which primarily tackled the traffic problems of some of the towns of England. One would find that this approach is more applicable in the case of the small towns of Assam because, it requires modest data that can be generated with reasonable resources and most importantly a large part of the data can be available from the census reports and other such general sources.
The present work uses a descriptive case study to illustrate the role that the approach adopted in Traffic in Towns can play in the transportation planning process of the towns of Assam. More specifically, the case study in this research illustrates how this simple approach can be used as a part and parcel of the master plans. The nature of data available for the case study town is similar to that of other towns of Assam and many towns are facing similar challenges regarding transportation and land use policies. The major findings of the existing situation of the case study town are as follows:

(1) The population of the town begun to grow rapidly after 1971 and raising the population of the master plan area to the level of over 2 lakhs. It is found that while the western portion of the master plan area, particularly to the west of the NH-52, is the area with people belonging mostly to Hindu community, to the east of the NH-52 and the entire northern and eastern parts are the area inhabited mainly by the people belonging to the Muslim Community. The analysis of spatial pattern of growth of population shows that while the growth has been high in the eastern half of the master plan area, in the western half, to the west of NH 52 and in the municipal area, the population growth was relatively low. The spatial pattern of the growth of houses and the workers also conform to the growth of population in the master plan area.

(2) The diverse economy of the Tezpur town and the areas around represents traditional farming, modern agriculture, handicrafts, range of cottage, small and medium industries and a multitude of services. Consequently, the land use figure for the master plan area shows almost 50% of its land under agriculture and forest. Out of the developed land, it is found that the residential use accounts for about half of the developed land, while a quarter is used for public and semi-public purposes and a sizeable portion (18.53%) for transportation. One of the striking features, which is observed, is that there is a considerable transformation of land from the holla area to residential uses and from residential use to commercial use in the central part of the town. There are also instances that Government also took the lead to convert holla area to other uses. For example, the Kekorapool public bus stand near Podum Pukhuri or the BSNL office in front of Telegraph office etc.

(3) The examination of the distribution pattern of some of the services shows that educational institutions and health units are distributed nearly in a random way. The
banks, hotels, bars and restaurants, wholesale trade and fruit markets, on the other hand, show clustered pattern of distribution in and around the central business area.

(4) About the road network, the general framework is seen to be composed of four radial roads, interlinking transverse roads and some lower order feather roads, all of which woven intricately to form a pattern of spider web. However, the local physiography casus it to deviate from the general spider web. Similarly, the situation of the town on the river bank also has made the spider web limited to its half.

(5) It is found that above 55% of the general roads in the master plan area are black topped, 23% are gravelled and about 18% are kutcha. It is seen that majority of the black topped roads are distributed in and around the municipal area and on the western side of the master plan area.

(6) About the carriageway widths, it is found that the carriageway width of the National Highways is 7.10 metre. In the case of the major distributors, the paved portion ranges from 3 to 7.35 metre, with maximum frequency at 5.7 to 5.8 metre category. But, the paved portion is found to be narrow on almost all the local distributors (ranging from 2.7 to 5.8 metre, with maximum frequency to the lower ends).

(7) When compared to the peak hour traffic volume, as obtained from the traffic count, the widths of the roads are found inadequate for the existing and growing needs of traffic. It is found that the roads have been carrying up to 2 to 3 times more traffic than their prescribed capacity. So, to solve this problem of excessive congestion in roads like the Grand Trunk Road or the main road that runs through the town centre etc., it is proposed in the present study that the town should be spared of the through traffic by provision of a by-pass. This should result in immediate lessening of 10-15% of the traffic at the peak hour.

(8) The road density as a whole is found to be 2.87 km/sq. km, but if we exclude the Kutcha roads, it is only 1.66 km/sq. km. About the road lengths per 1,000 populations, it is found to be 1.80 km. These low road densities can obviously be considered as one of the factors responsible for creating significant congestion and slow speeds on the existing roads, more particularly inside the town.

(9) About the spatial variations in the degree of connectivity of different vertices, though the municipal area apparently shows the highest road density, the ATS value stands at
only 56%. The ATS value for the master plan area as a whole is also about 64%. It implies that in terms of connectivity of various nodes or vertices, the circuits are not yet properly developed. It suggests that any planning for the elaborations of network should also be, at the same time, aimed at creating more and more circuits.

(10) It is found that there are six major nodes, where people go for work and shopping. So, the shortest routes from the catchment areas of these nodes form the corridors for movement. It is also found that the residents use the radial roads as major corridors for work and other purposes. Besides the radial roads, the transverse road that is formed by NH 37(A) and a part of NH 52 is another important corridor outside the municipal area. Within the municipal area, the main corridors are the four radial roads and the transverse roads running from Tribeni point to Civil Hospital, Murhateteli to Chandmari, the Barahalia road and the road from Dadhara to Dhanwanagar etc. (Chapter 6, Section – The road network).

(11) The traffic in the town is of heterogeneous in nature. Modes having maximum speed ranging from 15-100 km per hour and width ranging from 0.5-2.6 metre are sharing the same road space. It is found that, along with the cars, buses and other motorised vehicles, the traffic in the form of bicycles, pedestrians and other non-motorised modes are also present in significant numbers on all the roads.

(12) About the peak hour, it is found that majority of the journeys to Tezpur takes place during the period from 9.00 AM to 10.00 AM. The traffic count reveals that this is the time when 10 to 15% of the total traffic tends to pass the count points.

It is also found that the roads having basically the intra-master plan area traffic have a peak hour between 8.30 AM to 9.30 AM. On such roads, a sharp decrease in the traffic can be seen after this peak hour. The reason for this is that the traffic on these roads basically consisted of workers, who have to reach the town centre by 9.00 AM to 10.00 AM. On the other hand, the roads, where both long distance and intra-town commuters along with through traffic move, there has been a more or less constant high traffic after 9.00 AM. For example, count points like Mission Chariali, Haleswar and Murhateteli show such trend, having a peak hour at 10.30 AM to 11.30 AM.
It is also seen that the peak volume of traffic to the town centre forms a wave, starting at around 9.00 AM at the periphery and ends at around 10.00 to 10.30 AM at the town centre.

(13) Lack of adequate parking place for motorised vehicles has already created serious problem in the commercial area of the town. For instance, the survey undertaken to know the supply and demand condition of parking for motorised vehicles, especially in the busy commercial area of the town, revealed that as against the heavy demand of 1,974 parking spaces for these vehicles in the peak time (11.00 AM), the present supply is only 1,744. Thus there is a shortage of 230 parking spaces in the commercial area.

(14) The pedestrian count was taken on 18th May, 2010 from 9.00 AM to 4.00 PM, at 13 selected points in the CBD area of the town. The worked out correlation co-efficient between number of pedestrian and distance from the town centre reveals that as one moves away from the centre of the town, the number of pedestrian goes on decreasing.

(15) So far as the environment of the town as a whole is concerned, it is said that Tezpur is one of the cleanest towns of Assam. It is famous for its scenic beauty and green environment. This potentially good environment is, however, is negatively affected by the vehicular traffic. The study of the town centre shows that there are roads where the volume of traffic was clearly incompatible with pedestrian safety, the places where roadside parking and the vendors make the passage extremely narrow, the roads where the traffic creates severe noise pollution, and the places where the visual scene is disrupted by both moving and stationary traffic. The study also shows that while the environment is fund to be not conducive in the town centre, the quality of environment is positively related with the distance from the town centre.

(16) The study shows that due to the narrowness of the carriageway, many roads even in the municipal area face a good deal of congestion. In these roads, even a stationary vehicle can impede the flow of traffic in the whole road. The accessibility, especially at the time of the peak period, is also found to be significantly low. Moreover, inadequate loading facilities, lack of parking etc. are also observed at several places. These types of difficulties are most severe particularly around the town centre.
(17) Turning to road safety, the investigation of the cases of accidents shows that places like Mission Chariali, Batamari and Solagaon exhibit high accident proneness not only in terms of number of cases, but also in terms of casualties. It is found that the number of cases of major and fatal accidents in and around the town centre is low. It may be due to the reduced speed in this area. It is also clear from the study that while majority of cases in and around the municipal area was between light motor vehicles and pedestrians (38.08% during the study period 2004 - 2008), out side the municipal area it is the heavy vehicles that cause most of the accidents with other road users. The involvement of motor cycles in the accidents is also found to be high (27%).

After having analysed the present situation regarding different aspects of traffic, the estimation of the population, number of vehicles, number of daily trips and modal preference gives the following results:

(a) The projected population at present and at the horizon year for the master plan area is around 26 to 28 and 30 to 36 lakhs respectively.

(b) By 2025 or so, the number of motorised vehicles, especially the motorcycles and cars for the journey to work itself would rise (given an adequate network and suitable parking places) from about 22,449 at present to nearly 33,844 (about 66% increase). On the contrary, the total number of persons travelling for work by all forms of transport would increase by only about 41%.

(c) The number of motorised vehicles seeking to enter the municipality area daily would increase from about 22,000 - 23,000 at present to about 29,000 - 32,000 by 2025. In addition to this, there would be about 50,000 - 55,000 non-motorised vehicles. The total peak hour flow would be of the order of 3,662 motorised vehicles (out of which about 80% would be composed of motor cycles and cars) and about 2,600 - 2,700 non-motorised vehicles. The composition of the non-motorised vehicles would be about 1,750 cycles, about 700 - 800 cycle rickshaws and 200 - 300 thelas and animal drawn carts. The ultimate parking demand for this level of traffic would be about 3,000 spaces (as against about 2,000 spaces at present) for the motorised vehicles and above 2,000 spaces to accommodate the non-motorised ones.
(d) The per capita trip generation for the surveyed villages is found to be 0.57. If compared to a similar trip estimation carried out for Gurgaon, India, by School of Planning and Architecture, New Delhi in 1982, which is 0.562, the estimation for Tezpur seems to be normal. Here, mention should be made that it can be further break down for home based work trips or non-home based work trips etc. and this can prove to be a formidable tool for quick response techniques in the case of small cities and towns.

From the total trips found in the survey, the estimated total trips for the Tezpur master plan area stood at 1,40,498 at present (2011) and at 1,78,207 for the horizon year of 2025. The worked out per capita trip generation by different modes for different density zones, income based zones and the catchment areas (which was done in lieu of the conventional techniques of multi-stage distribution of the trips with both manual and computerized approaches) also gives the total trips to be about 1,60,000 – 1,65,000 for the year 2025.

The estimate of the manner in which the various work journey movements would be apportioned between buses, cars, motor cycles, bicycles and other forms from each of the sub-zones, shows a high reliance on motor cycles and bicycles. Walking also constitutes a high share followed by a reliance on public transport. In this regard, mention should be made of a side study, which was carried out during the main household survey by asking various mode users about their opinion of shifting the present modes of cars or motor cycles or bicycles to mass modes. This study showed that while people who use cars are captive to that mode, people who use two-wheelers are willing to shift to mass modes, if it becomes convenient to them.

(e) The total number of vehicles in the whole master plan area would rise from about 84,484 at present (2011) to about 1,07,253 at the horizon year (2025). Out of this, above 50% will be bicycles and cycle rickshaws, 30% will be motor cycles and 10% will be cars and the remaining 10% will embrace all other types of vehicles. Regarding the spatial pattern, it is seen that most of the vehicles tend to be concentrated in or near the municipal area. The number of different types of
vehicles also varies considerably between different zones. It is seen that while bicycles and motor cycles predominate in the comparatively low income zones of the northern and eastern sides of the study area, the percentage of cars is high in the zone comprising the municipal area and its fringe.

7.3 Suggestions

Having analysed the present scenario of the urban traffic problems on the one hand and recognising the need for a long-range transportation plan on the other, the present study intends to suggest some measures with the objective of developing a workable plan for transportation and land use for the towns of Assam. These measures, along with the conventional measures, would help the planners and administrators in planning for the traffic and related developments in the towns of the state. The measures are:

A. The main shortcomings of the present transport networks of the towns of Assam are basically the results of lack of connectivity, infrequent or nonexistent public transport, heavily pedestrianised roads without safety measures for the pedestrians and cyclists, and suburban sprawl limiting travel choices. Further, many of the roads carry more traffic than their prescribed maximum capacity. All these are fundamentally related to the land use problems that influence the location and nature of the transportation system. Addressing these problems requires a concerted land use-transportation strategy and not simply certain routine measures like widening of the roads.

While considering transportation as a strategy for a new kind of investment, the master plans may include an examination of the alternative land use patterns and housing options. But, unlike traditional long-range transportation plans, in which a fixed forecast of population and employment is developed and alternative transportation system improvements are evaluated, the core of the new plan should consist of evaluation of urban form alternatives. For this, along with many other alternatives, the planners may consider the following:

1. Compact Urban Form – that is, creating a high quality walking, bicycling, and transit-supportive environment with focus on reinvestment in the traditional core area of the town. It would reflect a greater mix of land uses
and increased density of development in the urban core. Proposed transportation projects would, then, include reduction of number of trips on certain roads to create a more pedestrian friendly environment, enhancing public transport service, with provision of demarcated lanes for it.

2. Growth centre/Village Centre Concept – that is, focusing the transportation system on connecting a limited number of intensively developed, mixed use centres of activity located throughout the master plan area (while maintaining the character of the existing towns and neighboring villages). Transport projects in this case may include efficient public transport service linking these centres, strategic road expansion projects, and dedicated lanes for public transport.

B. There is a need to shift the emphasis of planning and decision-making from ‘mobility’ to ‘accessibility’, where mobility implies movement by a motorised mode of transport and accessibility implies the ability and the need to reach a destination by any form of transport or by walking. In other words, the transport network needs to be redefined with a focus on accessibility and emphasis on safety, with priority for pedestrians, cyclists and public transport.

C. Considering the vulnerability of the pedestrians, as consistently shown by studies on road traffic accidents, the need for adequate footpaths should be emphasised.

D. Cycling must be considered necessary as a mode of transport from the viewpoint of health, pollution and affordability. Planners may think of site-specific bicycle tracks and well marked bicycle lanes on specific roads. Besides, plans should be there to divert the cyclists to less busy roads of the area.

E. It is seen that there is very little scope for the community to participate in the present planning process. But, realising the importance of community participation, the present study suggests towards setting up of Public Supervisory Committees to ensure implementation of the various measures as embodied in the plan. Besides, in the form of community planning, master planning should encourage active public participation in the planning process.

F. The number of deaths and serious injuries in the case study town itself points out that road/traffic accidents are terribly high. These are ethically and socially
unacceptable. In this regard, along with the conventional measures, the planners may think of the following:

(i) Besides the traffic engineering measures, enforcement and education for the people should be carried out with special emphasis.

(ii) Bicycles should be painted in orange colour so as to make them easily visible, especially at the twilight hours, and thus prevent accidents. Red reflective tapes can also be strategically pasted on some parts of the bicycles so that they are more visible at night.

G. The inner town and precincts with cultural value should be conserved as heritage areas.

7.4 Conclusion

Generally all Master Plans describe a vision for the future and how it plans to achieve that vision. One of the ways, in which the Master Plan can address land use and transportation issues and establish a basis for future development, is that the master plans of Assam can add a well developed transportation section to them. This section will define how the transportation system relates to the regional system, the vision for growth, and the intended function of the local transportation network.

The way used for analysis of the present situation in the case study town in the present work and then the principles taken for formulating the strategy may also be taken into account as an instrument able to modify the planning decisions and policies regarding urban planning in the towns of Assam. The approach and the future strategy adopted in this work will ensure low road traffic volumes. The exact positions of urban growth centres and the new roads, as proposed in the present work, however, should be selected on the basis of cost/benefit analysis.