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7.1 INTRODUCTION

Planning of the city needs not only the skill and assistance of engineers and architects, but also the help of geographers.\(^1\) In India only two types of planning are much stressed upon, namely, scientific and economic. Very little importance is given to the geographical outlook in both types.\(^2\) The role of a geographer is very important and much credence is given to this opinion either in the establishments of a new city or in the development of an old city.\(^3\) Planning for a town usually improves the percussion of a design taking in to development of industry during the future two decades. Thus, planning has an inescapable geographical basis.\(^4\)

Geography and planning today have a mutually beneficial two-way relationship. Town planning is the art of which geography is the science. That means, geography and planning have something many in commons. The main aim of planning is to decentralize the population from congested areas, decentralize economic growth by building new towns in remote or depressed areas, relieve traffic problems by either piercing new streets
through worn out property (as it is more economic than widening on expensive frontages) or by widening of roads, safeguard centers of science, beauty and eliminate blighted areas close to the core of the city.\textsuperscript{6}

In doing so, town and country planning seeks to prefer a guiding hand to the trend of natural evolution, as a result of careful study of the place itself and its external relationships. The result is to be more than a piece of skillful engineering or satisfactory hygiene or successful economics, it should be a social organism and work of art.\textsuperscript{6}

In short, it is undoubtedly true that the population of several cities is increasing rapidly while the civil and the government authorities are finding it difficult to meet their needs. It is, therefore, now a day usual to prepare a plan of development for every city in order to be able to meet the problems arising out of rapid urbanization.\textsuperscript{7}

Urban planning has much to do with the needs and aspirations of the city dwellers. It is imperative therefor that the socio economic dimensions of the problem are meticulously analyzed and the needs of city are correctly assessed. Planning should be so organized and executed that it reliant the best that exists in the present and introduces changes, which are most conducive to the general welfare of the society and feasible in the present economic station. A plan is governed by a number of factors. Abercrombie rightly observed that “the touchstone of planning is the accommodation of several units to make a complete but harmonious whole.”\textsuperscript{8}
7.2 SPATIAL DEVELOPMENT OF THE KOLHAPUR CITY IN 20TH CENTURY

The development of Kolhapur City, especially the area outside the old gaonthan developed rapidly from the very beginning of 20th century. One of the reasons for it was Kolhapur – Miraj meter gauge railway line, which was constructed in 1897. The construction of Wilson Bridge on Jayanti Nala also caused the development of Laxmipuri area and the bridge connected old gaonthan and Railway Station, Shahupuri etc. Rajarampuri and Sai extension schemes also developed. The grid iron pattern is generally used while planning the above four localities but the plannings were lacking in public facilities and at the same time, the undulated of land surface was not considered.

For the rich and well to do people, Tarabai Park area was developed, where more than \( \frac{1}{4} \) H. (20R) plots were available for each person. At the same time, Sakoli in the west of gaonthan area and Khasbag, Belbag on the south was also developed as residential colonies. For the farmer community, Phulewadi housing society was developed on the west of Rankala Tank on Gangan Bawada road. All these developments took place till 1940.

During 1960-70, Ruikar Colony, Shahu Market Yard was developed prominently. Different parts of city were developed according to town planning schemes. They are:
TABLE NO. VII-I
KOLHAPUR CITY
TOWN PLANNING SCHEMES

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOWN PLANNING SCHEME</th>
<th>AREA (HECTARE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>Town planning scheme No. 1</td>
<td>66.00</td>
</tr>
<tr>
<td>1962</td>
<td>Town planning scheme No. 2</td>
<td>16.00</td>
</tr>
<tr>
<td>1967</td>
<td>Town planning scheme No. 3</td>
<td>10.50</td>
</tr>
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Source- City Development Plan, Kolhapur city.

In these entire schemes, areas were reserved for public families.

The Tribunal was established to finalize the town-planning scheme No. 4 (Area 33.5 H) and Town Planning Scheme No. 5 (area 42.00 H). Both the schemes are submitted the government for implementation.

Shivaji University is established in 1963, it is located in E ward near old Poona- Bengalore National Highway. Its area was 360 H. In this area, there are number of administrative buildings, various departments of Post –graduate classes, Guest house, Hostels, Vice-chancellors residence, professor’s colony, staff quarters etc. This area is systematically developed. A garden and a huge stadium are also included in this campus. Colleges from Kolhapur, Sangli, Satara and Solapur are affiliated to it.
Under the Royal patronage of Late Chhatrapati Shahu Maharaj of Kolhapur, Talims and Aakhadas were encouraged. Himself was a great wrestler so he had built Khasbag Maidan with a capacity of 20,000 spectators for proper development of the wrestling presently there are 60 Talims in different parts of city where training is rendered. Kolhapur is a motherland of Marathi Film Industry. Jayprabha Studio and Shalini Cinetone are famous for Marathi Film production. With the help of Government of Maharashtra, Marathi Chitranagari is under construction and development.

7.3 EVOLUTION IN THE EXECUTION OF PLANNING

Maharashtra state (former Bombay state) is one of the leading state, which is engaged in formulation of acts regarding town planning and amendments according to different situations. Land use planning has been first started in India by Bombay State in 1915, formulating Bombay town planning Act 1915. It was the first act of this kind in the country. This act was involving town planning for developing areas, which can be implemented by local authorities. It is also useful for determination of area, shape of open spaces and their reservation for public utility. The scope of this act has been increased under the rule PWR 139, to prepare city master plans for the cities governed by municipality. But according to this rule, it was not obligation for local authorities to prepare these plans and submit to Government for their sanction.

This error was amended by cancellation of above act and formulation of new act named as Bombay town planning act 1954. By this act, it is obligatory for every civic authority to prepare a development plan for the entire area within its jurisdiction. The
main objective of this act was to control the land use provision of public facilities, projected population of next decade and planning of road network which is necessary for transport.

After that, to correlate city development and regional development, the Bombay town Planning Act 1954 was cancelled and Maharashtra Regional and town planning Act 1966 was implemented.

The Kolhapur City Master Plan was first prepared according to Bombay Town Planning Act 1954. It was sanctioned by Government on 26.9.1959 and implemented from 1.1.1960. After that Bombay Town Planning Act 1954 was cancelled and instead of that Maharashtra Regional and Town Planning 1966 is enacted from 11.1.1967. Then Kolhapur Municipal Corporation on 15.12.1972, but the area remained constant.

7.4 PLANNING POLICY OF KOLHAPUR MUNICIPAL CORPORATION

In the planning policy of Kolhapur Municipal Corporation, various suggestions are made dealing with number of factors. Here, only few factors are considered, such as, street hawkers, water supply, drainage, electricity supply, telecommunications, transportation, parking, industrial and housing policy, slum areas, tourist centres and environmental policies etc.\textsuperscript{11}

7.4.1 STREET HAWKERS

Street Hawkers is a very important factor in the city. They served the needs of working class of society. But hawkers become a
The growing problem of the Kolhapur City. The Kolhapur Corporation should plan systematically to solve this problem of hawkers and for that purpose, the area should be developed in such a way that hawkers should not be the obstacle for the traffic. For implementation of the planning, hawkers can be controlled and the accidents can be avoided. The municipality should give the area to hawkers for proper development.

The corporation should act and immediately take measures to solve this problem.

Measures-

The following measures can effectively solve the problem of hawkers in the city.

1. Plan the Hawkers zone.
2. No new licenses should be given until the problems of existing hawkers should not be solved.
3. The list of business and the rules related to the hawkers should properly framed.
4. Hawkers license should be given to only one person in a family.
5. License should be given after strict and careful scrutiny.
6. No license should be given to illegal trades.
7. License should be given to the trades run by nighttime especially on high traffic roads.

7.4.2 WATER SUPPLY

The main water supply of Kolhapur City is Balinga and Bawada reservoirs. The city has to depend for its water supply on Radhanagari and Tulashi dam, because Bhogavati and Ranchaanga Rivers have less water during summer season. The water supply of the city has been affected due to the two schedules
and illegal irrigation for agriculture. Taking into consideration this scarcity of water, in 1986-87, nearly 173 tube wells have been taken out of which, 144 tube wells were successful. The government sanctioned the water supply extension scheme of about 7.55 Crores for Kolhapur City, in 1985. The scheme was sanctioned for increasing water supply. The area, which depends upon Kalamba Tank, suffers from inadequate rainfall. The scheme of about Rs. 53.15 Lakhs sanctioned to improve Balinga Water Supply Centre of capacity of about 10 M.ltrs. The scheme was started in January 1988 and it ended in December 1988, with supply of clean drinking water. But this scheme has no filtration process but now government has sanctioned Rs. 95.75 Lakhs for purification of water.

7.4.2A NEW PROPOSAL

Kolhapur City suffers more during summer due to illegal water irrigation schemes for agriculture. So also, Tulashi dam has no sufficient water in it. Water pollution takes place in Bhogawati River due to Bhogawati and Kumbi Kasari sugar factories influents water. Obviously, alternative source of water supply has been carefully studied, and a proposal was made to build a bandhara at Kone on Bhogawati river which costs Rs. 39.17 crores was proposed. It was the scheme of water Conservation Corporation. But as the cost was very high and Kolhapur was not included in Dandekar committee list. So the scheme sanctioned but another immediate proposal of about 2.23 crore was submitted on 27.7.1986 to government of Maharashtra. The proposal includes tunnel between Bhogawati and Dudhaganga River, Kolhapur type bandhara at Kone and land acquisition.
7.4.2B Capacities of the Present Resources of Water Supply

A) Kalamba water supply centre (Kalamba Talav) - 8 Million Ltrs.
B) Balinga water supply centre (Bhogavati River) - 41 Million Ltrs.
C) Bawada water supply centre (Panchaganga River) - 36 Million Ltrs.

Total water supply - 85 Million Ltrs.

Rate of water supply -

a) General : 130 Ltrs. Per day per capita.
b) During summer : 115 Ltrs. Per day per capita

c) As per rule : 180 Ltrs. Per day per capita

Demand of water according to extension schemes -

a) Final phase 2021 : 14,00,000 population (Urban)
                   : 02,63,000 population (Rural)

b) Rate of water supply : 140 Ltrs. Per day per capita (Urban)
                         : 40 Ltrs. Per day per capita (Rural)

c) Total demand of water: 292 Million Ltrs. (Includes Industrial
demand) i.e. 4 TMC.

In order to meet the needs of the city a Scheme:

A proposal has been sent to government. The water supply of
the Kolhapur City through a pipe line form Kalamawadi dam.
Water tank and Pipeline will be constructed according to the need
and necessity. The necessary survey has been conducted (survey of
about 70 Kms.) and budget and the maps are in progress under
Executive Engineer of Sangli. It is expected that the proposal
should be submitted to corporation (Maharashtra Government) as
early as possible and the cost of the scheme is about Rs. 80 crores.
7.4.3 DRAINAGE SCHEME

Underground drainage scheme has been started for Kolhapur City in 1952. It was planned for old gaonthan i.e. A, B, C, D and E wards and part of E ward including Shahupuri, Rajarampuri and the area near it. But, the suburbs were not included in it. The scheme was completed in 1978. The city also developed in very rapid manner. As a result of this rapid development, the present drainage scheme cannot function in effective manner. There is one pumping station near Shahu Boarding hand only one disposal unit near Gramsevk Training Centre in Line Bazar. Its capacity is 4.8 million gallon per day. Recently, a electric motor pump set of 200 hp has been set. Considering the factor like future development of the city expected growth in population, a new scheme is necessary for Kolhapur. Municipal Corporation calculated the expected expenditure of about Rs. 20 to 25 Crores. But unfortunately, no fixed scheme has been yet designed.

2.4.4 ELECTRICITY SUPPLY

Kolhapur city has got electricity supply mainly form Mudshingi centre (220 Kw), Bapat camp and Kale sub centre (110Kw); Nagala Park, Shahu Mill, Balinga, Sugar Mii, Shirol, Ghadage Patil, (Uchagaon) sub centre (33 Kw) presently. Out of this electricity supply, generally 55 MW is used for domestic and commercial purposes, nearly 5 MW for agricultural purpose and remaining 45 MW for industrial use. This electricity supply does not full fill the growing demand of the city. 80, 76 Mw electricity is still needed. For this purpose, Maharashtra State Electricity Board has
suggested some schemes and the land required for it. The details are given below.

1. High power electricity sub centres (110 Kw) be established at Balinga, Puikhadi, Gokul Shirgaon, Shahu Mill compound area, nearly 2 to 3.5 H. of land is required for it.
2. High power (33 Kw) and capacity of about 10 MW Subcentres at six places (Jarag nagar, Puikhadi, Shendapark, Aptonagar Shalini Palace and Circuit house) will be setup for which 0.5 H. of land is required for each subcentre.

**7.4.5 TELE COMMUNICATION (TELEPHONE)**

Presently, there are 3900 telephone lines and the number of customers are 37502 (1998). There are four telephone offices in Kolhapur City. Telephone Bhavan at Tarabai Park is owned by the telephone exchange, while the other three offices are in the rental buildings. Some area near the E. P. School over to telephone exchange department for the servants quarters.

**7.4.6 PLANNING FOR THE TRANSPORTATION**

City bus service is very inadequate due to growing population as well as growing number of private vehicles and insufficient roads. In order to solve this problem of transportation, it is necessary to draft a new program for transportation, systematic planning of it, the use of new systems and long term transportation scheme. It is necessary to develop public bus service system for city like Kolhapur. It is a cheaper mode of transportation because the ticket charges are comparative low & it is very suitable for passengers. Bus service can be improved by use
of strength and simple transportation, such as different bus lanes, traffic preferences, reserve routes for buses etc. Kolhapur Municipal Corporation should invest sufficient capital to improve the bus services in the city.

7.4.7 PARKING SCHEME

Reservation for parking zone is very important and necessary because unsystematic parking on roads, cause main disturbance in traffic and misuse of carriage -way. By considering available facilities and area available in future, reservation of parking areas must be included in the planning scheme of the city.

Road parking includes both slow speed and high-speed vehicles. Parking is done according to local necessity and needs in different parts of the city. For example, highly polluted area, market place, cinema house, octroi posts need various parking zones. Nearly 43 roads in sector No. 1, 2, 3 and 6 are fixed for parking purposes. Generally, one hectare of land is required for the parking of 425 cars. According to that proportion, 8.30 hectares of land is required for off street parking to meet the present demand. Facility of on street parking can be provided on low traffic roads. For the remaining demand of off street parking, areas should be reserved in the development plan.
7.4.8 INDUSTRIAL POLICY

Maharashtra Industrial Development Corporation has acquired 120 hectares of industrial area and developed it properly on demand, another 688 hectares is acquired at Hupari and 276 hectares acquired at Gokul Shirgaon for the purpose of industrial development. So the proposed area is 964 hectares, which is more than required area. All the industrial areas are developed out of Kolhapur Municipal Corporation limit. According to regional industrial policies, large industrial and small-scale industries should be in MIDC areas. It is also expected that the related industries should be in the same area. But industries like sugar factories should be out of the urban area.

7.4.9 HOUSING POLICY

The growth rate of housing in Kolhapur City was 382 houses per year, according to regional policy. The report says that the growth rate of housing construction should be increased. It also suggested that, for the purpose of housing construction prefabricated and low cost housing technique would be proper. It also suggested that a housing board should be setup to tackle the problem of housing.

7.4.10 TRANSPORTATION POLICY

In the regional planning proposal, it is suggested that transportation be segregated and service roads to be made necessary for local transportation besides the national highway. In order to shorten the distance to the Kasaba Bawada sugar factory, a bridge must be constructed on Panchaganga River towards the
north. The construction of the bridge is almost completed. So also a new road near Kerle village on Kolhapur- Ratnagiri road is proposed for the sugarcane transportation from Panhala taluka. Nearly 31 M. broad ring road on the south region is also proposed off about 8 hectares area near bypass junction on Poona-Bangalore National Highway is suggested for the truck terminals.

7.4.11 TOURIST CENTRES AND ENVIRONMENTAL POLICIES

Kolhapur is a city of religious importance and tourists visit to it in a large numbers. Considering this in the regional planning, various proposals are submitted for the development and beautification of the tourist centre. The development of the Mahalaxmi Temple and the adjoining area, the extension of the roads, garden in Tembalai hill area are the important schemes from the environmental point of view, development of the Old Palace, The Rankala Tank Area and Panchaganga River Ghat as picnic spots are the prominent among them.

7.4.12 SLUMS

The survey of present slums reveals that numbers of slums are increasing along with the development of the city. Generally huts in slaves are much crowded, so here population density is more. At the same time, slum population has scarcity of public facilities, which results in a social health and environmental pollution problems.

At the same time of first survey in 1976, the number of slums in the city were 57, out of them 37 slums are declared until now (up to 1990) by government. According to 1989 survey, the
number of slums are increased up to 63 are population in these slums is 15 percent of total the city population. Therefore, it is projected that it will be 20 percent until 2001.

There are many schemes run by central and state Government for development of slums But Maharashtra housing department corporation / local civic authorities may have to face difficulties to provide more facilities to slums, which are situated on public reserved places. Therefore, there is no new proposal of reservations in the development scheme. Only those people, who are living in the slums, public places will get benefits of above mentioned schemes.

Slums at some particular places are hazardous for general people or surrounding people and also for slums. Therefore, it is necessary to remove such slums i.e.
- Slums near city water supplies stations, which causes many health problems.
- Slums in set back distance near national and state highways.
- Slums in places owned by railway department.
- Slums having population density more than 1000 persons per hectare. Which is responsible for the health problems.

Such slums should be rehabilitated at places reserved for same reasons.

During rehabilitation, care should be taken that the population density of rehabilitated slums should be less than 1000 per hectares. Along with this, it is also tried to reclaim extra population from the slums having population density more than 1000 persons per hectare to another place.
The information regarding slums population and the area required for its rehabilitation is given in the table No. VII-II.

TABLE NO. VII-II
KOLHAPUR CITY
POPULATION OF SLUMS AND AREA REQUIRED FOR REHABILITATION.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Details</th>
<th>Population</th>
<th>Area required for rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Population more than 1000/hectare from declared slums</td>
<td>10,500</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Population of undeclared slums 7235 to reclaim 50% of this population</td>
<td>3500</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Projected population from newly developed slums.</td>
<td>5700</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>19</td>
</tr>
</tbody>
</table>


It is assumed that the growth in slum population in the next decade will be absorbed by slums which are possessing capacity to absorbed more population.

In formerly sanctioned development plan at Rajendranagar, out of 24 hectares area reserved for slums occupants rehabilitated about 8.5 hectares area is developed for them by Municipal Corporation. The remaining 15.5 hectares area is also reserved for slum rehabilitation in regional development plan.
7.5 SUGGESTIONS

Any programme for the development of a town has to take into consideration socio-economic as well as physical factors within its broad framework. All these factors put together in the most desirable combination in an urban set up would yield the necessary environment for a pleasant human habitation. In the Indian context, life in towns right from smaller towns to metropolitan cities has been described as one of "Chaos" or of "despair". One of the major causes for such a state of affair seems to be lack of proper understanding and co-ordination among physical, social and economic planners in charge of urban planning. The purpose of this brief note is to present a diagnostic view of the development of Kolhapur City which is one of the several hundreds of towns/cities sharing all the ills of urbanization.

7.5.1 STREET HAWKERS

Street hawkers is the crucial problem in Kolhapur City. The street hawkers are of two types. In the first category, the street hawkers sell their goods on the some place spot, for example bus stand, Railway station, schools, offices, building complexes and other important market places. The second category includes the hawkers who do their business of day to day goods by wandering in different areas. The area includes residential places generally. Both these hawkers create more problems. Following are the some suggestions to tackle the various problems caused by the street hawkers. They are:-

1. No license is issued to the hawkers on prominent roads. Instead the licenses be given to them where there is low traffic. The
strict vigilance from time to time is necessary to observe whether rules are followed or not.

2. Permission is granted in the vacant places in residential areas, so that they do not cause disturbance on the road.

3. The hawker's zone is created in public places like, garden, playgrounds, hospitals, bus stand, religious places and big hectic squares.

4. Places are allotted to street hawkers on the side of the roads where they should not cause disturbance to traffic and peddlers.

5. Permission is granted to licensed street hawkers who do their business on roads.

6. Licensed should not be given to those street hawkers who require lot of time on one place/ spot. e.g. going on hand cart.

In short, in order to keep the roads suitable for peddlers and to avoid accidents licenses should not be given to the more hawkers and the cart owners.

7.5.2 WATER SUPPLY

Kolhapur City has supply of the water mainly from Balinga, Kalamba, and Kasaba Bawada as observed previously. Nearly 160 lts. of water supply per person per day is necessary as per rule, but more water (183.51 lts.) is supplied actually. But, it is not supplied in the same manner equally through out the year. It varies from season to season, for example, in summer season, 115 lts of water is supplied per day for each person, in rainy season it is more than required but the quality of water is not good, and generally 130 lts of water is supplied per day for each person. The water is irrigated illegally for agricultural purposes. It affects the
water supply of the city. Water pollution is also caused due to factory drains, which results in different diseases. Strict measures should be taken against pollution causing factories.

Radhanagari dam, Tulashi dam and Kalamawadi dam are away from Kolhapur City of about a distance of 48 kms. 40 ksm, and 52 kms. respectively. The problem of water supply will be easily solved, if a straight pipeline should be built up from these dams the city. By doing so wastage of water will be avoided so also water pollution and illegal use of water by the farmers will be also avoided.

The water problem of the city can be solved by building water tank by digging the jack wells in the areas near Panchaganga and Bhogawati River. The capacity of Balinga, Kalamba and Kasaba Bawada water supply centres must be improved.

7.5.3 DRAINAGE

Open drainage system is a critical problem of Kolhapur City from the viewpoint of health. Presently under ground drainage system covers the area of about 25 sq.kms. and it is beneficial for the city population of about 2 to 2.5 lakhs. The area of Kolhapur City is 66.82 sq.kms. and for such huge area, this under ground drainage system is highly inadequate. The population of the city will be apr. 5,00,000 persons in the year 2001. So the each of under ground drainage system should be doubled to ful fill the need. It will also improve the health conditions of the city dwellers. The slope of the city is from south east to north. Due to this, the drain water as well as rainwater mixes in the Panchaganga River. There is a disposal station near Shahu Boarding and Line Bazar.
There is only one sewage treatment plant with very low capacity at line Bazar. It is necessary to improve the capacity of this plant. So also, it is necessary to extend the drainage system area near Jayanti Nala. It will be beneficial to set up sewage treatment plants at Bapat camp and Shinganapur Municipal Naka.

7.5.4 CITY BUS TRANSPORTATION

According to the data of Kolhapur Municipal Corporation, the corporation had 65 buses in 1997-98, out of which 59 buses were on roads. The total number of passengers was 304 lacks in the same year. It is far less than the total number of passengers in 1992-93. The reasons are many for this decrease in the number of passengers. The reasons include private transportation facility, growth in the personal vehicles, low quality bus services, growing number of out of order buses and irregular payments of workers. All these factors affect the city bus service.

There are rules for the present public bus services in the cities with population of about 5,00,000 in developing countries. The rules are:

1. One bus is required for the population of 3000 persons. If the ratio of buses is less than the total population, then the bus service be considered inadequate according to rule.

The population of Kolhapur City is expected to be 477806 persons in the year 1998. Considering this expected population, the corporation must have more than 159 buses but only 59 buses are available. It means that the corporation should increase the number of buses.
2. It is necessary that, an average bus should go 230 to 260 kms per day. In Kolhapur city, a bus covers a distance of about 232 kms per day. Which means that the bus service in city is in a good condition but many times, a bus carries least number of passengers. It occurs due to the fastly growing number of private vehicles and transport modes. Another factor is the mismanagement of bus timing schedules.

To improve the present conditions of city bus services the buses should be in well to do conditions and the management of timing schedule is very necessary.

3. For a fair bus service, less than nine workers per bus are necessary but the number of workers per bus is more than nine. So, for better bus service, curtailment is the number of bus workers. In Kolhapur City straight bus service is not available at some places and because of this, people use private vehicles at large scale. Following are some recommendations for Straight City bus service.

2. Gandhinagar to Shivaji University
4. Kalamba to Shivaji University. Via R. K. Nagar
5. Phaulewadi to Kalamba.

### 7.5.5 PARKING AND TRANSPORTATION

Parking problem is another important problem in Kolhapur City. Natural growth of population migration, narrow roads, lack of
management and growing number of vehicles are some factors responsible for the parking problem.

According to the data of the Regional Transport Office, there are 86,323 vehicles (including two, three, four wheelers) in Kolhapur City during the year 1998. The capacity of the roads is not considered with the nature of the moving along them. There is the lack of proper parking plots. To serve the main thoroughfares which makes the roads in the city congested with parked vehicles. Parking problem of Kolhapur City would be solved if the following measures will be taken into consideration.

1. All the business premises should have parking yards separately, especially in the back yard.
2. Parking plots be constructed for stationary vehicles within the city.
3. To prevent accident, street lighting facilities are needed.
4. Traffic lights should be operated automatically.
5. Pedestrians should be keeping the roads.
6. A proper training of the public mind will do a great deal to improve the parking conditions in the city today.
7. To solve the problem of traffic and transportation, different sources of funds should be traced.
8. There should be modification in the land acquisition acts when a land is acquired for major roads, flyovers, roadovers and under ground roads.
9. Efficiency, energy, environment and equity should be taken into account while solving traffic and transportation problem.
7.6 OTHER SUGGESTIONS

The growing population and the rapidly growing number of vehicles cause number of problems in Kolhapur City. The problem like traffic jam, pollution, narrow roads etc. to order solve the above-mentioned problems, following measures will be helpful.

1. The flyovers will be built where the problem of traffic jam is prominent. I.e. Temblai Naka.
2. Sufficient number of footpaths is built for the convenience of the pedestrians. The roads should widened and the under ground roads should built, wherever necessary.
3. In order to control the pollution problem, one of the measures is tree plantation and preservation. It helps in mentioning the balance of oxygen and carbon-dioxide in the air
4. A compulsory plantation and preservation of trees for governmental, non-governmental offices, educational institution industrial areas is helpful to control pollution.
5. It is necessary to switch off the vehicles when they are waiting for signals.
6. It is necessary to check the vehicles causing air and sound pollution. The strict legal action be taken against the owners of vehicles.
7. The old vehicles crossing the expected year limit be strictly prohibited on roads.
8. The public awareness campaign should be carried to control the pollution and to improve the environmental conditions in the city.
9. The Municipal Corporation should give to the slum dwellers the facilities like, clean drinking water, sanitation, electricity, medical and educational facilities.
REFERENCES

2. Ibid.
3. Ibid.
10. Ibid.
11. Ibid.