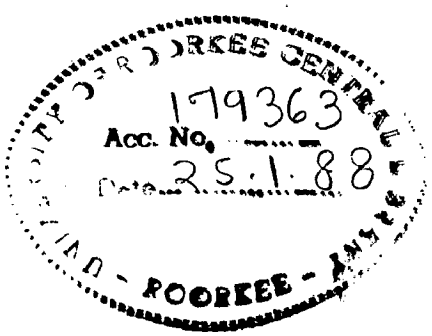
PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERUVU AREA HYDERABAD A.P.

A DISSERTATION

submitted in partial fulfilment of the
requirements for the award of the degree
of
MASTER OF URBAN AND RURAL PLANNING

By

GULAM REZA ALI ZADEH



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JULY, 1987

CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the dissertation entitled **"PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERUVU AREA HYDERABAD A.P."** in the partial fulfilment of the requirements for the award of degree of **MASTER OF URBAN AND RURAL PLANNING**, in the Department of Architecture and Planning, University of Roorkee, Roorkee is an authentic record of my own work carried out during a period from January 1986 to July 1987 under the supervision of Shri Rakesh Chandra, Department of Architecture and Planning, University of Roorkee, Roorkee.

The matter embodied in the dissertation has not been submitted by me for the award of any other degree or diploma.

DATED: July 15 1987.

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This is to certify that the above statements made by the candidate is correct to the best of my knowledge.

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IN THE NAME OF GOD, THE COMPASSIONATE THE MERCIFUL

Dedicated to

my beloved

Parents & Uncle

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Last and most important, I would also like to say that the credit of completing this dissertation also goes to my parents and relatives with whose grace and blessings I was able to persue my studies and my all the works. This dissertation would not have been possible without their inspiration and encouragement.

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PREFACE

Industrialization is a process of growth which is organically linked both to the social and economic past and to the parallel process of social and economic development.

Industrial activities are an important aspect in the spectrum of National Development. For major new industrial activities, and existing industrial activities, new industrial towns and redevelopment of industrial area are need to be planned.

The success of industrial township primarily depends on the correct procedure adopted for over all planning of the industrial entity, which includes both industries and township.

After independence few new towns have been built because of tremendous growth of industries spread all over the States of India. Present studies have been made to know the lacuna's and lapses of the existing industrial township and their inadequacies of basic needs, environmental problems, haphazard growth, improper planning and future problems.

Modinagar and Ramachandrapuram Patancheruvu have been taken for case study and Ramachandrapuram Patancheruvu area has been studied in detail.

contd...

Several aspects are studied and conclusions about the problems are reached. Each chapter deals about the different essential aspects of both the town in detail. A complete study of the Ramachandrapuram Patancheruvu area shows the lack and inadequacy of planning and control on internal and peripherial area and Ribbon Development along the Bombay National Highway No. 9, which is passes through Ramachandrapuram Patancheruvu area. With the help of charts, maps, figures, and photographs studies have been done and conclusions drawn.

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CHAPTER - I

1. INTRODUCTION :

Ramachandrapuram and Patancheruvu are industrial towns, located in Medak and Hyderabad Districts of Andhra Pradesh. Even in the Satavahanas period (230 B.C.) Medak District was existing.

However after 1958 Ramachandrapuram was transfered to Ramachandrapuri- village in 1962 from Medak district to Hyderabad District. Due to the establishment of the Bharat Heavy Electricals Limited, Ramachandrapuram Patancheruvu area is classified as Class III town (population between 21,056 - 62021).

The majority of the population is industrial workers in Government, Semi-Government , Quasi Government, and private firms and Organisation. Rest of the population is engaged in agricultural work and other business activities.

Ramachandrapuram Patancheruvu area is located at a distance of about 25 Kms. from Hyderabad, towards North-West of it. The land, slops down in a gradient from North-East South East towards North-Western direction. The Centers of the area are between 510 and 610 metres above mean sea level. The surrounding peripherial settlements of this area comprises

the following revenue settlements: Patancheruvu, Bandlaguda, Ramachandrapuram, Ameenpur, Chandanagar, Taranagar, Serilingamplally, Kondapur, Madeenaguda, Patelguda, Manmole, Serinalagandla, Nalagandla, Kothaguda, Kanchan Gachi Bowli. The highest point in the topography of this area is observed to be at Ameenpur, which is nearby seven Kms. away from Ramachandrapuram where the range of hillock present an interesting skyline providing scenic beauty to the area. In this area, there are few natural water bodies within the rocky slopes which are all rain fed. The maximum temperature of this area is 44.5°c and the minimum fluctuates between 7°and 8°c. The annual average rainfall in this area is 745.5 mm while the maximum rain per day recorded during the last decade was 154.4 mm (Fig. 1)

The relative humidity is at its maximum during the months of July, August and September at about 83 %, while the minimum recorded was 27 % during the month of March.

The wind direction in this area is generally west to east. It fluctuates from North- West to South-East during the course of the year.

The B.H.E.L. complex at Ramachandrapuram and the ICRISAT at Patancheruvu are well established institutions and are well connected by roads and railways. These establishments given potential scope for further development of this area. In view of this the Medak district was declared as a backward

area for further development and gave the status for receiving central industrial subsidy.

The Andhra Pradesh Industrial Infrastructure Corporation embarked upon developing Patancheruvu. One of the above subsidy tract, into vast industrial area. As there are large number of industries exist in this area and are mainly large scale, small scale, and ancillary industries. The establishment of B.H.E.L. in Ramachandrapuram Patancheruvu area paved the way ofor the growth of many ancillary industries. Also the Andhra Pradesh Industrial Infrastructure Corporation has taken up a major industrial programme in Patancheruvu. The main units established in this undertaking area are (a) Volrals Limited (b) Votage Croup (c) Novapan India Limited (d) Nagarjuna Steels (e) A.P.Scooters (f)Alwin Industry etc.

As the Bombay National Highway No. 9 passes through Ramachandrapuram Patancheruvu area, the traffic frequencies are very high in this region. This because of the regional as well as the local traffic. This comprises mainly of traffic connecting various cities and towns like Hyderabad (24 Km) Secunderabad(25 Km) Sangareddy (24 Km) Sadasivpet(30 Kms) Andole(42 Kms) and Zahirabad (70 Kms) etc.

There are two weekly markets in both the towns. The whole sale markets the vegetable, food grains and other

commodities shops are in haphazard and scatter manner in this area as well as along the Bombay National Highway. This leads to unhygenic irregular and haphazard growth of the above. Also the shopping, schools, unauthorised parking of ve vehicles, locations of theatres etc. situated along the Bombay National Highway causes delay to internal mass transit and regional traffic. Specially during the peak hours of industrial shifts change hours, school, theatres, it is extremely difficult to accommodate the heavy in flow of traffic in this belt. This traffic include cycles, Rickshaws, bullock cards, heavy trucks, Auto, motorcycle, cars and pedestrains etc.

Therefore ribbon development in this area create an urgent needs of improvement as, there will be an rapid expansion of both town in the next 20 years. With increase in population of over 2.5 laks(approx.) and inherent traffic problems will create unmanageable problems unless concerted steps are taken in developing this region.

The main attraction of the Ramachandrapuram Patancheruvu area is the B.H.E.L. township and ICRISAT. So far, in this area BHEL has a fulfledge with all kinds of facilities and amenities, the people of Srinivasanagar colony Rmachandrapuram, Patancheruvu, and peripherial area feds by BHEL township for the sake of basic needs. The facilities and amenities at present are very meagre in Ramachandrapuram Patancheruvu area.

This needs to be checked and the growth has to be well planned and controlled for present and future.

Except BHEL township there are no proper open spaces and recreational facilities in this area. The existing few open place are not fully utilized and maintained for the above purpose.

This area needs expansion, like bus stand, railway line, providing parking, conservation of water bodies for recreational purposes, specifically restriction of ribbon development etc. Similarly it is very essential to provide medical facilities commercial, institutional, proper housing, and all other basic requirements.

The present floating population and the population of the nearby surrounding rural areas are to be considered for the purpose of shopping, health recreational and other facilities and amenities etc. The immigration of the surrounding population and their settlements in this region used to be checked for the proper planning and of developmental activities.

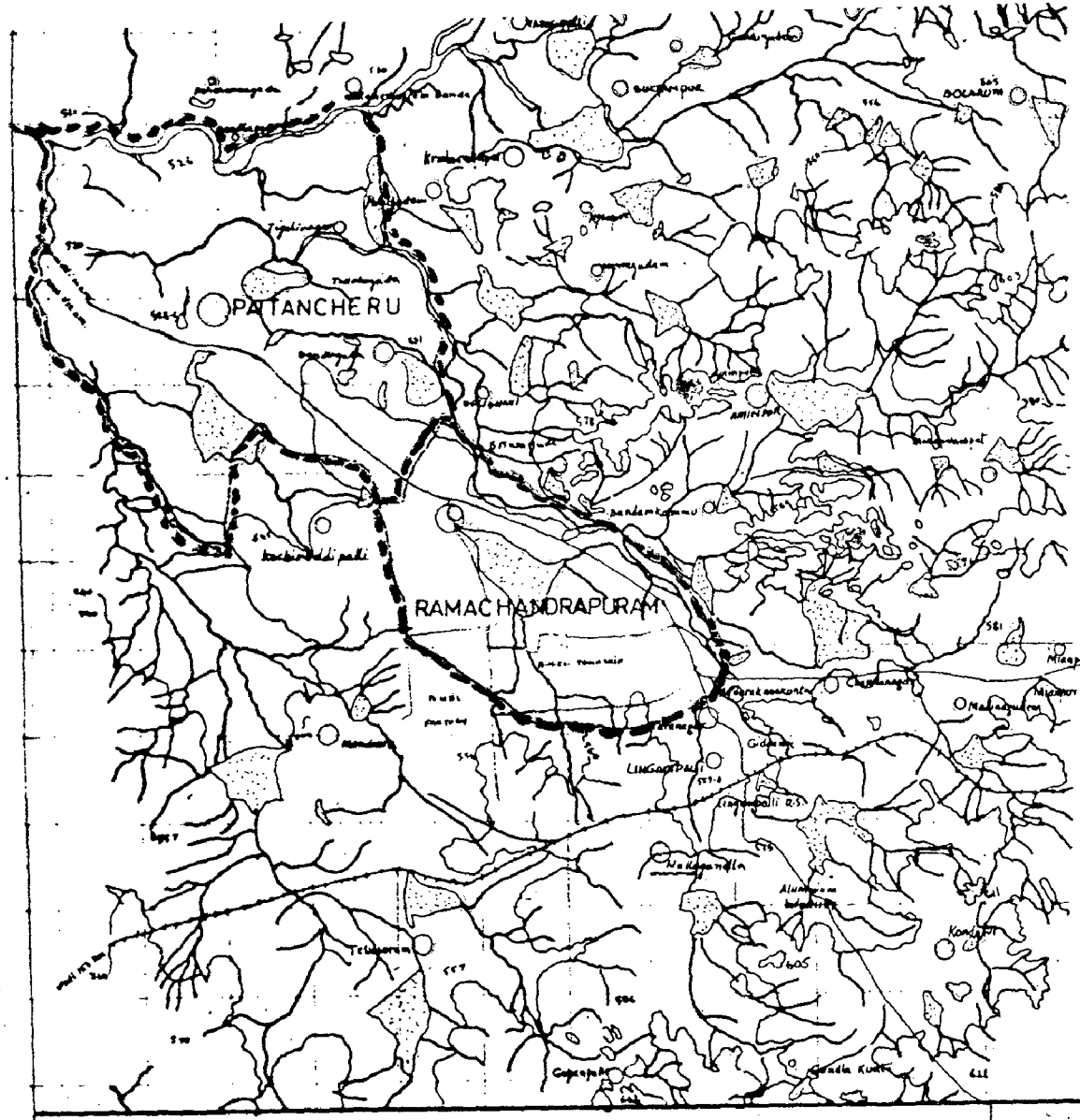
If this growth, is not properly checked it will be difficult for the further expansion and development of the industrial town.

The proper land use planning for different activities have to be also deeply concentrated for better growth control, This should provide adequate infrastructure, green belt, buffer zone for industrial environment.

Meanwhile for the planning of a new town or existing town, it is desirabel that several factors are to be taken into consideration. More is necessary if it is an existing area. For an existing area it is essential to know the undesirable growth pattern, integrated planning process and effective implementation of the programmes in order to avoid formation of slums, and haphazard growth, and to prevent all kinds of pollution like air, water, land.

Further the environmental impact of the existing industries should be able to quantify and project the environment problems as well as to spell out environmental guidelines for the development of industrial and other landuses.

In view of the above, in this dissertation mainly a a part of the Ramachandrapuram Patancheruvu area is considered due to paucity of time, proper information and the facilities.



LEGEND

- SETTLEMENTS
- STUDY AREA
- NATURAL WATER BODIES
- RIVERS
- CONTOURS

PHYSIOGRAPHY MAP
R.P. AREA

PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

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NORTH
WIND

SHEET NO. 1.

500 M. to 1 cm. SCALE = 1:50 000

2 CM. to 1 K.M.

.1 IDENTIFICATION OF PROBLEM :

In Ramachandrapuram Patancheruvu area, the planning is erratic i.e. haphazard growth of commercial areas, katcha huts, shops, khokas, houses, shops, and workshop's huddled together in some of the areas, insanitary and unhygenic condition, as well as growing of slum pockets alongwith Bombay National Highway, which is in the form of ribbon development. This type of irrational growth is increasing, narrowing the width of the national highway and causing difficulty in movements of the regional and internal mass traffic.

In Ramachandrapuram Patancheruvu area, there are residential areas like (i) Srinivisanagar Colony, (ii) Bandlaguda (iii) B.H.E.L. Township that is already in agglomeration with Chandanagar Residential area which is under construction by Hyderabad Urban Development Authority (HUDA), (iv) Taranagar Residential area and Sri Nalagandla Residential area are also in agglomeration with B.H.E.L. Township.

Population Growth :

About 30,000 workers from Hyderabad city are employed in various industries of the Ramachandrapuram Patancheruvu area who are daily commutes.

This mass of people which commutes daily between Hyderabad and Ramachandrapuram Patancheruvu area and also the migration of people from the surrounding villages to Ramachandrapuram Patancheruvu area have an impact on the development efforts in Ramachandrapuram Patancheruvu areas because it creates a burden on the town and its services in the form of community facilities, services and amenities being overtaxed, congestion on the roads, an unplanned and scattered growth of shops and commercial areas, proliferation of slums and increase in social problems, social rootlessness and social tensions.

2) Problems Associated with Industrial Development :

The Government of India have declared Medak District as an industrially backward areas. As Ramachandrapuram Patancheruvu areas is located in this district, it is entitled for all the State and Central Government Subsidies and encouragements. There had been a capital investment of about Rs. 150 crores on the establishment of B.H.E.L. factory during the year 1965-66. The setting up of B.H.E.L. paved the way for the growth of many ancillary industries. The Andhra Pradesh Industrial Infrastructure Corporation has taken up a major industrial programme in Patancheruvu with a capital investment of about Rs. 40 crores. The main units established in this undertaking are:
(a) Volrols Limited, (b) Votage Group, (c) Nava Pan India Limited, (d) Nagarjuna Steels, (e) A.P.Scooters, (f) Alwin Industries.

Besides these, a number of other industrial units ammounting to about Rs. 20 crores of investment have also been established.

Hence the spurt in the population growth during the decade 1961-71 was due to the rapid increase in industrialisation of the area, especially after the establishment of B.H.E.L. in 1965 which had in its wake the opening of a number of ancillary units increasing the employment opportunities in this area tremendously. Thereafter, the industrial estates at Ramachandrapuram and Patancheruvu established by the A.P.Industrial Infrastructure Corporation have enhanced the employment potential of this area, attracting many more job-seekers from different parts of the state.

A major industrial programme has been taken up by the A.P.Industrial Infrastructure Corporation at Patancheruvu located at about 2 miles from Ramachandrapuram. This development is in 4 phases. At present 4 major industries and about 80 medium and light industries have already been established supporting an industrial working force of about 4,000, which is expected to increase to about 20,000 within the next 10 years. All these working population have to be provided accommodation within a reasonable distance from their places of work.

It is estimated that the population of this area would be about 2.5 lakhs by 2001 as per the trend prevailing in increasing of industries. Even now haphazard development and creating of slums is taking place very fast in this area due to unsatisfied demand for residential and commercial purposes, the problems with this estimated increase in population will be manifold and have to be taken care of from now itself.

3. Commercial Facilities :

Proper and planned facilities are available in BHEL area and with the exception of this area, the growth of shops and commercial area is haphazard.

4. Facilities and Amenities :

Except for that in B.H.E.L. Township lack of recreational facilities exists in the town. The lacking or inadequate facilities are :

a) Parks and Playground
b) Auditorium and Conference Hall
c) Stadiums, Swimming Pool and Club
d) Museum and Art Gallery
e) Religious Institutions
f) Theatres are inadequate
g) Open Air Theatre
h) Lack Educational Facilities
i) Health facilities are inadequate.

5. Traffic and Transportation :

Flow of traffic from Hyderabad during peak hours generally mix up with local and zonal traffic which creates traffic congestion problem.

There is a lack of proper parking for lorries, and other vehicles. Lorries are mostly park near the entrance of the factory along the Bombay National Highway, this tends to delay the mass transit as well as is a big causes of accident can take place.

6. Infrastructural Facilities :

Infrastructure is inadequate except B.H.E.L. Township. (a) Water Supply, (b) Electric Supply, (c) Sewerage and Drainage, (d) Telephone

7. Pollution :

Industrial solid waste is discharged without treatment, therefore, in some of the area contamination of agriculture land is there. Due to the stagnation of industrial waste. Land, air, and water pollution is also there in some of the areas.

(a) For some part of Ramachandrapuram and Patancheruvu area well water is used for domestic water supply. But, the underground water resource of the area is getting contaminated due to infilteration of the industrial waste. Moreover, the waste from Nalahs is also discharged on the land, which has further enhanced the contamination.

1.2 SCOPE :

In the present study the main emphasis is given to the peripherial and internal developments and haphazard growths of Ramachandrapuram Patancheruvu area. This study concentrates on the major planning lapses which have been identified in terms of economics, social and physical linkage of the pheripherial population with the township population. In addition to this number of heavy energy based and ancillary industries are likely to come up in the area. These industries will definitely attract more people with the result that there shall be migration and hence erratic settlements in this belt. Hence it is more, important to analyse the present situation in new towns mainly in terms of industrial development and its regional growth of the town. This study would help, to evolve an approach for the entire industrial development and guidance for developing such new towns in future.

In this connection there is a more scope in studying the environmental issues, specifically related to air, water and land pollution in this area.

Air Pollution :

In industrial areas of Ramachandrapuram Patancheruvu, the smoke plumes and the gas effluents emanating from the chimenys directly disperses in the atmosphere which also depends on the

prevailing wind direction, and thereby increasing the toxic contents in the atmosphere as well as the particulate matter. This results the stress on vegetation as well as toxication in the atmosphere. Also the improper location of the existing industries have proved hazardous to the population of the area.

Water and Land Pollution :

The ground water of the area is getting contaminated due to infilteration of the industrial waste. Moreover, the effluents from the factories is also directly been drained to the main drainage system which has further enhanced the contamination.

In this area, growth in various sector has resulted in serious development problems, for instance, the growth of workshops, khokas, and shops, in the commercial sector has resulted in many problems, as congestion and pollutions.

Further, the slum pockets have come up along the Bombay National Highway and at some other places. This has further worsened the situation.

In addition to this several new industries have come up in the area, their impact has to be studied- in terms of various types of facilities/ amenities is to be provided. These have resulted in shortage of housing, overcrowding, enhanced business activity congestion, etc. All this has to be studied seriously

and comprehensive planning steps are required to maintain the balance between the intense industrial growth and environment.

1.3 AIMS AND OBJECTIVES OF THE STUDY :

I Identification of problems of Ramachandrapuram Patancheruvu area including peripherial and internal development.

II Identifying and analysing the causes related to unplanned growth of the Ramachandrapuram Patancheruvu area.

III Proposals for the proper development of Ramachandrapuram Patancheruvu area, including environmental and Community facilities.

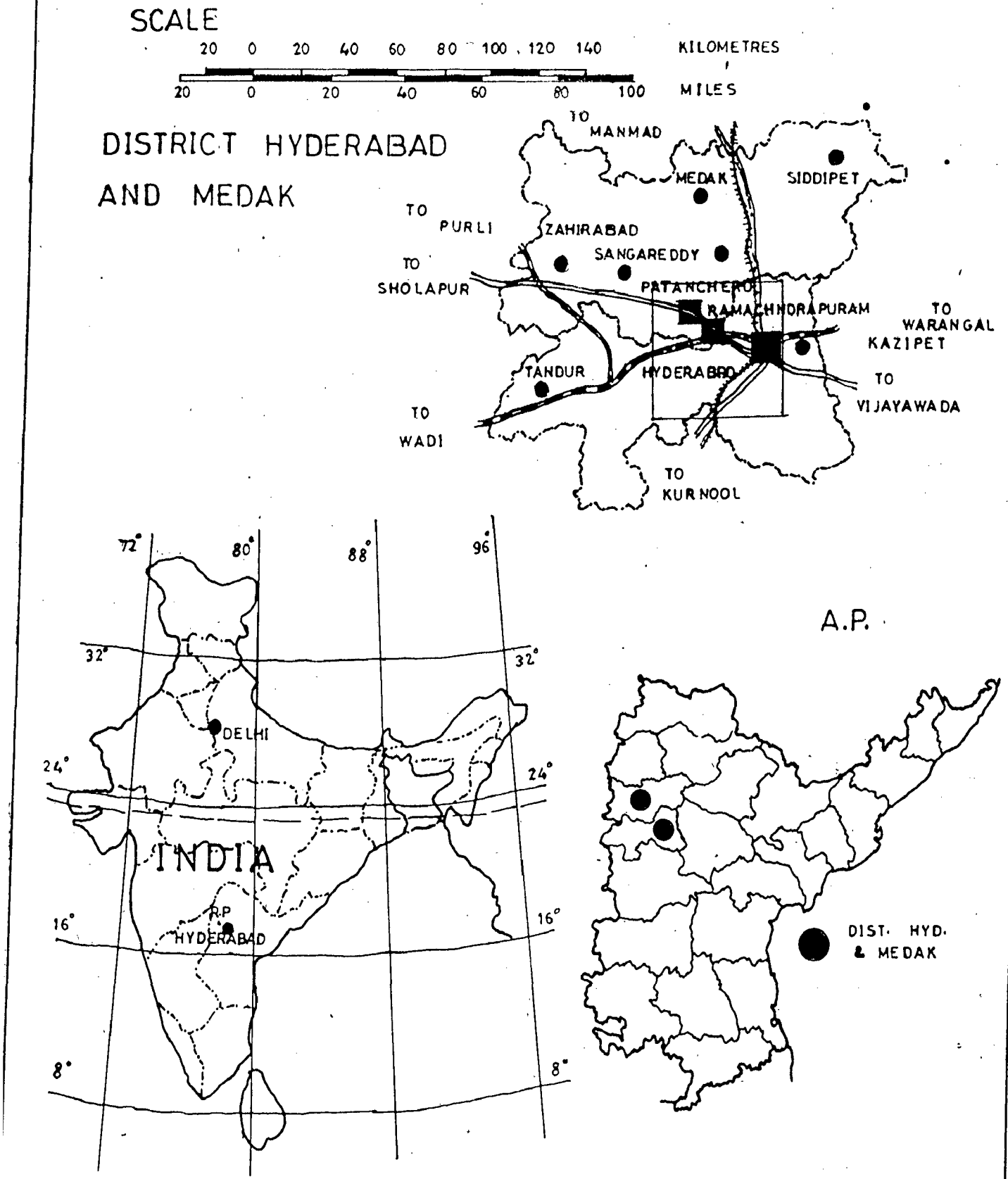
1.4 LOCATION OF REGIONAL SETTING :

Ramachandrapuram Patancheruvu area is an integrated part of Hyderabad District and Medak District area, comprising of twenty one taluks Sangareddy, Andole, Zahirabad, Narayankhed, Medak, Dubbak, Siddipet, Gajwel, Narsapur, Sadasivpet, Ramayapet, Rajendranagar, Medchal, Hayatnagar, Ibrahimpatnam, Maheswaram, Chevella, Vicarabad, Marpalle, Tandure, Pargi and located at latitude, 17°-31' North, Longitude, 78°-21' East.

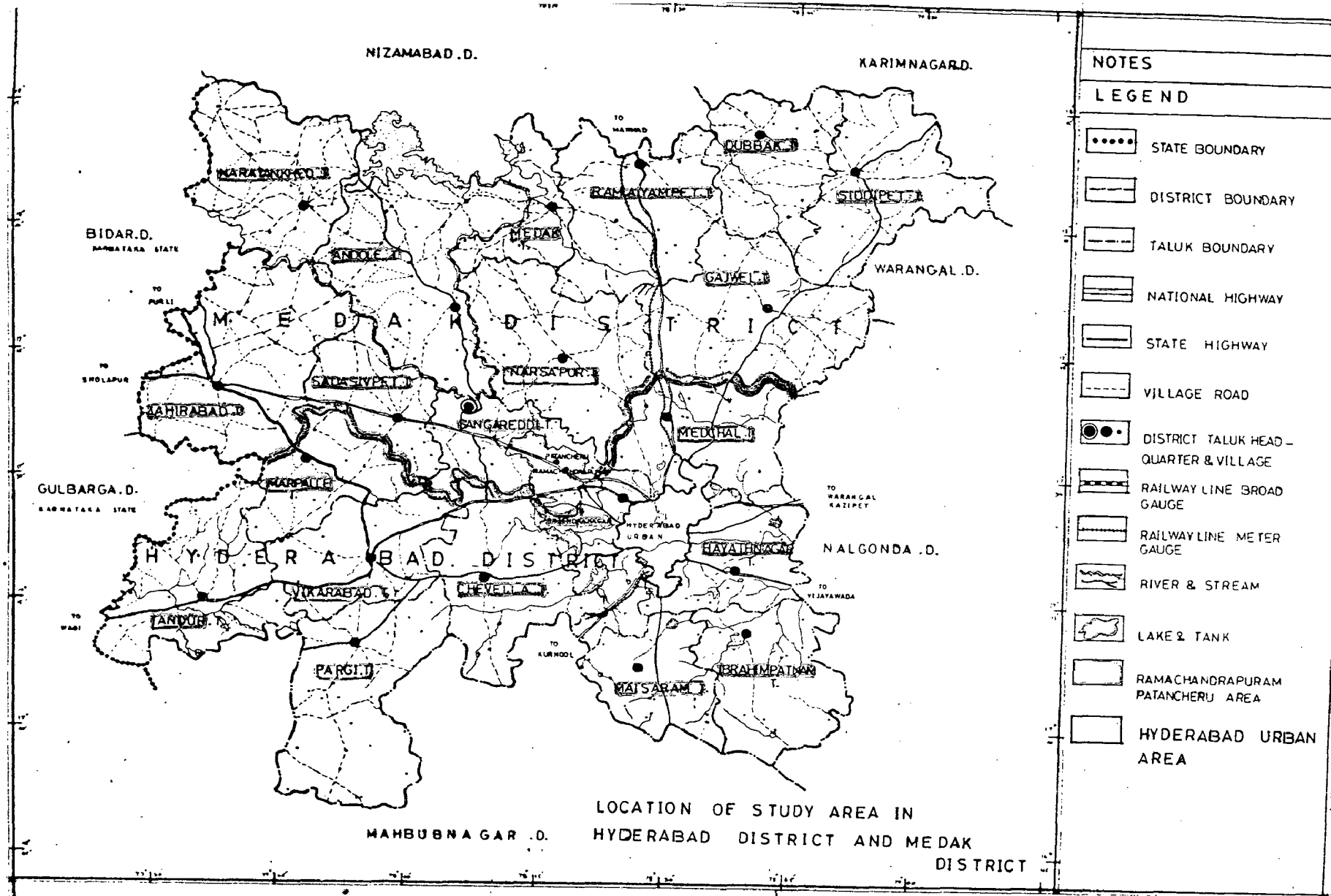
See map No.1(4) Importance of studying Ramachandrapuram Patancheruvu area for its planning and development strategies, is also due to its improper growth and existing industrial area, both town is well connected with other parts of the district

and state by roads and railway. The railways station is approximately 3 to 4 Kms away, and nearest airport at Hyderabad is 24 Kms. away. Other importance regional towns, connected to it are Sangareddy (23 Kms) Hyderabad (24 Kms.) Secunderabad (25 Kms.) Sadasivpet (30 Kms.) Zahirabad. (70 Kms.) Andola (42 Kms.) Vicarabad (30 Kms.) and approximate distance from Pune by direct bus route is 513 Kms. and Bombay 673 Kms.

Fig. 1.4a



LOCATION OF RAMACHANDRAPURAM PATANCHERU AREA



LOCATION OF STUDY AREA IN HYDERABAD DISTRICT AND MEDAK DISTRICT

PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

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SCALE 1 CM. = 5 KMTS

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NORTH
WIND

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CHAPTER - II

2. GROWTH OF INDUSTRIAL TOWNS IN INDIA A STUDY OF ANDHRA PRADESH STATE

2.1 HISTORICAL BACKGROUND :

In India, before 1939, industrialization which started in about 1850 in the cities of Bombay, Ahmedabad, and Calcutta had spread slowly to only a few other areas of India, However, since world war second, and especially since the start of the planned industrial development of 1951, a whole series of new industries were spreading to new areas of the country, i.e. Seeka in Saurashtra, Dalmianagar in Bhihar, and Khopoli and Welchandnagar near Poona in Bombay. All were villages before 1939, but now they have large industrial establishments. During the same period, cities which were primarily non-industrial, such as Bangalore, Coimbatore, and Ludhiana, have bseen the establishment of numerous industrial plants within their borders or on their outskirts. Similarly in the second five year plans major industrial units were set up in the villages, like- Durgapur, Bhilai and Rourekela, where the publically owned steel plants were established. With the spread of industrial plants throughout the country, the effect upon the rural economy was accelerated and the social and political climate became wide spread.

Hence, with the far higher per capital productivity of labour in industrial and related activities, it is clear that a widespread development of factory and non-agricultural industry, which will absorb an increasing and eventually large proportion of the total population, is necessary for country's growth of per capita income.

The period 1939-1945 also saw the start of various types of new Industries as well as growth of existing metal working and engineering industries. India could no longer depend on imports of capital goods. Therefore, a development of an internal industry in this field was necessary to meet the minimum needs for expansions and maintenance of the existing capital equipment. The demand pressures upon all industries led to repidly rising prices of manufactured goods, and with lagging wages, profits reached record levels. However, due to non-availability of capital imported equipment there was only a slight increase in plant capacities. The reasons for the lack of expansion of industrial capaicity and infact, decline in output, lay primarily in the uncertain political situation - first the 1947 budget with its heavy rates of taxation, and then the achievement of independence- combined with the separation of India and Pakistan.

Hence, for the first three years of the plan period, industrial expansion was very slow. Between 1951 and 1953 the

industrial production index rose by only 6 percent, and it was estimated that a very large proportion of India Industries, during this period, operated at less than 60 percent of capacity. However, by 1954, industrial expansion had accelerated before proceeding to the more detailed analysis of the growth of specific industries, a description of the general policy and control frame work within which industry operates in India is essential. Therefore, one major motivation of policy is to promote the growth of manufacturing industry. But there are various criteria for judging specific policies to implement this primary goal. The industrilization programme requires the conservation of scarce capital resources and scarce foreign exchange and it is also necessary to provide a socially satisfactory regional distribution of industry.

Recent Growth :

According to the sixth five year Plan 1980-85, impressive as these achievements are, the rate of industrial growth has not been uniform during this period. Hence there are many reasons for the fluctuations in the rate of industrial growth. In the initial years of planning, industrial development was largely based on import subsitutions and had the advantage of captive steady market. The steady growth in industrial production was conditioned by the general pace of economic development in the country. With the changing international and national

environment , it has been difficult to match the sustained growth of earlier years. During the last decade (1970-71 to 1979-80) the average growth rate has been about 4 percent per annum. While no single factor can be identified as having a significant bearing on the rate of industrial growth, a close relationship could be identified between the trends in total investment and(particularly public investment) the industrial production. Other factors which have effected the growth rate from from time to time are the shortage of infrastructural and other vital inputs, such as power, Transport, Coal, Cement, un-remunerative administered prices, distrubed industrial relations, and to an extent inefficient management.

Consequently Industrial growth in India, since independence has resulted in steady migration of people from rural areas to urban centres. It is expected that by the end of the year 2000, nearly one third of the total population of the country would be living in cities with more than million population.

Industrial Growth in Andhra Pradesh :

APIDC* - A Profile in Growth :

Andhra Pradesh industrial Development Corporation is a premier industrial promotion organisation in the country, founded about twenty six years ago on 16th December, 1960. It was a time when Andhra Pradesh, an infant state, was only known for

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*APIDC: Andhra Pradesh Industrial Development Corporation

its agricultural resplendence. Hence it was time when a lone jute mill or a solitary spining mill and a sugar factory was represented as an industry. The birth of APIDC symbolised the new blown aspirations and dreams of the peoples of A.P.

Andhra Pradesh had always the right requisites, a strong agro-based economy, sound infrastructural facilities, and a bounty of natural resources. But there was crucial dirth of one element which was imperative for the success of industrilisation entrepreneurship. The traditional Andhra Farmer could not perceive beyond the stretch of his paddy field. Agricultural surplus was ploughed back into agriculture.

But today, after twenty five years, Andhra Pradesh has a different story to tell. From this land, a giant computer company opens the door to the second industrial revolution. Numerous agro-based and resources- based units link each other into better performance and massive engineering and chemical industries catapult the state into new horizons of high technology. This is a vicissitude brought about by the APIDC, starting with a vacuum, it was no mean task for the Corporation to generate a spirit of entrepreneurship in a predominently agro-based society.

BUT APIDC did it with success- success that has to day become a legend- a history that rises above the economics of

chronicles - a history that touches life, bringing smiles on down trodden faces in the remotest of places. Hence, the noted backward areas of Andhra Pradesh are humming industrial belts today. Agro-based and resources-based units manifold. And numerous foot loose, high technology units stand as testimonials to a new spirit of industrialisation.

2.1.1 Objectives, Functions and Categories :

Objectives :

Andhra Pradesh industrial infrastructure Corporation was set up in 1973 by the Government of Andhra Pradesh to provide industrial infrastructure and thereby help in the development of Small, Medium and Large Industries.

Therefore, the main objectives of the Corporation are :

- To identify potential growth centres in the State,
- To acquire land for (IDAS) and (IES) (Industrial Development Areas), and (Industrial Estates),
- To establish Industrial Estates and also to build worksheds and develop plots.
- To provide social infrastructure like industrial housing near work spots.

APIDC - Objectives :

- Promoting medium and large industries to bring about planned industrial development in the state.
- Developing backward areas to bring about a balanced dispercel of industries.
- Developing and fostering a wide and competent entrepreneurial base.
- Offering opportunities for exploitation of the State's natural resources through industrial applications.
- Bringing about technology upgradation on the industrial front.

APIDC- Activities :

- Participation in venture capital of industrial projects including underwriting of equity.
- Extending term loans under IDBI Refinance scheme.
- Extending seed capital to first generation professional entrepreneurs.
- Identifying new projects and scope for higher technologies.
- nursing sick and undermanaged units.

APIDC - Services :

- Monitoring industrial projects
- Helping entrepreneurs in obtaining all the necessary clearances.

- Advising entrepreneurs on technical and financial aspects of projects.
- Developing project reports and profiles.

APIDC - Delivery System

- A well Knit group of competent and qualified professional managers who work along with the entrepreneurs from concepts to commissioning of projects.

2.1.2 Performance of Industrial Towns :

Industrial Township :

To decrease industries on residential areas and to provide better facilities to industries for their establishment and growth, various industrial townships or estates have been set up either by government or local authorities. The important aspects of such industries estates are as follows:
1) Layout, (2) Management (3) Services and Amenities, (4) Site (5) Size.

In these industrial projects, land is developed with facilities like water, power, roads, streets lights and sheds. All that an entrepreneur needs to do is to make his own internal arrangements and obtain power connections according to the requirements of his unit. Ready sheds are also available

in many such estates so that the entrepreneur may implement his project without delay.

Ancillary Industrial Estates :

These are established for large parent units like BHEL and benefit both the ancillary and the parents unit.

Autonagars :

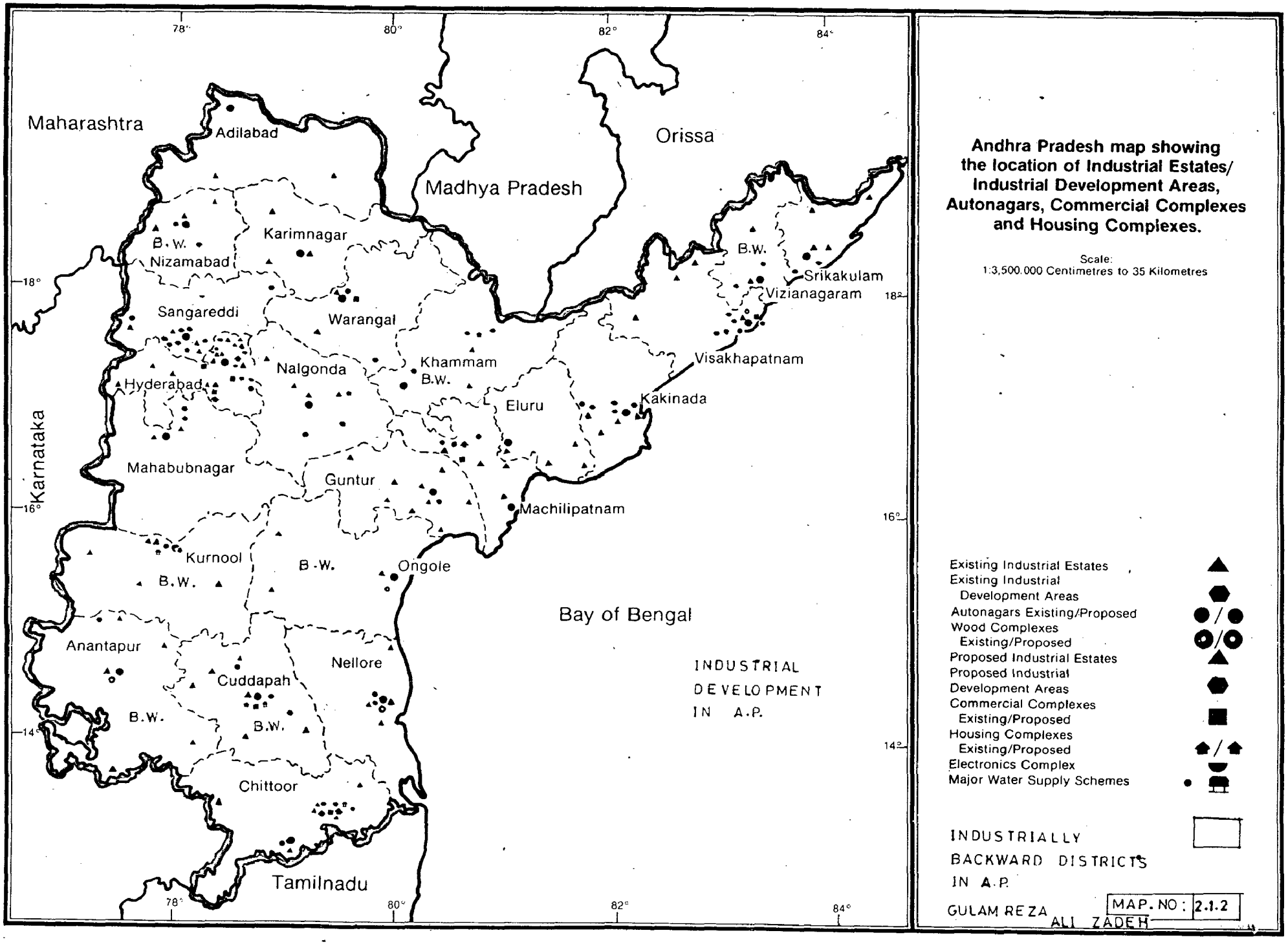
The purpose of Autonagars is to serve the transport industry. Autonagars are set up in the outskirts of the city so that trucks, buses and other vehicles do not have to travel to the city centre for repairs and servicing. This helps in reducing traffic congestion and at the same time offers a single umbrella, multi-facilitiy kernal to transport operators, tradesmen and technicians.

Commercial Complexes :

These are set up near (IES) Industrial Estates and (IDAS) Industrial Development Areas to help small traders, businessmen, banks and other institutions with accommodation for their operations.

Industrial Housing :

In large industrial areas,(APIIC) Andhra Pradesh Infrastructure Corporation develops housing Complexes in order to provide residential accommodation near work spots. These



Andhra Pradesh map showing the location of Industrial Estates/ Industrial Development Areas, Autonagars, Commercial Complexes and Housing Complexes.

Scale:
1:3,500.000 Centimetres to 35 Kilometres

- Existing Industrial Estates
- Existing Industrial Development Areas
- Autonagars Existing/Proposed
- Wood Complexes Existing/Proposed
- Proposed Industrial Estates
- Proposed Industrial Development Areas
- Commercial Complexes Existing/Proposed
- Housing Complexes Existing/Proposed
- Electronics Complex
- Major Water Supply Schemes

INDUSTRIALLY BACKWARD DISTRICTS IN A.P.

GULAM REZA ALI ZADEH

MAP. NO : 2.1.2

houses are constructed for economically weaker sections, lower income groups and Middle Income Groups with assistance from HUDCO, New Delhi. Fig. 2.1.2

2.1.3 Problems and Prospects :

Problems in General :

1. Economic Crises : If demand falls or if there is sudden change in public taste, the industrial area faces economic crises. The workers as well as employers both suffer and the economic structure of the whole area collapses.

2. Rural Urban Migration : Due to the expansion of industries and establishment of many large and small scale industries, the sudden spurt of population from surrounding villages takes place towards the industrial towns, this creates a heavy burden on town i.e. burden on community facilities, Amenities, Services, residential, parks and playgrounds etc. The unhealthy condition prevailing in most of the congested areas of industrial units affect adversely on the health of workers.

- Pollution : If trade wastes are not properly treated before disposal, air pollution and water pollution occur.

- Traffic Congestion : The growing of industries develop problems of traffic congestion which are not easy to solve.
- Reduction of Agriculture Land : The tremendous growth of industrial areas in many parts of the country shows obviously that the fertile land of used for agricultural pruposes is reduced.

3. Population Growth :

It is found that such unorganised and uncontrolled development of industries has acted adversely on economic and social condition of the community of the town as a whole.

Similarly the rapid increasing in population due to industrialisation has created many problems. The existing amenities and facilities are not sufficient to cope with this rapid growth. Moreover, lack of housing for employees of industries has created some slum areas in the town.

4. Prospects :

Much work has been done in developing industrial town in A.P. State, industrialization has undoubtedly helped in development of the states. Nevertheless, much more work remains to be done for planned and

integrated development of the various districts of Andhra Pradesh.

The industrially backward districts like Khammam, Nizamabad, Ongole, Vizanagram, Cuddeapah, Prodatura, Nandyal, Adoni, Anantapur and Guntakal should be given priority. Entrepreneur should be given much more than just the basic infrastructure.

.2 DEVELOPMENT OF INDUSTRIAL TOWNS AND ESTATE IN VARIOUS DISTRICTS OF ANDHRA PRADESH :

a) Policies and Programmes of Central Government and Andhra Pradesh State Government :

In regard to industrial towns and state in various Districts, the activity was limited to a few units till the middle of this century. It was only during the 1950s and particularly after the formation of Andhra Pradesh that a sudden spurt was noticed.

Similarly with the outbreak of the second world war industrial development in the state took place.

(APIIC) Andhra Pradesh Industrial Infrastructure Corporation has developed industrial estates and also assisted Private Industrial Estate, in various districts of Andhra Pradesh, which are given below :

1. Srikakulam District, (2) Vizianagoram District (3) Visakhapatnam District, (4) East Godavari District (5) West Godavari District (6) Krishna District (7) Guntur District (8) Prakasam District (9) Nellore District (10) Anantpur District (11) Cuddapah District (12) Chittoor District (13) Kurnool District (14) Rangareddy District (15) Warangal District (16) Medak District (17) Malgauda District (18) Mahabubnagar District (19) Nizamabad District (20) Adilabad District (21) Karimanagar District, (22) Khammam District. Appendix No. 1

Policies and Programmes of Central Govt. and A.P.Govt.:

According to the Sixth Five Year Plan, industrial policy can not be static and will have to respond to changes in the econimics scene as set out in the preceeding paragraphs. The frame work of rules and regulation relevant to the nascent stage of development are not necessarily appropriate to the complex industrial structure which has since been build up. Without sacrificing the basic principles of a planned economy sufficient flexibility would need to be built in the system to impart a sense of dynamism to take advantage of the considerable Technological and managerial capabilities that have been developed over the years. In order to make efficient use of scarce capital much greater attention will have to be paid to secure greater efficiency and competitiveness in the functioning of our industry.

In order to protect employment, all encouragement will have to be given to the growth of cottage, village and small industries. Sectors where efficient production can be secured on a small scale would continued to be reserved for future expansion only by the small scale units. However, if social costs of production of the decentralised sector are to be contaimed within reasonable limits, there must be greater play of competition in the remaining sectors which are not reserved exclusively for small scale industries. In industries, where economies of scale excercise an important influence

on the cost of production, expansion of existing enterprises is to be preferred in setting up new plants of uneconomic size. This applied particularly to the expansion of capacities which depend on export markets. Moreover consistant with the emphasis on technological self-reliance adequate stress must also be laid on keeping the technology in use upto date. To that end, import of technology particularly for export oriented and key industries may need to be libaralised.

The directional change in the industrial policy are reflected in the industrial policy statement of July ,1980, this accords particular emphasis on improving efficiency and productivity in the industrial sector through optimum utilisation of existing capacity. To this end, it is proposed to grant recongnition to increase capacities arising from Technological improvements and labour productivity by endorsing industrial licences selectively on the basis of such capacities and to permit automatic growth in industries in the core sectors or those which have a direct linkage with the core sectors or with long term exports.

The industrial policy statement of 1980 provides for the production of advanced technology, introduction of processes which would aim at optimum utilisation of energy as also for the establishment of appropriate capacities to achieve economies of scale. A special thrust is to be given to the establishment of export oriented units. The operational elements of the

indnstrial policy will have to be kept constantly under review in order to meet challanges arising from the shifts in the international and national economic situation.

The Industrial Policy Statement of 1980 also provides for the production of advance Technology, introduction of processes which would aim at optimum utilisation of energy as also for the establishment of appropriate capacities to achieve economies of scale. A special thrust is to be given to the establishment of export oriented units. The operational elements of the industrial policy will have to be kept constantly under review in order to meet challanges arising from the shifts in the international and national economic situation.

.3 GROWTH OF INDUSTRIES IN HYDERABAD AND ITS ENVIRONS :

OLD TIME INDUSTRIES :

It appears that the area denoted by the district, with the exception of Hyderabad city and its suburbs which in recent times acquired a vastly improved industrial complex, has at all times been a preponderantly agricultural tract except for some of the time-honoured crafts associated with the villages of ancient India. The crafts pursued in olden days were mostly cotton spinning and weaving, carpentry and manufacture of bronze-ware and jewellery. Dyeing and printing, an industry allied to weaving, was also an important occupation in some parts of the district. These industries particularly spinning and weaving, however, suffered a set back due to the keen competition they faced from the machine-made products. After 1948, a vigorous and multi-pronged efforts has been made both by the Government and private agencies to review such industries by extending financial assistance and training facilities and also to provide the district with an industrial base.

DEVELOPMENT OF POWER SUPPLY :

A thermal power-station comprising colafired boilers and steam Turbo alternators of 3,000 KW., was commissioned in 1923. Therefore, the establishment of a number of industries in an

around Hyderabad, demand for power supply increased considerably. As a result the capacity of power station was raised in stages and by the end of March 1967, it stood at 27,500 KW. Therefore, the fast growth of the industrial complex, especially after the formation Andhra Pradesh in 1956, demanded increased capacity of the existing sub-stations, erection of new ones and extension of the distribution lines.

MINING AND HEAVY INDUSTRIES :

Generally speaking, the district is not rich in mineral wealth. The minerals available in the district are quartz, lime kankar, limestone, clays and felspar of these quartz and lime stone are important.

LARGE SCALE INDUSTRIES :

Almost till the turn of this century, the district did not witness any industrial activity except the traditional handicraft and cottage industries. Hyderabad made a landmark in 1929 when the erstwhile Nizam's Government created an Industrial Trust Fund with a captial of a crore of rupees which subsequently rose to more than three crores. The objectives of this fund were to invest the capital in selected large scale industries and to utilise the profits made. Therefore for the development of small scale and cottage industries. As a result of this a number of industries came into existence and a large number of cottage

industries was saved from near extinction. Further, with the outbreak of the second World War, many steps were taken for industrial development in the state. The first step in this direction was the formation of an Industrial Corporation. Partly financed by the Government and partly by other agencies, for the manufacture of items like heavy chemicals, sheet glass and ware, glucose, starch, casein and plastics. With a view to stimulate industrial activity a scientific and Industrial Research Board was constituted for the promotion of industries based mainly on the indigenous and locally available raw material. In about four decades since 1929, a huge industrial complex came up in and around Hyderabad. The pace of industrial growth was accelerated especially after the integration of the state with the Indian Union in 1948, followed by the implementation developmental programmes under the five by the Five Year Plans.

The simultaneous growth of credit institutions like banks in the district and the facilities offered such as (1) Earmarking sites for industries, (2) Supplying power and water at Subsidised rates, (3) Setting up of industrial estates and (4) Financial assistance from the Government and other agencies like the State Financial Corporation and Industrial Development Corporation, gave an impetus to the establishment of some major industries. Almost all the industries in the large scale sector in the district are located in and around Hyderabad city.

APPENDIX NO: II

SMALL SCALE INDUSTRIES :

As observed earlier, the industrial growth in the district is of recent origin. Even in regard to industries in the small scale of this country. It was only during the 1950s and particularly after the formation of Andhra Pradesh that a sudden spurt was noticed. This is evident from the fact that the number of such units in the district which stood at 52 in 1950 rose to 366 in about a decade's time. This was due to the efforts of the Government to create a conductive industrial climate and the facilities of credit extended by the commercial banks that have come into existence since then. The peculiar feature of the industrial development in this sector is that not only rice, dal and oil-mills have grown in appreciable number but a concomitant growth of units like general engineering, printing presses, iron and steel works, occupying the first place among non-agricultural category, gave a new orientation to the economy of the district.

Therefore, a perusal of Annexure will reveal that not only the units very greatly in their number but also present a diversity of character, of the 657 units, general engineering (77), printing presses(76), iron and steel works, and dal mills(39) each Saw-mills (36), Oil-mills(31), rice mills (23) chemicals and parama-ceuticals(14) and beedi factories(10) are important. The Appendix also reveals that these units are heavily concentrated in the twin cities of Hyderabad and Secunderabad with as many as 627 units, of the remaining units, tandur taluk claims 16, Hyderabad and East 8, Hyderabad West and Medchal 3 each.

Appendix No: III

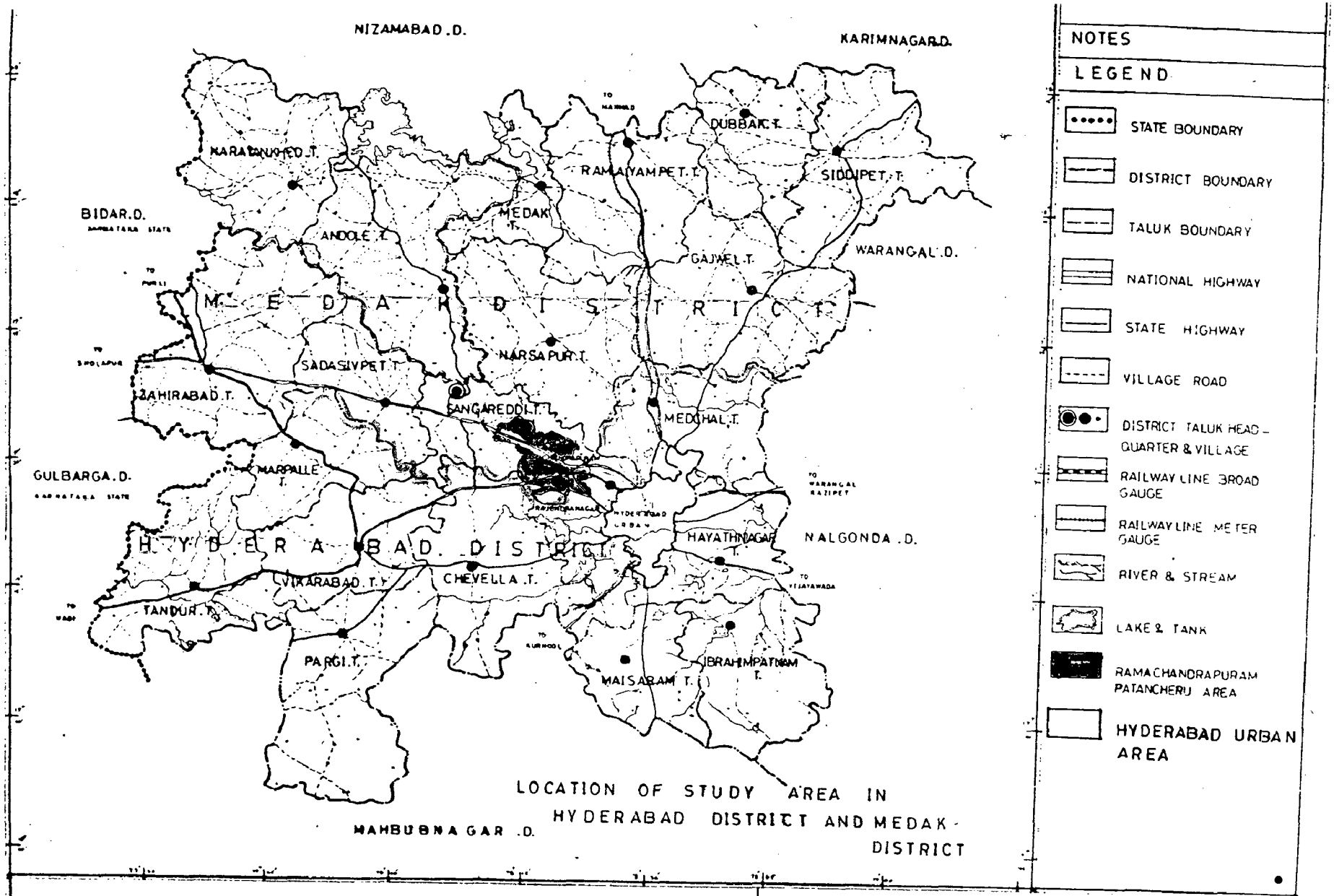
CHAPTER - III

ANALYTICAL STUDY OF RAMACHANDRAPURAM PATANCHERUVU AREAS :

1 HISTORICAL BACKGROUND :

Ramachandrapuram Zone is situated in District Medak and Hyderabad District (A.P.). District Medak was not a homogeneous administrative unit in the past and its component parts were, at varying periods of time under the control of several dynasties, namely, the Satavahanas in 230 B.C. to about 218 A.D. ruled over at Daccan. Chalukayas and Badami ruled in 543 A.D. to 757 A.D. and Rashtrakutas, rules at 973 A.D., Kalyani ruled from 973 A.D. to 1200 and Kakatiyas in A.D. (1117-50), the Bahmanis ruled from 1337 A.D. to 134 . Therefore the Barid Shahis, Shahis, ruled from (1482 A.D. to 1518) and Kutub Shahis ruled in 1543 A.D., the Mughals and Asaf Jahis ruled from (1748 A.D. to 1803). Therefore, in 1901, the Medak District consisted of 6 talukas: Ramayampet, Baghat, Kalapgur, Andole, and Termal besides some Jagirs.

Hence, the most important change after 1958 was the transfer of Ramachandrapuram to (Ramachandrapuri) village in 1962 from Sangareddy Taluk to Hyderabad District mainly due to the establishment of the Bharat Heavy Electricals Limited, the Government of India have declared Medak District as an Industrially Backward, area. Fig. 3.1, 3.1.1, 3.1.2



PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

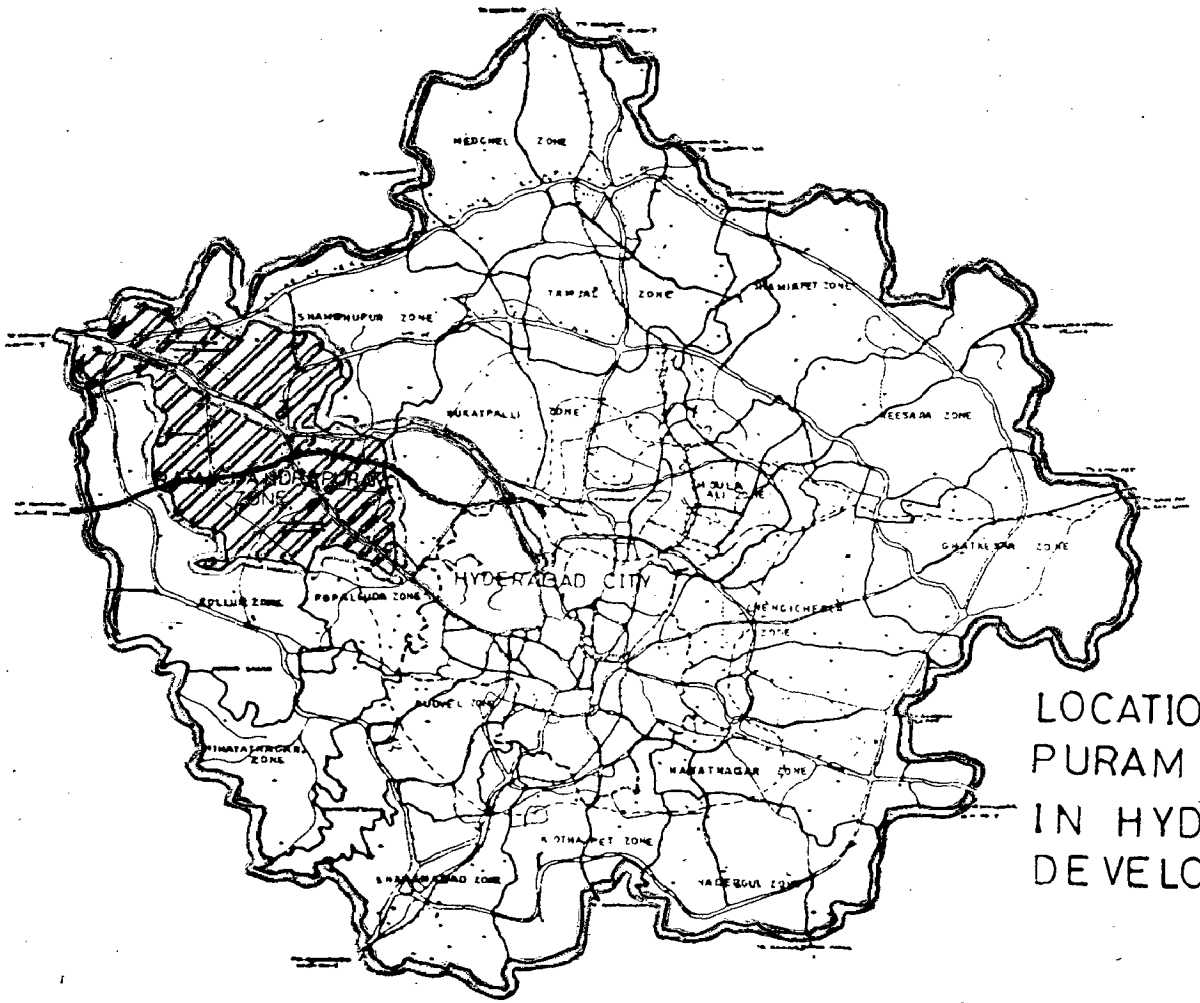
GULAM REZA ALI ZADHE
M.U.R.P THESIS 1984-86
DEPARTMENT OF ARCHITECTURE AND PLANNING
U.O.R ROORKEE U.P

SCALE 1 CM. = 5 KMTS.

20 10 0 10 20 30 40 KMTS.

NORTH WIND

SHEET NO. 3.1



LOCATION OF RAMACHANDRA-PURAM PATANCHERU ZONE IN HYDERABAD URBAN DEVELOPMENT AREA.

PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM. PATANCHERU AREA HYDERABAD A.P

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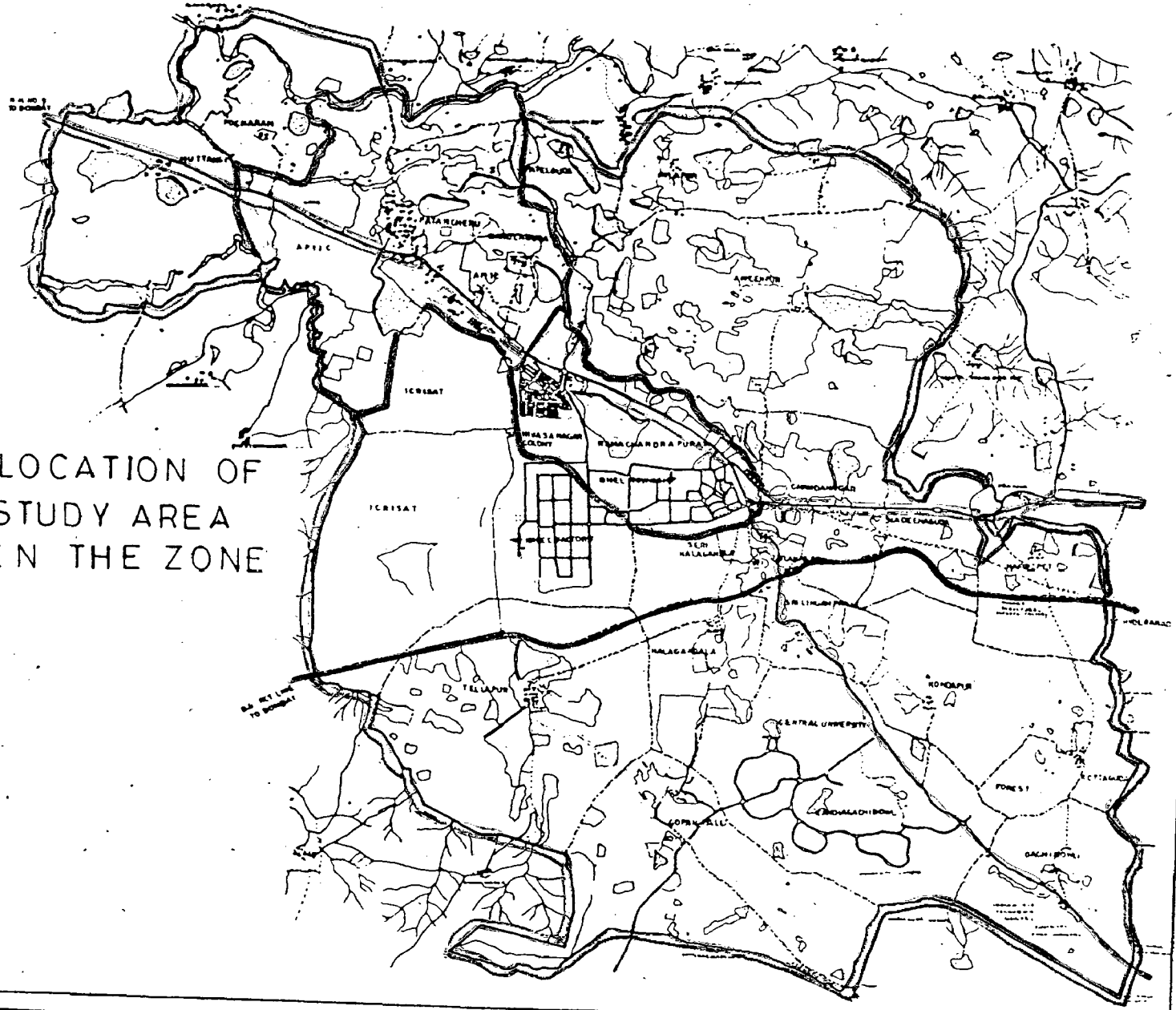
FIG: 3.1.1

NORTH

sheet 3.1



PLANNING AND DEVELOPMENT STRATEGIES OF
RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

GULAM REZA
ALI ZADHE

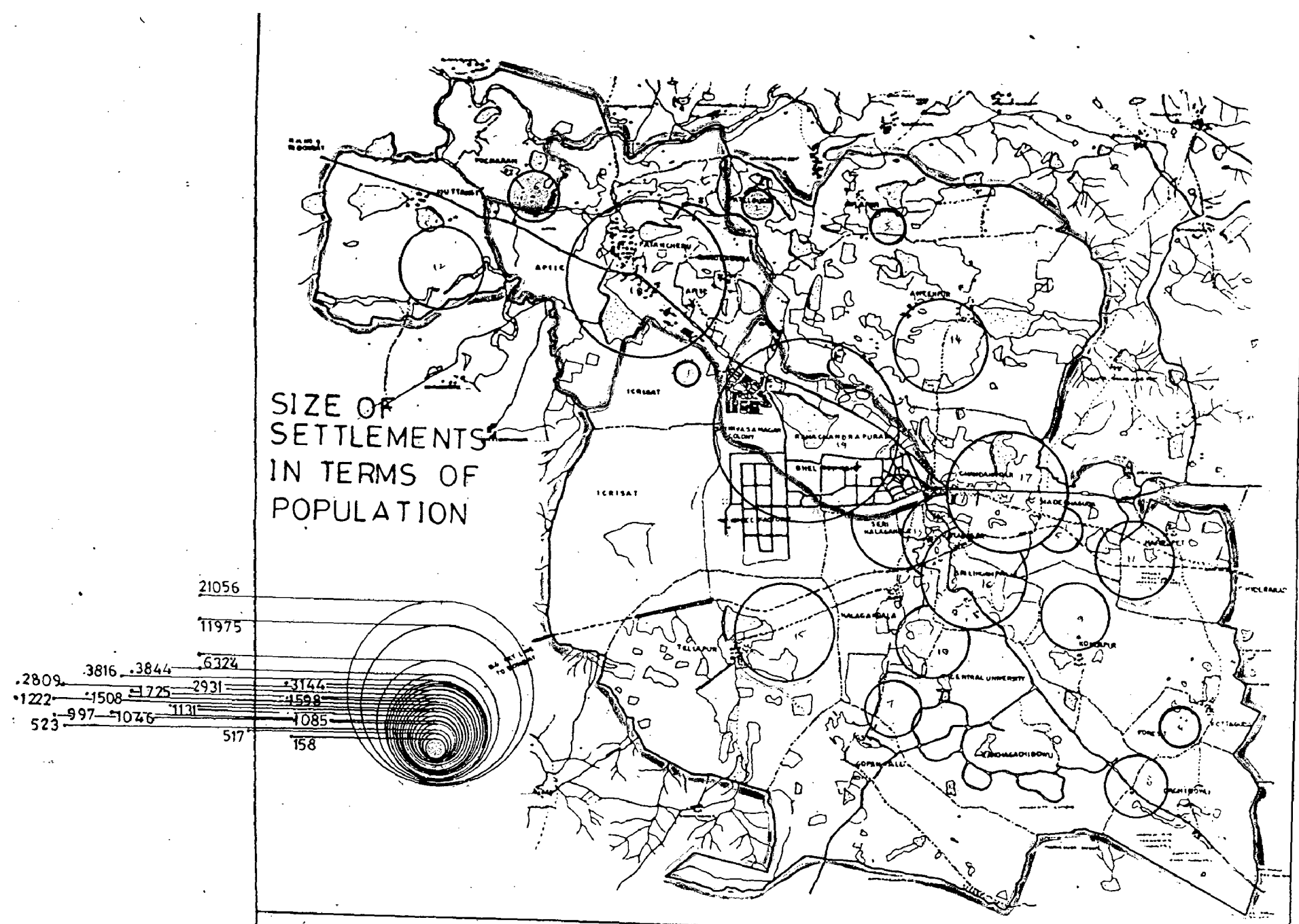
FIG. 3.1.2

Ramachandrapuram Patancheruvu area is located in this District. It is entitled for all the State and Central Government subsidies and encouragements there had been a capital investment of about 150 crores on the location of B.H.E.L. factory during the year 1965-66, the location of B.H.E.L. paved the way for the growth of many ancillary industries, the Andhra Pradesh Industrial Infrastructural Corporation has taken up a major industrial programme in Patancheruvu with a capital investment of about Rs. 40 crores.

3.2 POPULATION STUDIES :

Population Growth : The demographic studies are necessary to evolve strategy for balanced growth of a city or town. The demographic factors like rate of growth of population, sex ratio, age structure, occupational structure etc. mainly determine the physical growth. The study of the changes in the population of city or town have to be made in the context of the changes in the population of the area under its influence which is normally responsible for its growth and decay.

The population of this area was 4807 in 1951 which increased to 7169 in 1961 and 21254 in 1971. The average percentage of decadal growth which was on 49.26 for 1951-56, shot up to 196.47 during the next decade 1961-71. The spurt in the population growth during the decade 1961-71 was due to the rapid increase in industrialisation of the area, especially after the

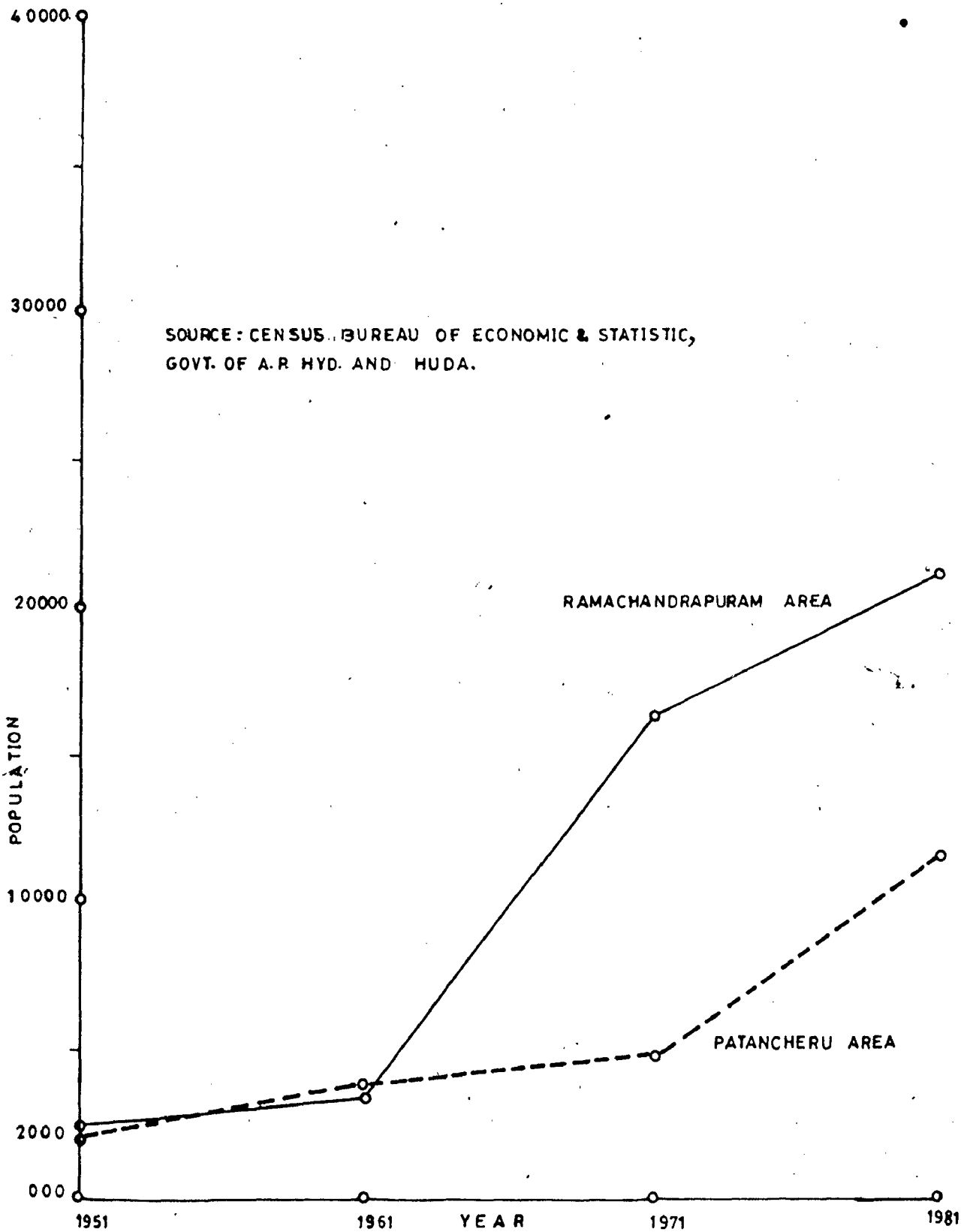

SIZE OF SETTLEMENTS IN TERMS OF POPULATION
21056
11975
6324
3816
3844
2809
2931
3144
1222
1508
725
4598
997
1046
1131
1085
523
517
158
NOTES
LEGEND
SETTLEMENTS PATTERN
STUDY AREA
ZONE BOUNDRY
PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P
GULAM REZA ALI ZADHE
NORTH
FIG. 3.2

establishment of B.H.E.L. in 1965 which had in its wake the opening of a number of ancillary units increasing the employment opportunities in this area tremendously. Fig.3.2,3.2a,3.2b

At present B.H.E.L. having employs of 73,900 people including nearly 14,500 Trained Engineers and Technicians and 31,500 skilled artisans and suporting Technical Staff. Similarly the total population in the B.H.E.L. Township is 26,734.

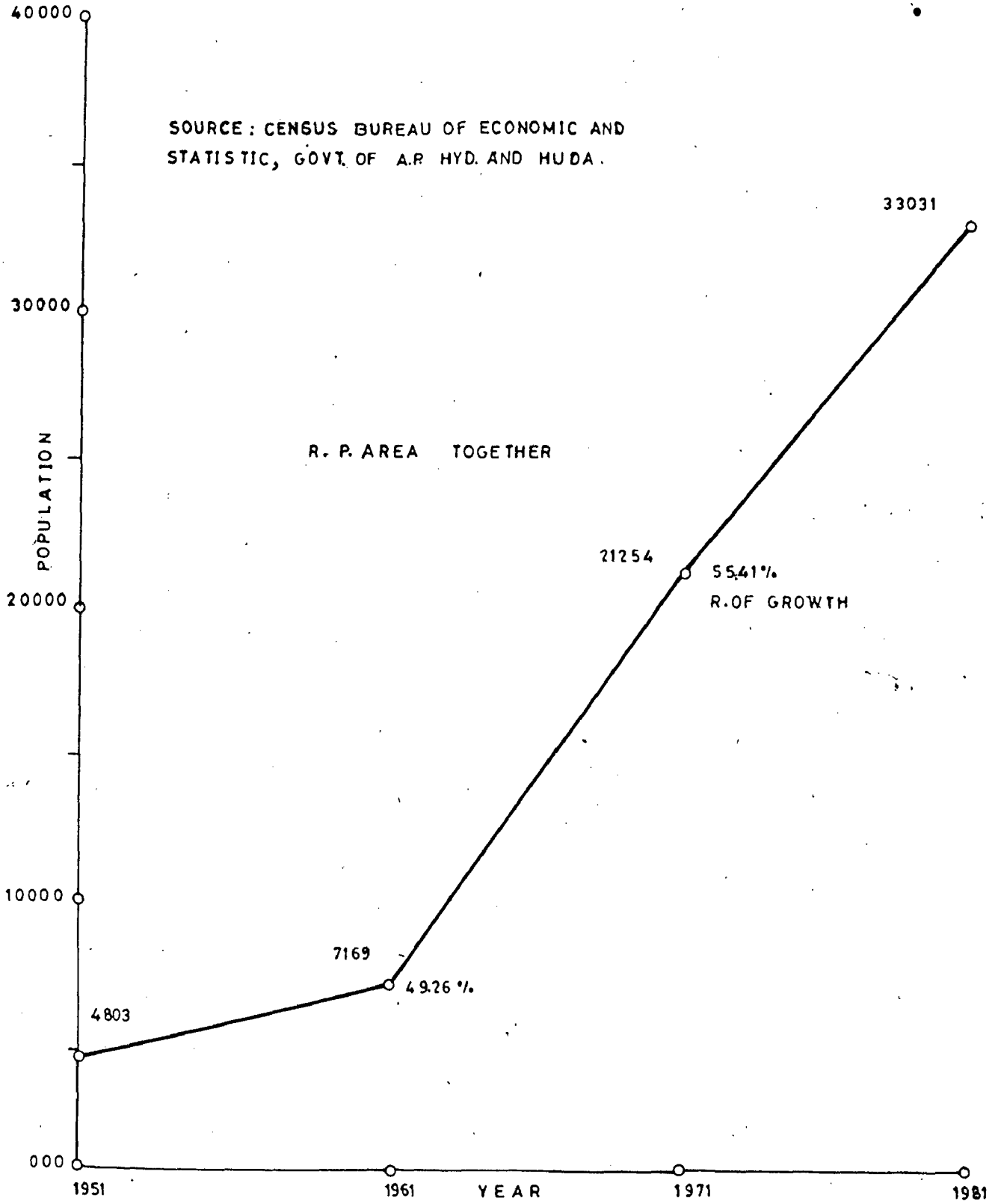
Besides B.H.E.L., establishment ICRISAT between Ramachandrapuram and Patancheruvu, the University of Hyderabad towards South-East and the Industrial estates at Ramachandrapuram and Patancheruvu established by the Andhra Pradesh Industrial Infrastructure Corporation have enhanced the employment potential of this areas, attracting many job-seekers from different parts of the state.

The occupational structure which was predominently primary upto 1961 has consistently shifted from primary to secondary during the subsequent years and has almost undergone a through metamorphosis from the primary activity to urban manufacturing activity establishing urban characters in the area. The occupational distribution of population in this area according to 1971 census is as follows:



POPULATION GROWTH FOR RAMACHANDRAPURAM PATANCHERU AREA

FIG. 3.2 a



GROWTH FOR TOTAL POPULATION OF RAMACHANDRAPURAM PATANCHERU AREA

FIG. 3.2 b

Primary	46.15 %
Manufacturing	33.44 %
Construction	2.23 %
Trade And Commerce	5.03 %
Transportation and Communication	1.98 %
Service	9.17 %
TOTAL	100.00 %

According to the Directorate Census Operation (A.P.) in 1981, shows the population growth of Ramachandrapuram during 1951 it was 2562, while in 1961 increased to 3,532 in 1971 increased to 16,271 and 1981 increased upto 21,056.

The population of BHEL township according to the BHEL profile of growth, during 1971 it was 18522 while in 1981 increased to 26,734.

Similarly the population gowth of Patancheruvu during 1951 it was 2241 while 1961 increased to 3,637, in 1971 increased to 4,983 and in 1981 increased upto 11,975.

The population of Bandlaguda, during 1961 was 278 while in 1971 increased to 449 and in 1981 increased upto 2,247.

Therefore, the population of Ramachandrapuram- Patancheruvu and Bandlaguda area upto 1981 census it was total 35,268.

Hence, the total population of Ramachandrapuram-Patancheruvu ; BHEL township and Bandlaguda area upto 1981 approximately it was totally altogether 62,021.

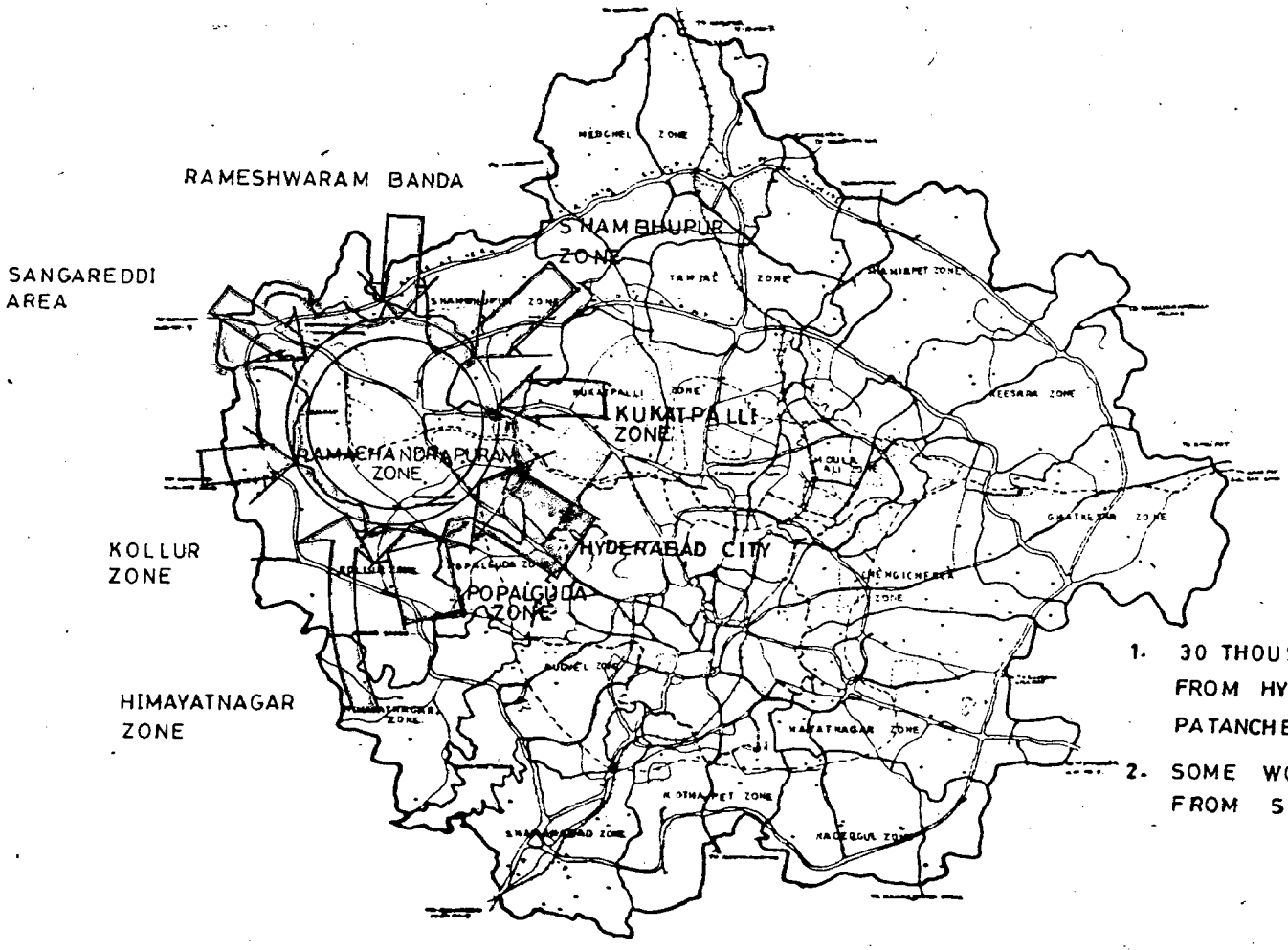
3.2.1 Migration :

The population of any area is determined by natural increase and net migration, in Ramachandrapuram- Patancheruvu area 50 % of total population of the town is from net migration, out of which 40 % if from rural areas. It is more due to the push factors from villages. Fig. 3.2.1

3.2.2 Physical Growth :

Installation of the Industries at Ramachandrapuram and Patancheruvu area had necessitated the need for accompanying townships. In Ramachandrapuram Patancheruvu area, there are Residential areas like (i) Srinivisanagar Colony, (ii) Bandlaguda (iii) B.H.E.L. Township that is already in agglomeration with Chandnagar Residential area which is under construction by Hyderabad Urban Development Authority (HUDA) (iv) Taranagar Residential Areas and Sri Nalagandla Residential Area are also in agglomeration with B.H.E.L. Township already.

At Ramachandrapuram Patancheruvu area lack of attention to development of land for ancillary industries in some of the area, which were also bound to come along, has as a consequence



NOTES
LEGEND

- RAMACHANDRAPURAM—
- PATANCHERUVU—
- AREA
- HYDERABAD—
- URBAN AREA

1. 30 THOUSAND WORKERS ARE COMING FROM HYDERABAD TO RAMACHANDRAPURAM PATANCHERU AREA DAILY.
2. SOME WORKERS ARE ALSO COMMING FROM SURROUNDING VILLAGES

PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM. PATANCHERU AREA HYDERABAD A.P

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FIG. 3.2.1

NORTH

sheet no.

given rise to unplanned and uncoordinated development advantage points on the periphery of these towns. All these resulted in scattered development of industrial, residential and commercial areas. Also there is backlog planning and haphazard growth of workshop's Khokas, shops, Insanitary and unhygenic conditions, as well as growing of slum pockets appearance but shows lack of proper control also, specially development on either side of Bombay National Highway No. 9.

The main factors which have played an important role in giving the city its present shape and form can be runed up as follows:

1. Planned development of Ramachandrapuram Township in isolation with Patancheruvu Township areas.
2. Sporadic and linear development of industries.
3. Unplanned scattered commercial areas, service centres, etc.
4. Town sprawl and ribben development along the Bombay National Highway No. 9.
5. Encroachment of slums, Khokas along the Bombay National Highway as well as lack of proper parking for lorries and other vehicles.
6. Air, land and Water pollution is there increasing hazards.
7. Lack of governing body or municipal authority except local Panchayat which is not able to control the problems of this industrial township.
8. Inadequate aids from Central Govt. for fulfilment, the the Housing problem in this area.

3.3 EXISTING LAND USE PATTERN :

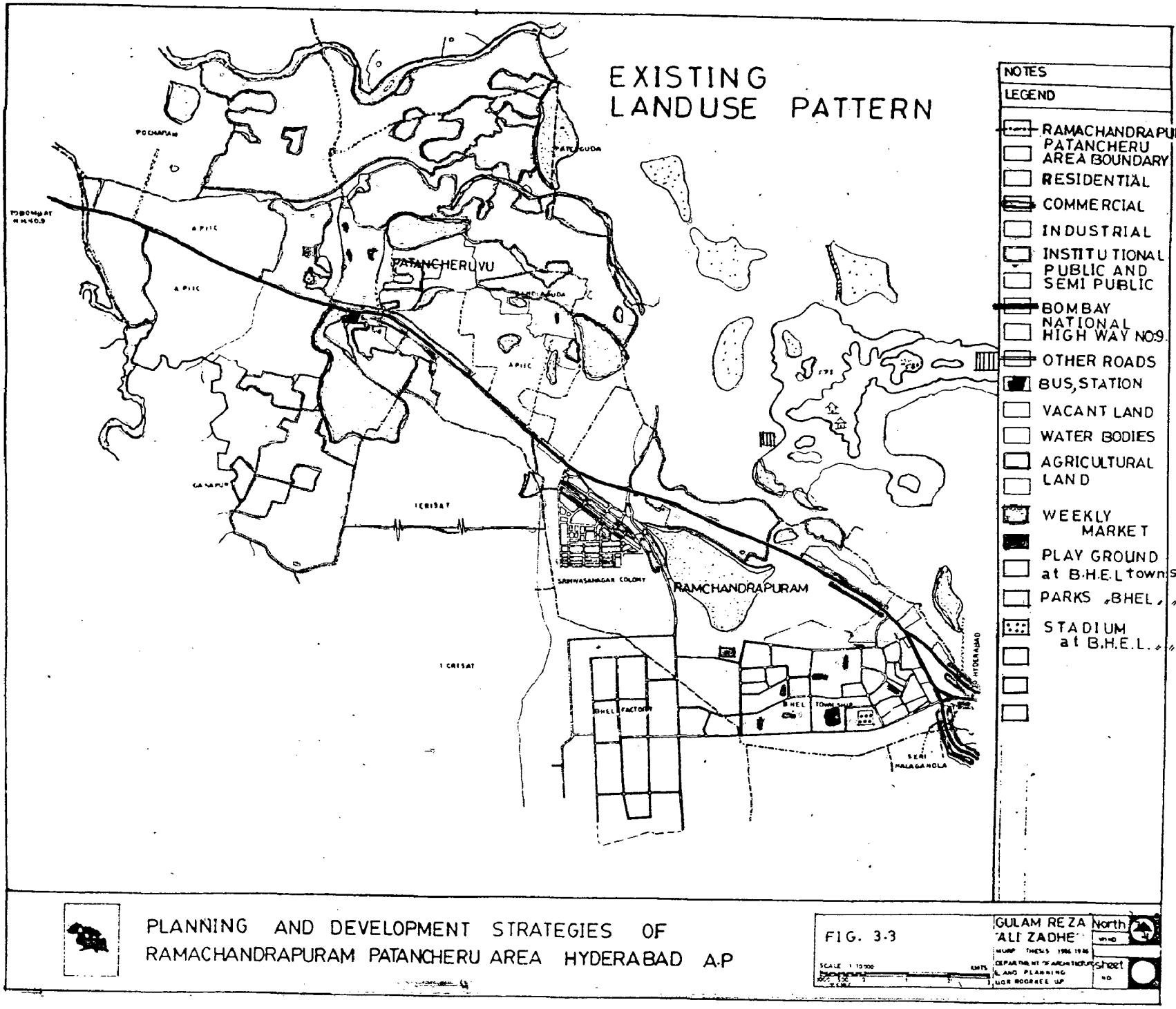
The developed area of Ramachandrapuram Patancheruvu is approximately 1213.87 Hectares which is 46.62 % of the total area (2604.03 Hectares) Table No.3.3 shows the existing land use pattern of Ramachandrapurum Patancheruvu area:

3.3.1 Residential :

The residential area of Ramachandrapuram Patancheruvu covers 361.15 hectares of land which amounts to be 29.76 % of the total developed area. BHEL township area has been developed with their own authority in the form of residential sectors for their employees. This is a planned residential area providing healthy environment with all civic amenities and facilities for its inhabitants.

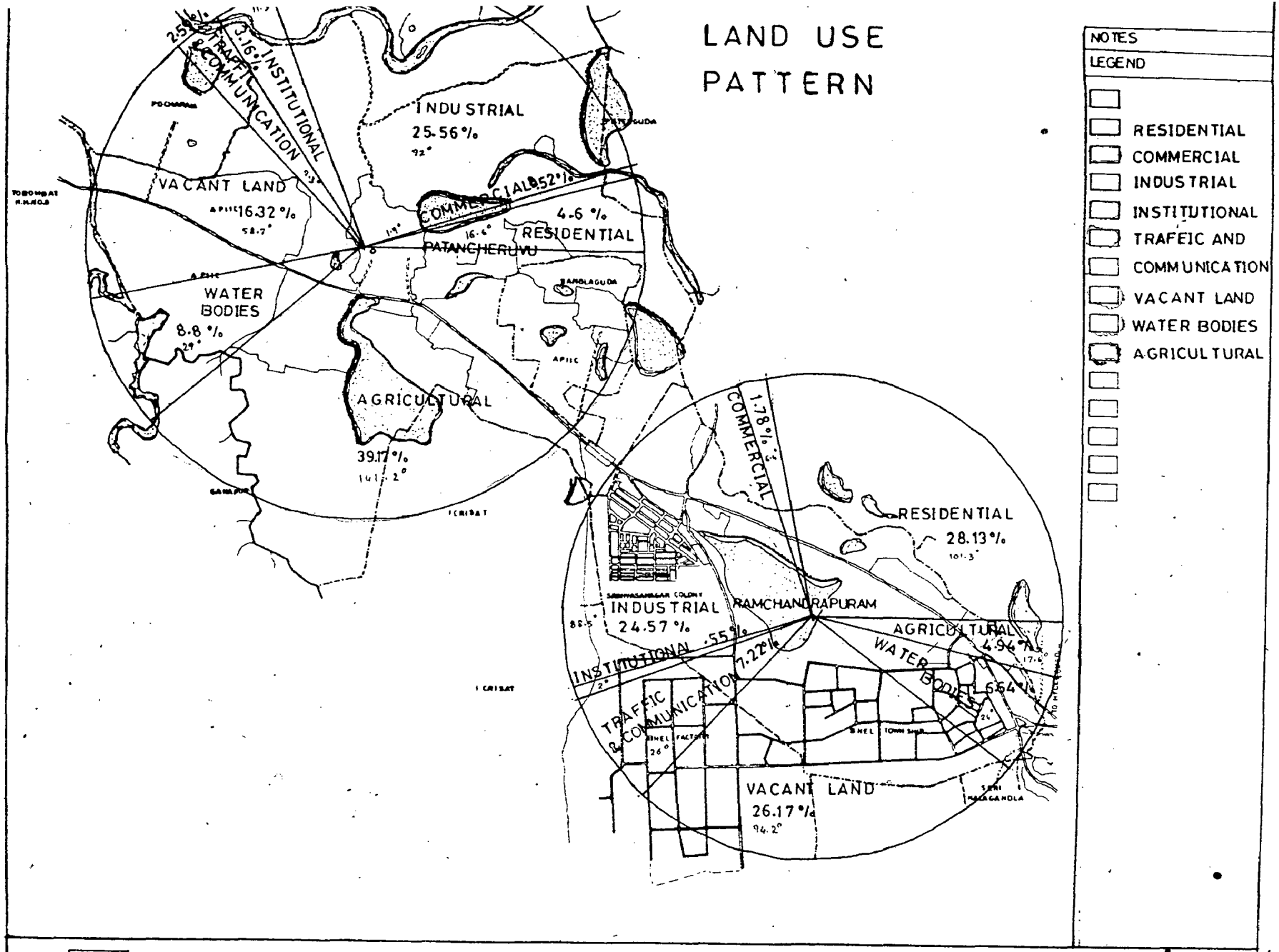
On the other hand 75 % of the emplyees daily commute from Hyderabad city and from surrounding villages to their place of work. These workers specially come from far off places are due to housing shortage they could not get accommodation in the township. Therefore they have to live as tenant or construct their own houses, which have developed in scattered pockets, in some of the areas in haphazard manner.

Fig. 3.3., 3.3.1


EXISTING
LANDUSE PATTERN
NOTES
LEGEND
RAMACHANDRAPURAM PATANCHERU AREA BOUNDARY
RESIDENTIAL
COMMERCIAL
INDUSTRIAL
INSTITUTIONAL PUBLIC AND SEMI PUBLIC
BOMBAY NATIONAL HIGH WAY NO9.
OTHER ROADS
BUS, STATION
VACANT LAND
WATER BODIES
AGRICULTURAL LAND
WEEKLY MARKET
PLAY GROUND at B.H.E.L township
PARKS "BHEL"
STADIUM at B.H.E.L.
PATANCHERUVU
ICRISAT
SRINIVASNAGAR COLONY
RAMCHANDRAPURAM
BHEL FACTORY
BHEL TOWNSHIP
SERI HALAGANOLA
HYDERABAD
PLANNING AND DEVELOPMENT STRATEGIES OF
RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P
FIG. 3.3
GULAM REZA
ALI ZADHE
North
Sheet

LAND USE OF RAMACHANDRAPURAM-PATANCHERUVU AREA

RAMACHANDRAPURAM AREA			PATANCHERUVU AREA		
	Area in Hectare	Percentage		Area in Hectare	Percentage
RESIDENTIAL	288.15	28.13 %	RESIDENTIAL	73.00	4.6 %
COMMERCIAL	18.2	1.78 %	COMMERCIAL	8.2	.52 %
INDUSTRIAL	251.72	24.57 %	INDUSTRIAL	404.01	25.56 %
INSTITUTIONAL (Public and Semi Public)	5.67	.55 %	INSTITUTIONAL (Public and Semi Public)	50.02	3.16 %
TRAFFIC AND COMMUNICATION	74.00	7.22 %	TRAFFIC AND COMMUNICATION	40.9	2.59 %
VACANT LAND	268.11	26.17 %	VACANT LAND	257.87	16.32 %
WATER BODIES	61.92	6.64 %	WATER BODIES	127.6	8.08 %
AGRICULTURAL	56.66	4.94 %	AGRICULTURAL	618.0	39.17 %
TOTAL	1024.43	100.00 %	TOTAL	1579.6	100.00 %



PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

FIG. 3.3.1

GULAM REZA ALI ZADHE

North

Sheet

3.3.2 Commercial : -

At Patancheruvu the land occupied by commercial area is 8.2 hectares. In Ramachandrapuram Srinivasanagar Colony is 15.4 hectares and in BHEL township 2.8 hectares, altogether 26.69 hectares of land covered under the commercial use in this area.

Except BHEL township rest of the commercial areas are in haphazard way. There are two weekly markets, one at Ramachandrapuram and another at Patancheruvu area. In this area the growth of shops and commercial area is haphazard, which is developed in linear form along the Bombay National Highway. Therefore, the road shoulder encroached by Kacha shops, service shops etc. At Ramachandrapuram and Patancheruvu area these shops resulting in a blockade of circulation space and creation of chaos, and obstructions accompanied with an acute congestion, and possibility of accident.

3.3.3 Industrial :-

At Ramachandrapuram Patancheruvu nearby 54.03 % of the total development land which covers 655.73 hectares is under industrial use. Hence the land occupied by Industrial Area at Patancheruvu is 404.01 hectares, such as the major industrial units is included in this land use, which the land occupied by industrial area at Ramachandrapuram is 251.72 hectares compare to Patancheruvu industrial area is less.

3.3.4 Institutional (Public and Semi Public) :

In Ramachandrapuram BHEL Township and Patancheruvu, area 41.59 % hectares has been put to public and Semi-Public use, this constitutes other areas of offices, educational, health, civic and cultural institutions. The land covered by institutional (Public and Semi Public) area at Patancheruvu is 50.02 hectares and in Ramachandrapuram BHEL township covered only 5.67 hectares.

3.3.5 Recreational :-

Except BHEL Township there is not any notified places for entertainment, at Ramachandrapuram and Patancheruvu area.

3.3.6 Transport and Communication:-

The area under the Town Road including Bombay National Highway, No. 9 which passes through Ramachandrapuram and Patancheruvu area, Bus Stand, etc. has been included in this section. 9.47 % of the total developed area covering approximately 114.9 hectares of land is utilized.

3.3.7 Agricultural Land : -

In Ramachandrapuram Patancheruvu area nearly 25.90 % of the total land covering an area of 674.66 hectares is under the agriculture use, of which 56.66 hectares is in Ramachandrapuram area and 618 hectares in Patancheruvu area.

3.3.8. Water Bodies :-

The area covered under the water bodies, at Ramachandrapuram is 62.92 hectares, where as in Patancheruvu it is 127.6 hectares. 7.28 % of the total land covering an area of 189.52 hectares by water bodies in both the area.

3.3.9. Vacant Land :-

The bacant land in Ramachandrapuram and Patancheruvu area is 268.11 hectares and 257.87 hectares respectively. It covers the 49.92 % of the total area i.e.(525.98) hectares.

3.3.10. Land Use Problems :-

Efficient functioning of a city or town depend on the harmonious and well co-ordinated development of various land-uses. Except for the BHEL township rest of the area has developed in a haphazard manner. It has raised many problems, like linear growth of shopping area along the Bombay National Highway. Lack of amenities, traffic problems, shortage of accommodation, unhygienic condition, growing of slums etc. Therefore, due to the large magnitude of industrial activities in Patancheruvu area, the problems of proper treatment and disposal of affluent and waste should be tackled in planned manner. At present these effluents are disposed in nalas, streams, presembly without treatment. It is hazardous to the Environment.

3.4 HOUSING :

Housing constitutes a very important component of an urban area. Although, there are several problems of housing which are confronting us at the national level, however, the problems of housing which have emerged in the indutrial towns in the country during the last few decades, are more pronounced Therefore the housing problems in such towns or new cities is of inadequate residential accommodation to all its employees, and secondly there is no agency which may undertake development of land for private population.

In Ramachandrapuram Patancheruvu area some people have constructed houses on the land near township as well as along the Bombay National Highway in a haphazard manner.

At the time of instalation, management has to provide housing for labour population to its skilled and unskilled employees generally where the plant is commissioned, there will be influx of population, which gradually gets settled in one course of time.

If management fails to provide housing for such sudden influx of population, the population from surrounding villages and other places coming to towns creates unmanageable problems, for example at present thousands of the industrial employees commute from Hyderabad to Ramachandrapuram Patancheruvu industrial area, due to the inadequate housing.

In general land development and housing programme is being performed by HUDA for the development of the full-fledged ring town covering about 2000 acres, the over all plan has already been prepared.

As this happens to be investment intensive and can not take up immediately due to difficulty in ways and means position, therefore it has proposed to take up development of about 400 acres as a nucleus for the further development either by the Government and housing, a housing programme has already been taken up by Hyderabad urban Development Authority in only 63 acres of land at estimated cost of Rs. 199.68 lakhs with loan assistance from HUDCO.

Therefore under this integrated plan, it is proposed to dev lop another 92 acres of land at an estimated cost of about Rs. 86.6 lakhs, for which a provisional sanction has already been accorded by the Government of India under the centrally sponsored scheme for development of small and medium towns.

According to the information from HUDA i.e. Central sponsored Scheme of small and medium township is inadequate. Central Govt. had given one crore rupees to state Govt. of which 60 % is in the form of loan.

3.4.1 Living Condition :

In Industrial Township the living conditions in residential areas are not only governed by the quantum of land covered under this use, but depend upon the total environment in residential areas, the conditions also depend to a great extent on quality and quantity of houses, degree of provisions of services and amenities etc.

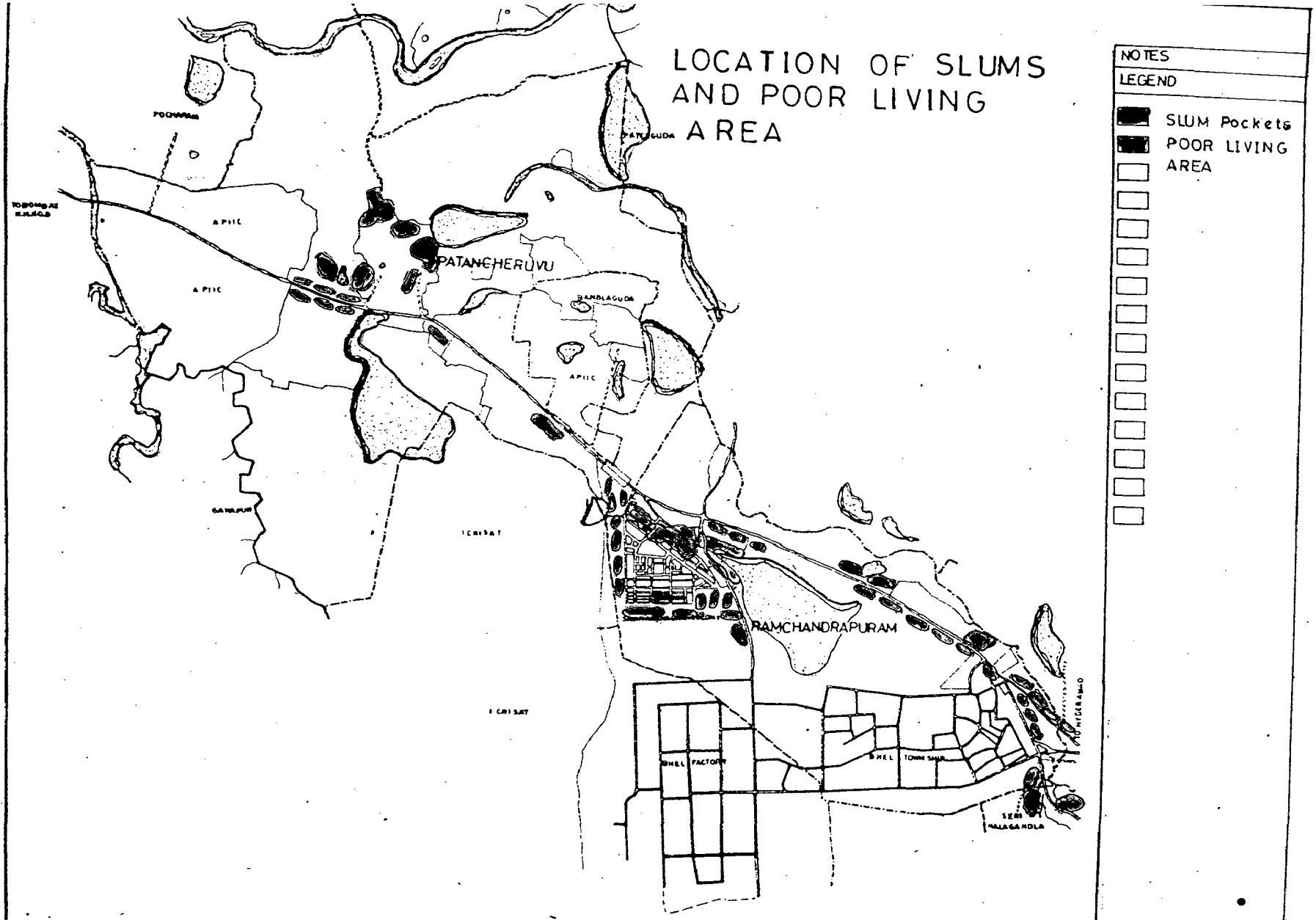
In Ramachandrapuram the land use of B.H.E.L. township shows that the major portion of developed land has been utilised and the density of this township is nearly 56 person per acre.

Analysis of residential density has revealed an over all net residential density of 20.81 persons per acres in Ramachandrapuram areas. While at Patancheruvu area the residential density is 4 persons per acre. The high residential density at Ramachandrapuram area is because of B.H.E.L. township and Ramachandrapuram town is counted together.

In Patancheruvu area the major portions of the land is covered by agriculture, industry and vacant land rather than residential area.

3.4.2 Classification of Residential Areas :

B.H.E.L. Township is identified as a good living area with having number of 4,397 quarters. While Ramachandrapuram



PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

FIG. 3.4.2

GULAM REZA ALI ZADHE

North

Sheet

Patancheruvu residential area have been identified as an average living areas, and substandard living area.

These categories have been based on the following factors Table Nos 3.4.2, 3.4.2a , 3.4.2b

a) Residential Density, (b) Occupancy Rate

c) Structure Condition.

Slum Areas :

In Ramachandrapuram Patancheruvu and Srinivasanagar Colony some of the areas are characterised by over crowding, katcha and dilapidated housing, unhygienic conditions with no basic civic amenities, Khokas, shops, and few Jhuggi Jhopri along the Bombay National Highway. These areas, constitute of generally house service population, cultivaters, farmers, labourers and other workers etc. which are economically poor sections of the community. Fig. 3.4.2

3.4.3 Housing Activities :

Housing activity is a continuous process in human settlements, but it seldom keeps pace with the growth of population, particularly in case of incustrial city or town projects.

Particularly because these cities, or towns are constructed in open barren area with no existing housing facilities

and the unending flow of population from different parts of the country ultimately creates housing shortage and congestion, this can be avoided with clear cut policies and with available finances.

TABLE NO 3.4.2

RAMACHANDRAPURAM PATANCHERUVU RESIDENTIAL DENSITY

S.No.	Location	Residential Area in acre	Population (Census 198 1981)	Residential Density Persons/ Acre
1.	B.H.E.L.Township	476.9	26,734	56
2.	Ramachandrapuram Srinivasanagar Colony	170.6	21,056	123.42
3.	Patancheruvu	143.3	11,975	85.36
4.	Bandlaguda	34.6	2,247	64.95
	TOTAL	882.4	62,012	329.73

TABLE NO. 3.4.2a

RAMACHANDRAPURAM PATANCHERUVU : OCCUPANCY RATE

S.No.	Name of the	Population	Occupied Residential House No.	House Hold No.	Persons Per Residential House	Persons Per House Hold
1.	B.H.E.L. Township	26,734	4,397	4,437	6.09	6.03
2.	Ramachandrapuram Srinivasanagar Colony	21,056	3,815	3,893	5.52	5.41
3.	Patancheruvu Residential Area	11,975	2,389	2,574	5.02	4.66
4.	Bandlaguda	2,247	450	462	4.99	4.86
	TOTAL	62,012	11,051	11,366	21.62	~~20.96~~

SOURCE: DISTRICT PROFILE (MEDAK) ANDHRA PRADESH -1981

Classification	Wall Material	Roof Material
Kutcha	Leaves, grass, reeds Bamboo, Timber mud	Grass, leaves, reeds, Th Wood or mud, unburnt, b Bamboo
Semi Pucca	Unburnt brick, Iron sheets or the metal sheets	Tiles, slats, single corr iron and Zinc sheets, Shah slate, or other material
Pucca	Burnt brick, stone cement Concrete	R.C.C., Asbestos, cement-sh bricks and lime, concrete or stone slab.

3.4.3.1 Construction of Houses:(Under the HUDA)

In order to meet the housing demands and management by the State Government, Central Government, and Private Enterprises, and HUDA constructed houses, within the area and developed the plots. Table Nos. 3.4.3.1,3.4.3.1a shows the different authority involved in this activity.

TABLE NO. 3.4.3.1

RAMACHANDRAPURAM PATANCHERUVU AREA : CONSTRUCTION OF HOUSES

S.No.	Name of the Agency	Location	Area in Acre	No. of houses constr-ucted	Estimated cost Rupees Lacs
1.	HUDCO AND HUDA	Ramachandrapuram Ringtown, Chandanagar Township-Phase I Site Development	63.5	1024	120.30
2.	Government (S.ε M.T.P.)	Ramachandrapuram Ring Town Chandnagar Township Phase II for (S.ε M.T.P.)	92.0	621	86.00
3.	HUDA	Ramachandrapuram Ring Town Phase III Housing	92.0	Under Const.	86.60
4.	HUDA	Ramachandrapuram Ring Town Phase IV	90.0	Project under Formulation	
		Total	337.5 Acres		

SOURCE: ANNUAL REPORT OF 'HUDA' HYDERABAD, A.P.

TABLE NO. 3.4.3.1a

THE TOTAL NUMBER OF PLOTS BEING DEVELOPED IN THE 58 ACRES IN THREE PARTS OF AVAILABLE FEASIBLE LAND.

Part-I	EWS Economically Weaker Section	HIG High Income Group	MIG Medium Income Group	LIG Low Income Group	Total	REMARK
Part I	-	34	116	16	166	Completed & ready for allotment
Part II	-	49	84	146	279	Nearing completion in progress
Part III	-	5	70	101	176	
Total	-	88	270	263	621	

SOURCE : ANNUAL REPORT OF HUDA, HYDERABAD, A.P.

3.4.4 Housing Shortage :

The rate of housing construction has not been able to keep pace with the rate of increase in population, with result that there is still shortage of houses. For example 30 thousands industrial and non-industrial employees commute daily from Hyderabad city as well as from surrounding villages to B.H.E.L. Township and Ramachandrapuram and Patancheruvu area.

The housing shortage in this area is becomming more and more due to announcement of expansion programmes, for industrial area. On the other hand ICRISAT which is located on about 3,500 acres of land between Ramachandrapuram and Patancheruvu area, has regular 1100 employees and 2,500 casual workers, which are living in both the town. Also Hyderabad central University is located nearer to Ramachandrapuram area. In future for those areas the needs for accommodation will increase and it will definetely affect the nearest settlements i.e. Ramachandrapuram Patancheruvu areas too.

3.5 TRAFFIC AND TRANSPORTATION :

In any industrial town, transport plays an important role for smooth operation of different activities, specially production. The distance between work centres, recreational, commercial, educational, etc. and residential areas are interlinked with traffic mode. It provides freedom to people to make locational choice for living, work, and relexation. Transport is thus a vital and crucial element in the development and operation of any urban complex.

3.5.1 Transportation System : (Regional)

Ramachandrapuram Patancheruvu area is well connected by Road and Rail with Hyderabad, Sholapur, Poona, Bombay etc. Meanwhile Hyderabad- Bombay main line- Broad gauge, both for goods and passengers traffic passes through Lingampally Railway Station, which is very near to the Ramachandrapuram and B.H.E.L. township. Meter gauge line also links with B.H.E.L. factory. Out of three modes of transportation - Road, rail and air, the road transport plays most significant and important role, while the rail comes next. Road Transport is important on account of direct linkages with important urban centres, frequency of bus services, comparatively lesser journey time and lower number of passengers and freight rate. Ramachandrapuram Patancheruvu is suitably and conveniently connected by

road to almost all the important urban centres of the region as well as to the surrounding villages. Bombay National Highway No. 9 passes through the heart of the Ramachandrapuram Patancheruvu town. Table No. 3.5.1

TABLE NO. 3.5.1

RAMACHANDRAPURAM PATANCHERUVU AREA-DISTANCE BY RAIL AND ROAD

S.No.	S.No.	Place	Distance in Kms.	
			By Rail	By Road
	1.	Ramachandrapuram to Hyderabad	24	25
	2.	Ramachandrapuram to Secunderabad	24.5	25.6
	3.	Ramachandrapuram Patancheruvu to Sangareddy.	-	23

3.5.1.2 Regional Traffic (Goods Truck and Passenger Buses :

Regional Traffic by passenger buses play an important role. It is an index of growing economic linkages.

Regional traffic consisting of goods trucks and passenger buses play an important role. It is an index of growing economic linkages. The regional traffic by trucks for goods

and other materials is presented in table No. 3.5.1.2 It shows the number of incoming and outgoing trucks and buses which are loaded and unloaded from Bombay to Hyderabad and Hyderabad to Bombay daily. In Ramachandrapuram Patancheruvu area the Bombay National Highway No. 9 is the most busy road.

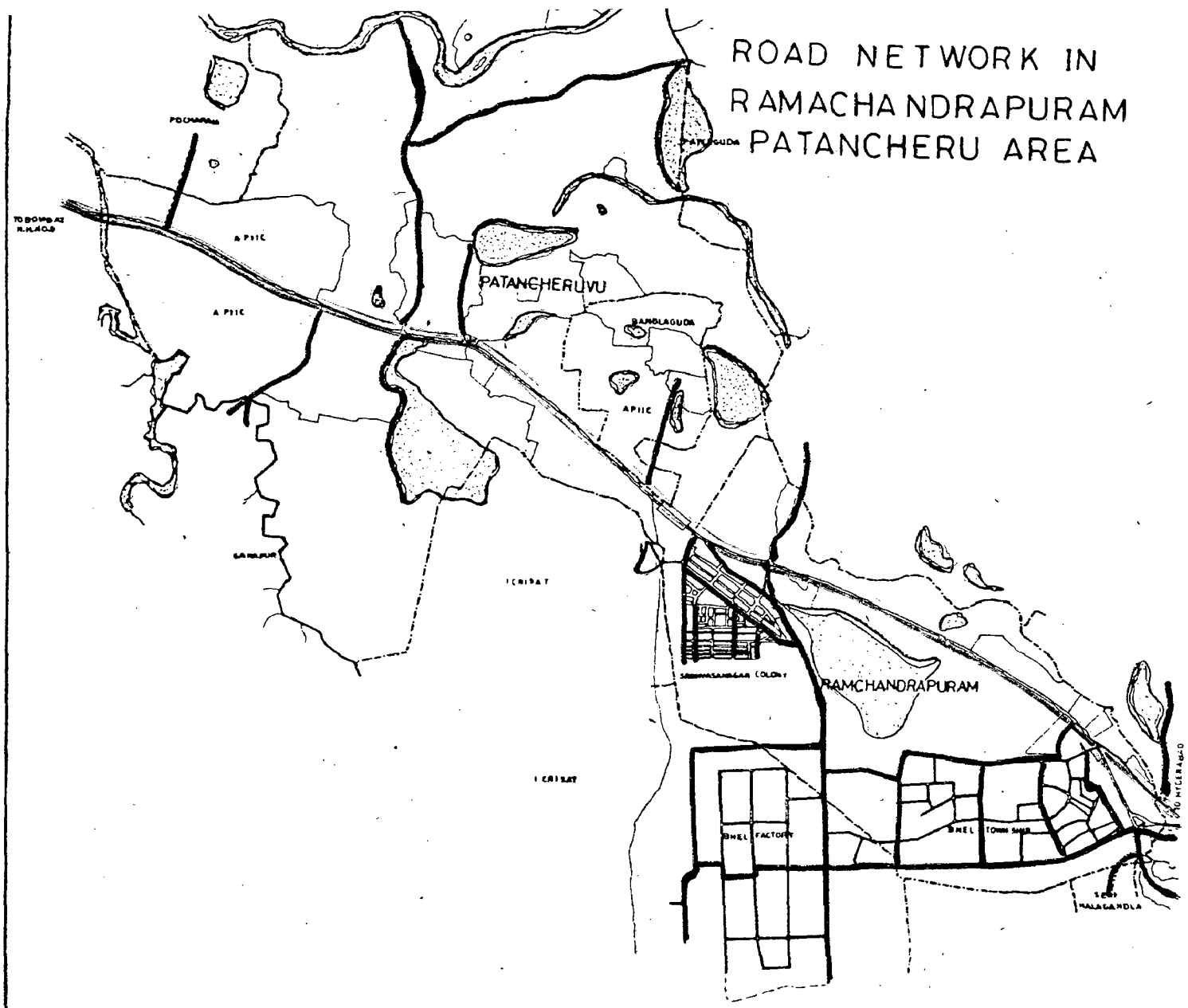
TABLE NO. 3.5.1.2

RAMACHANDRAPURAM PATANCHERUVU TRAFFIC(BUSES,GOODS) PER DAY

VIA: BOMBAY TO HYDERABAD - HYDERABAD TO BOMBAY

S.No.	IN COMING		OUT GOING		
	Loaded unloaded total, Terminating through total		Loaded unloaded total, Terminating through total		DAY
		Bombay to Hyderabad		Hyderabad to Bombay	Total No. of Trucks and Vehicles coming and going per day
1.	Fast Vehicles	885		986	1,871
2.	Trucks	434		434	868
3.	Slow Vehicles	443		476	919
	TOTAL	1,762		1,896	3,658

SOURCE: - ANNUAL REPORT OF HUDA, HYDERABAD, A.P.



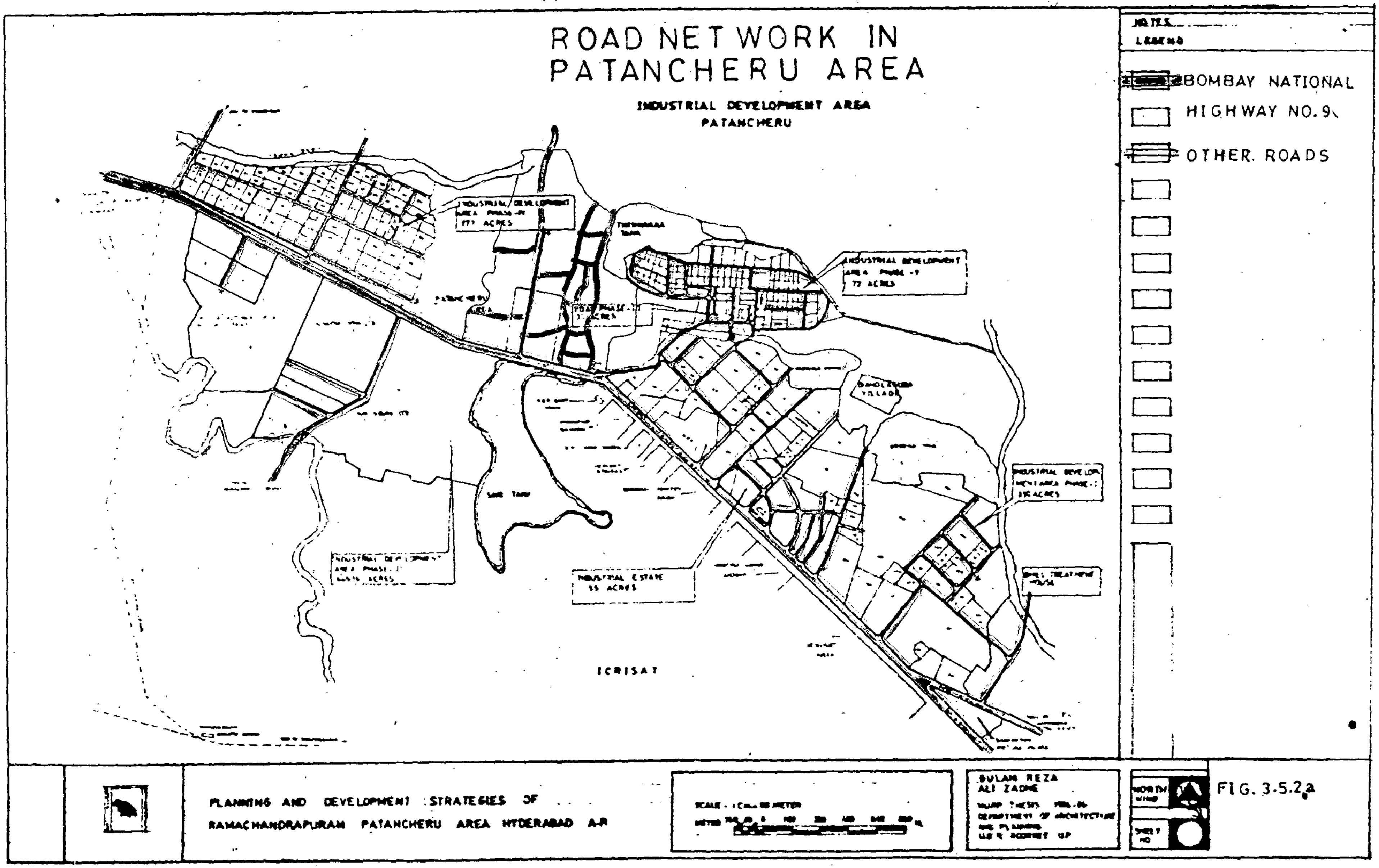
PLANNING AND DEVELOPMENT STRATEGIES OF
RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

FIG. 3.5.2

GULAM REZA ALI ZADHE

North

Sheet



ROAD NETWORK IN PATANCHERU AREA
INDUSTRIAL DEVELOPMENT AREA
PATANCHERU
NOTES
LEGEND
BOMBAY NATIONAL HIGHWAY NO.9
OTHER. ROADS
INDUSTRIAL DEVELOPMENT AREA PHASE -I 72 ACRES
INDUSTRIAL ESTATE 55 ACRES
ICRISAT
PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P
GULAM REZA ALI ZADHE

FIG. 3.5.2a

3.5.2 Circulation Pattern :

B.H.E.L. township was primarily designed to meet the requirements of workers employed in B.H.E.L. factory.

In the Ramachandrapuram Patancheruvu area, the Bombay National Highway No. 9 runs in the East West direction and few other minor crossroads run along the North south directions towards the industrial areas, and surrounding villages. Bombay National Highway which passes through Ramachandrapuram Patancheruvu area has changed the situation which is now prevalent. At present, linear commercial activities, large and small industrial activities, ICRISAT areas and residential developments have came up alongthe Bombay National Highway without any provision for circulation. It has given rise to complex circulation pattern. The functional efficiency of Bombay National Highway is considerably less, as the existing width of Road is 60 feet only and on the other hand haphazard growth of shops Khokas etc. has created traffic problems like accidence, delay etc. Fig. 3.5.2, 3.5.2a

3.5.2.1 Generating Nodes :

Work centre, commercial area, educational centre, traffic bus stands ICRISAT area, are the important traffic generating

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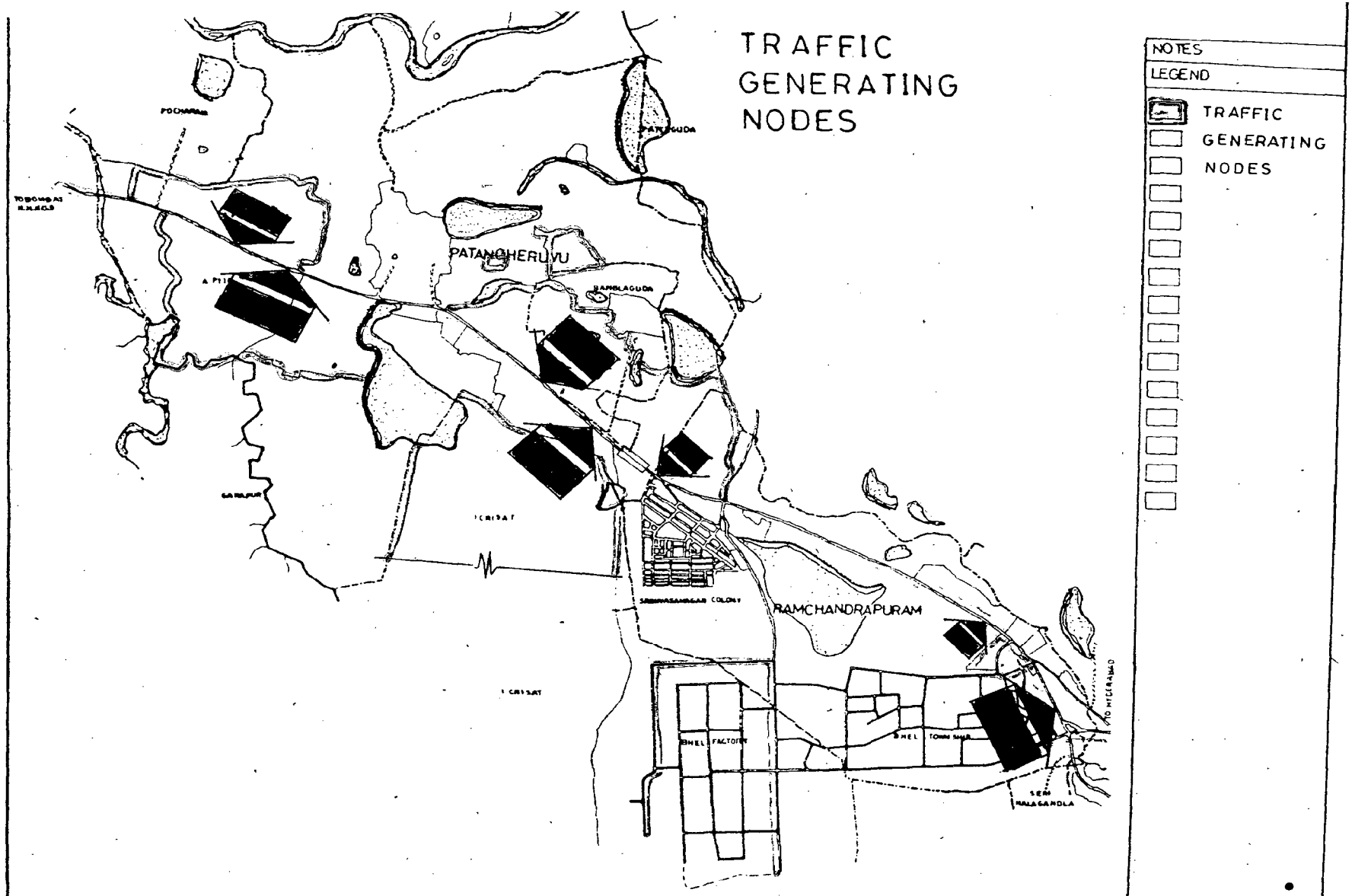
ICRISAT: International Crops Research Institute of Semi Arid Tropic



PLANNING AND DEVELOPMENT STRATEGIES OF
RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

FIG. 3.5.2.1

GULAM REZA
ALI ZADHE

North

sheet

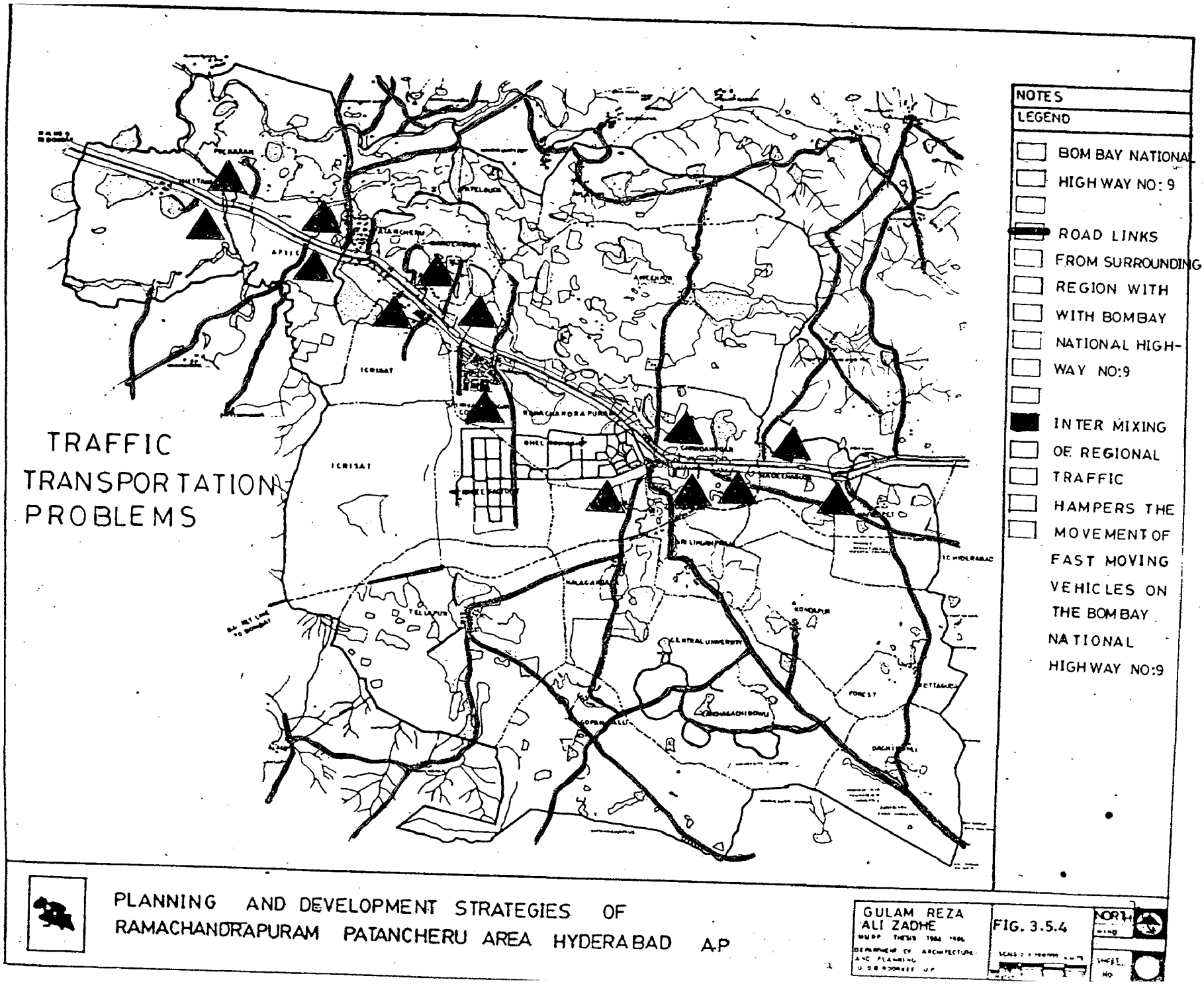
nodes are industrial area and industrial estate at Patancheruvu area. Fig. 3.5.2.1

3.5.2.2 Traffic Terminals :

In Ramachandrapuram Patancheruvu there is lack of bus terminals. Only there is one bus stand in Ramachandrapuram Patancheruvu area and one Railway station situated at Lingampally which is 3 Kilometers from Ramachandrapuram area. This railway station is a small junction where as the bigger junction is in Hyderabad and Secunderabad which are 24 to 25 Kilometers from Ramachandrapuram area. Therefore from Lingampally railway station small line i.e. metergage line con connected towards B.H.E.L. factory however this railway line funotioning as a major traffic terminals for Ramachandrapuram area. In fact there is no organised terminal for goods, traffic carried by trucks. All trucks are being parked on Bombay National Highway No. 9 near the gate of factories etc. There is no air port in the town, but there is major airport which is situated at Begampet Hyderabad city, nearly 24 Kms away from the Ramachandrapuram Patancheruvu area.

3.5.3 Modes of Transportation :

The modes of Transport in almost all over the cities and towns of country are heterogeneous in character, this consists of slow moving bullock carts, with thelas and rikshaws, bycycle, along with high speed buses vehicles. In Ramachandrapuram


TRAFFIC
TRANSPORTATION
PROBLEMS
NOTES
LEGEND
BOMBAY NATIONAL
HIGHWAY NO: 9
ROAD LINKS
FROM SURROUNDING
REGION WITH
WITH BOMBAY
NATIONAL HIGH-
WAY NO:9
INTER MIXING
OF REGIONAL
TRAFFIC
HAMPERS THE
MOVEMENT OF
FAST MOVING
VEHICLES ON
THE BOMBAY
NATIONAL
HIGHWAY NO:9
ICRISAT
RAMACHANDRA PURAM
BHEL
TELLAPUR
CENTRAL UNIVERSITY
FOREST
PLANNING AND DEVELOPMENT STRATEGIES OF
RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P
GULAM REZA
ALI ZADHE
FIG. 3.5.4
NORTH

Patancheruvu almost every mode of transport is available. This creates problems during the two peak hours of morning and evening due to the simultaneous movements of a regional goods trucks and passenger buses from, Bombay and other cities, and surrounding villages as well as large section of population to and from work centres. Fig. 3.5.4

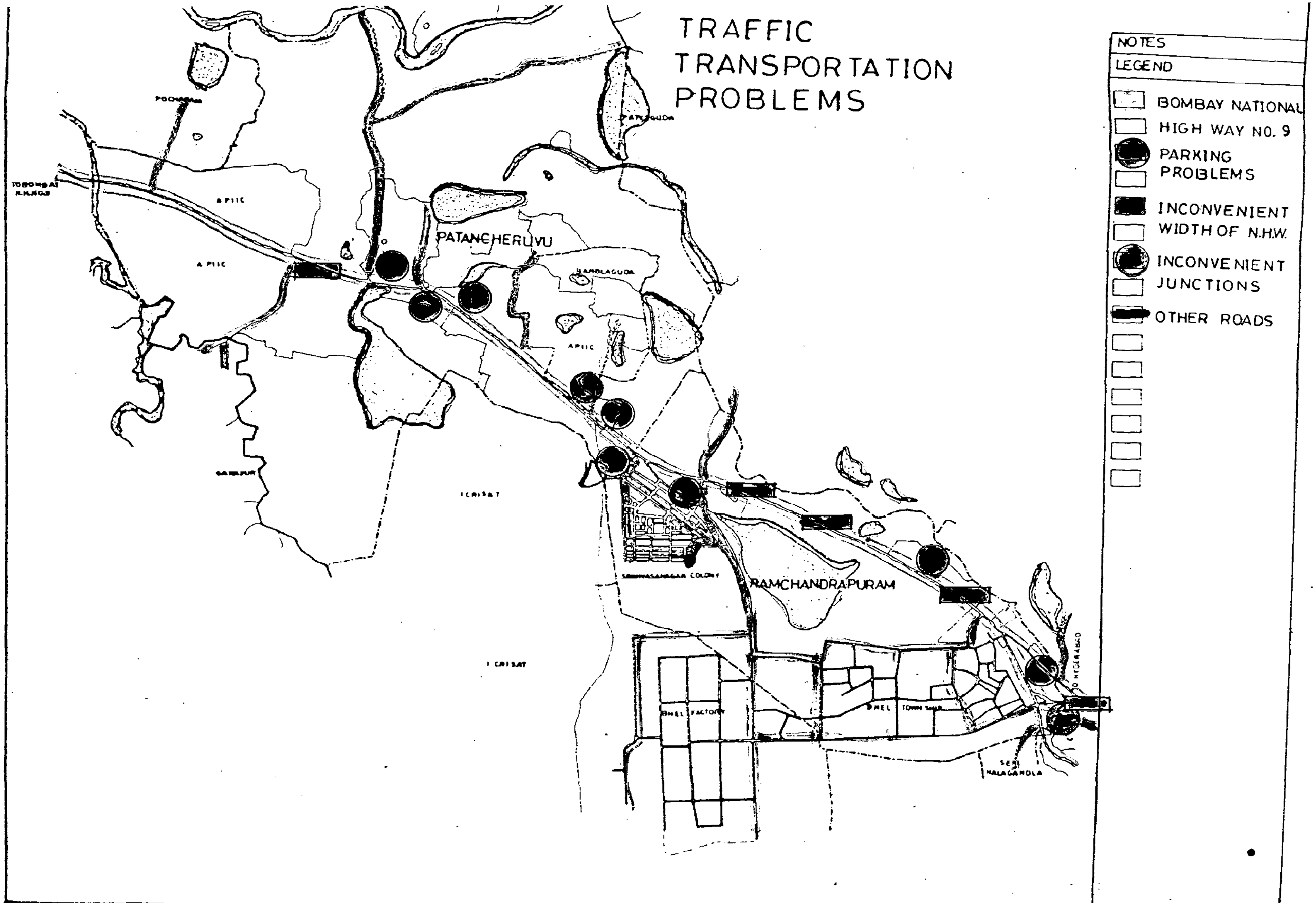
Cycles, cycle rickshaws, tempos, car buses are the modes of transporting people while bullock, carts, thelas, trucks are in use for transportation of goods with in the city and town. Among fast, moving vehicles the tempo motor cycle and scooters are very popular.

For goods, thela have proved to be most convenient mode of transport particularly where the road width is narrow.

3.5.4 Traffic Problems :

Due to mixed type of traffic at different areas problems arises. Some areas of Ramachandrapuram Patancheruvu, e.g. some stretches of the Bombay National Highway No. 9 are inconvenient for safe and regulated movements of vehicles. The faults in these areas can be mentioned as :

1. Lack of Parking Space
2. Lack of Traffic Islands
3. Narrow width of road and short width of bridges/culverts.



PLANNING AND DEVELOPMENT STRATEGIES OF
RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P.

FIG. 3.5.4 a

GULAM REZA
ALIZADHE

North

sheet

The inconvenient junctions at Ramachandrapuram Patancheruvu area is (i) Road Junction near the Entrance of B.H.E.L. Township, (ii) Road Junction at Srinivasanagar Colony, (iii) All the roads joining Bombay National Highway.

Inspite of that there are obstructions to vehicular traffic due to irregular road surface, lack of proper signals, narrow width of Bombay National Highway and of bridges, culverts on the Bombay National Highway No. 9.

The increased economic activities and growth of residential, institutional and commercial areas, workshops, theatres and parking of lorries near the gate of factories along the Bombay National Highway, has come up as a hurdle in the free movement of the traffic to and from the township in Ramachandrapuram - Patancheruvu area Fig. 3.5.4.a

3.6 TRADE AND COMMERCE :

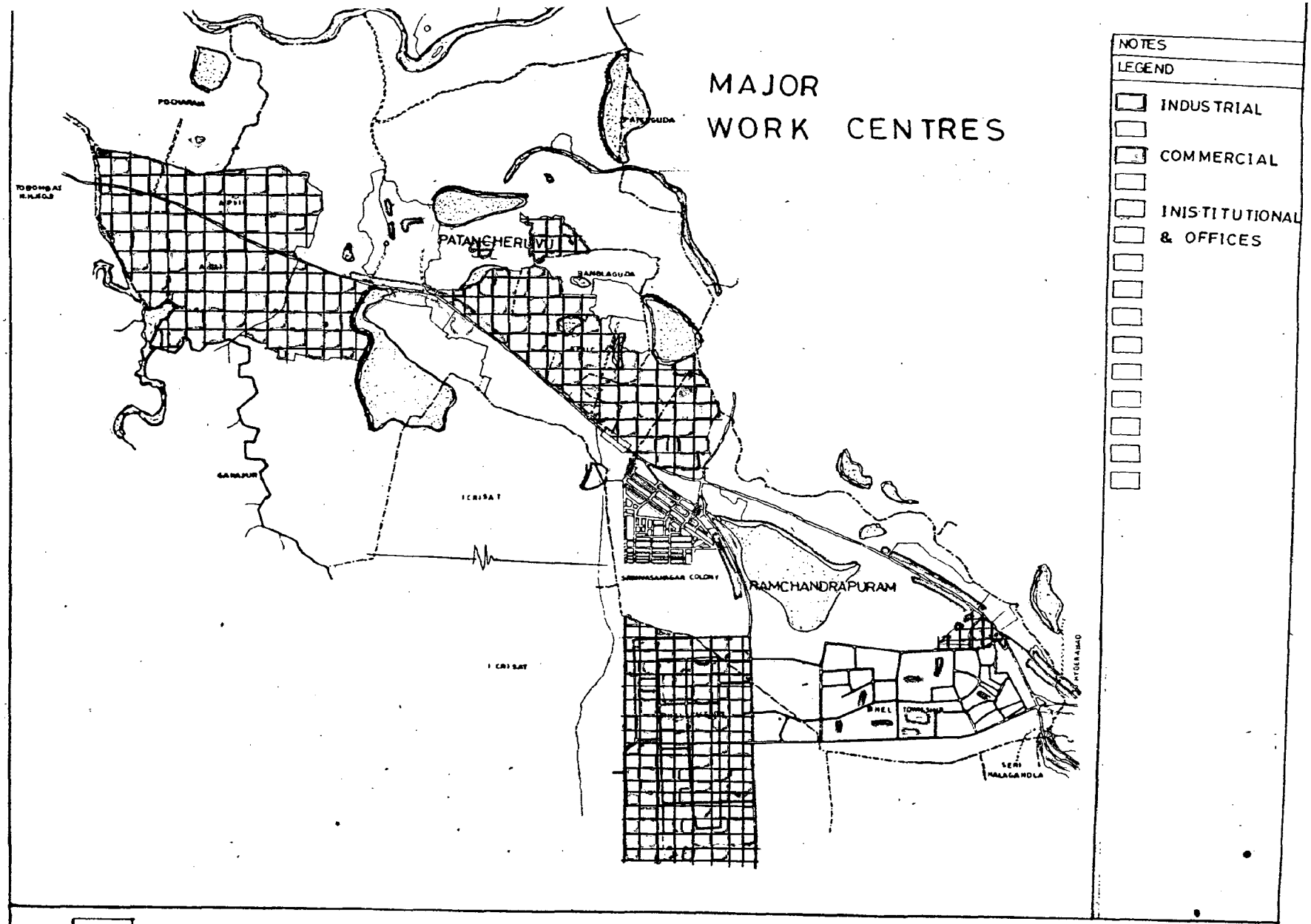
After the establishment of the BHEL factory in Ramachandrapuram, industrial activities during the last two decades, have gained momentum creating favourable climate for increased commercial activities in Ramachandrapuram Patancheruvu Town. Growth of such activities in BHEL Township differs in various aspects from other towns.

The number of ancillary and secondary industries in Ramachandrapuram Patancheruvu area increased as the requirements of the BHEL factory and other Large Scale Industries in Patancheruvu increased.

The growth of commercial development took place gradually in this area due to increasing number of industries. In BHEL Township areas for commercial activities are provided at the neighbourhood level and township level. But these kinds of activities play an important role in Ramachandrapuram and Patancheruvu area. Where as in Ramachandrapuram Patancheruvu area shops for retail and whole sale for various goods are existing inside the town along the road in a linear fashion in an irregular manner. There is no proper organised vegetable and fruits market in this area. Fig. 3.6 .

3.6.1 Centres of Retail Trade:

BHEL township is divided into five neighbourhoods and in each sector has a separate and adequate shopping centre. This



PLANNING AND DEVELOPMENT STRATEGIES OF
RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

FIG 3.6

GULAM REZA
ALI ZADHE

North

sheet

shopping centre cater to the need and requirements of the employees and officers of the BHEL township.

There are two weekly markets, one at Ramachandrapuram and another at Patancheruvu area , therefore the principal items of trade in the town are cosmetics and grain products etc. Also trade links are with a number of surrounding villages with Hyderabad city. Whereas in Ramachandrapuram Srinivasanagar colony around on 60 to 80 shops. This shopping area has grown in a haphazard manner. There is an inadequacy of space for small shops at the retail trade centre. The ability of foot-path shopkeepers and thela owners to make a living a small income have resulted in irregular development of shopping area, while in Patancheruvu area various kinds of shops have grown along the Bombay National Highway in a scattered and linear form.

3.6.2 Problems of Trade and Commerce :-

Except BHEL township in Ramachandrapuram Patancheruvu area, unplanned development from the beginning has resulted into a haphazard and unorganised area. It has come along the fringe and inside area of the township, as well as along the Bombay National Highway No. 9. Adjoining the Ramachandrapuram, Srinivisanagar Colony and Patancheruvu area, few of the shops and Kokhas are in the form of encroachements on the land originally belonging to Industrial area as well as encroachements are on the road shoulders in linear and sporadic fashion.

These encroachements have become so rampent that it has created congestion and traffic accidents and hazards.

3.6.3 Offices :

Ramachandrapuram Patancheruvu is actually not an administrative centre but based on the functional requirements of the B.H.E.L. township, ancillary industries and large and medium scale industries in Patancheruvu area, few offices are located here.

B.H.E.L. township has got its own set up of administrative, technical and social welfare offices, at the town centre. Other offices i.e. a small administrative building, one gram panchayat Samithi and ICRISAT is situated in Patancheruvu along the Bombay National Highway No. 9.

There are two banks located in the Patancheruvu area namely Vijay Bank and Gramcema Bank while in Ramachandrapuram there is only one bank.

3.6.4 Industries : -

The growth of large and small scale industries in Ramachandrapuram and Patancheruvu industrial area, is governed by the requirements of mother industries. But their growth at Ramachandrapuram Patancheruvu area has not kept pace as it was initially envisaged.

Currently, 18 ancillary and 184 small scale industries

are under the guidance of BHEL in Ramachandrapuram area. Compared to (1976-80) period, the growth of industrial units in the present period has been much faster.

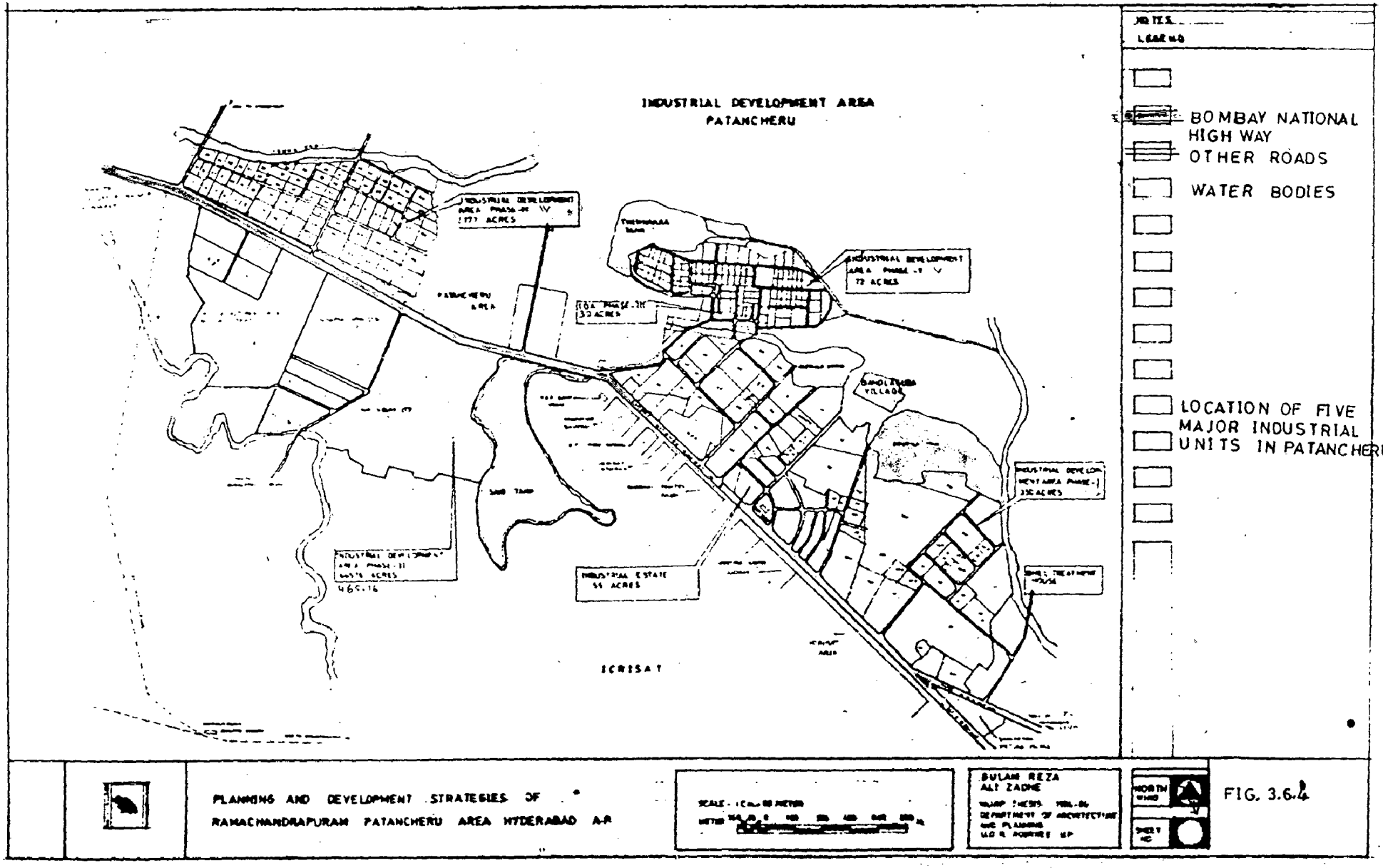
Medak Districts proximity to the cities of Hyderabad and Secunderabad has been an incentive to the development of industry as is demonstrated by the growth of the large industrial belt of Patancheruvu with units of all sizes large, medium, and small.

The development of all the industrial areas at Ramachandrapuram Patancheruvu has been taken up by Andhra Pradesh Industrial Infrastructure Corporation (APIIC). Also the Industrial area includes Patancheruvu (I.E.) Industrial Estate, Patancheruvu (IDA) Industrial Development Authority and Ramachandrapuram Ancillary industrial estate. This is handeled by (APIIC). In the same belt, a large industrial area is coming up at Pashamylaram which is some 8 Kms. from Patancheruvu area.

The entire industrial development has taken place gradually within a period of 23 years after the commissioning of the B.H.E.L. factory at Ramachandrapuram area.

(a) Industrial Establishment by Employment :

Out of the total units approximately more than 8 industrial units are working with more than 100 workers in Ramachandrapuram Patancheruvu township. In the year 1976-81 in



PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

BULAKI REZA
ALI ZAIDI

FIG. 3.6.4

Ramachandrapuram Patancheruvu industrial area more than 12500 employees are engaged with their activities. Similarly in the year 1983-84 in BHEL Ramachandrapuram area BHEL employs 73,900 people including nearly 14,500 trained engineers and technicians and 31,500 skilled artisans and suporting technical staff. Where as about 4000 workers are involved in Patancheruvu Industrial Area. Appendix No. IV, V.

(b) Land Utilization by Industries :

There are five major industrial units in Patancheruvu area i.e. (V-Phase). Major portion of the land has been utilized by these industries. The following industrial units are:

I-Phase is 350 Acres and in II-Phase 465.16 Acres, III-Phase-30 Acres, IV-Phase - 177 Acres and in V-Phase 72 acres. Altogether is 1094.16 Acres covered under the industrial use in Patancheruvu area while 303 hectares land is utilized for B.H.E.L. factory in Ramachandrapuram area. Fig. 3.6.4

(b.1) Industrial Estate, Patancheruvu :

During the third five year plan period, the Government of Andhra Pradesh sanctioned a shheme for setting up of an

---

Resource: From Report of Integrated Town Programme of R.P.area, Refer to list of Industries.

Industrial Estate at Patancheruvu (Patancheruvu) over an extent of 22.25 hectares. Twenty eight factory units of four different types were constructed besides a few warehouses, an administrative building and a water tank. Few units enjoy facilities like internal roads, water and power supply. The vacant area in the estate comprises of about 2.14 hectares is also divided into plots for allotment to the interested entrepreneurs for setting up of industries. So far, as many as seven units have gone into production of items like iron-casting, aluminium utensils, bolts, mosquito nets and fabrication. About 150 persons are provided with employment.

(c) Industrial Infrastructure :

Infrastructural condition in the industrial area is not adequate. Linear industrial growth all along the Bombay National Highway No. 9, specially from Ramachandrapuram Srinivasanagar Colony upto Patancheruvu areas and Mutangi village have come up in linear pockets.

Some of the private industrial development has not come up in an well organised and planned manner.

There is (APIIC) and (PIDA) to look after the industrial activities of (PIE) Patancheruvu Industrial Estate and (RAIE) Ramachandrapuram Ancillary Industrial Estate. But still the provision of infrastructural facilities in few of the unit is not adequate.

3.7 SERVICE, AMENITIES, AND ENVIRONMENTAL PROBLEMS :

To ensure public health, safety and safeguards from national and man-made hazards adequate water supply, appropriate means of collecting and disposing sullage and waste are imperative for any urban or town community. To this effect Industrial Towns are no exception.

Impact of the urban and town facility due to its activities, on the environment within the facility and outside is a matter of equal concern.

The following paragraphs in this chapter are devoted to highlight the adequacy of these provisions and how the urban and town facility will effect the environment. The social, economic and physical environment of the region in which these urban settlements are developing (Table No. 3.7) Fig. 3.7

3.7.1 Water Supply :

Most of the industrial towns built in the country were planned to be self-sufficient in all aspects of urban life. At present, the requirements of drinking water and water for industrial purposes in respect of BHEL Township, ICRISAT and the industrial estates of Andhra Pradesh Industrial Corporation and the HUDA Township are met from Manjeera project(Dam).

A total quantity of 1.0 MGD is drawn for this source Projects for protected water supply for Patancheruvu and

and Ramachandrapuram area have already taken up.

S.No.	Name of the Area	Expected Water Supply
1.	Patancheruvu area	0.5 mgd
2.	Ramachandrapuram area	0.8 mgd
		1.3 mgd

Excluding the existing supply and the expected supply under the projects in operation, the requirements of water supply for this area is 7.2 mgd which has to be met partly by tapping underground water resource and partly from Manjeera project.

Meanwhile at present except BHEL Township and industrial estates, there is acute water shortage in Srinivasanagar Colony Ramachandrapuram, Patancheruvu, Bandlaguda area. During summer season additional water requirements are met through water tankers.

TABLE NO. 3.7

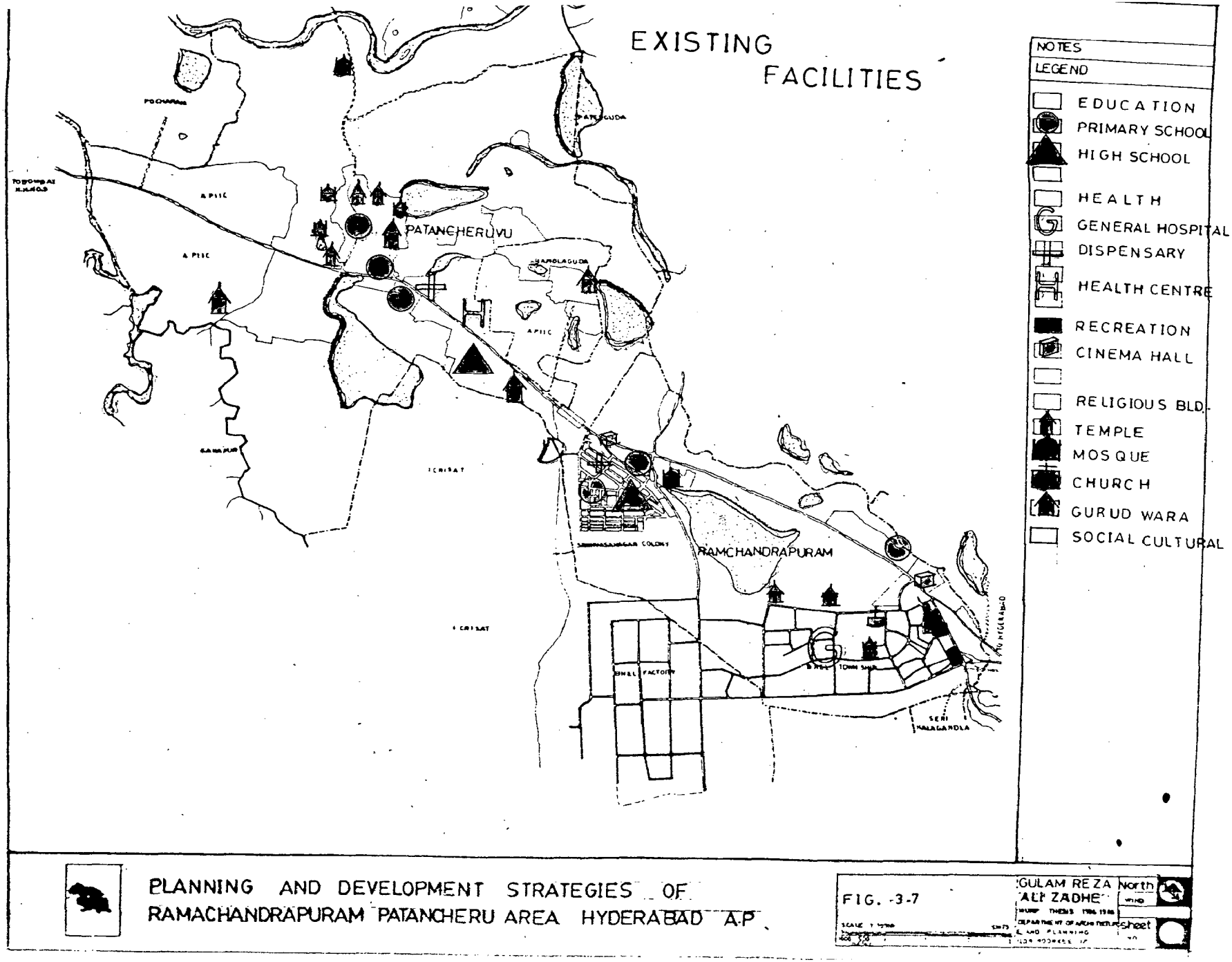
EXISTING SERVICES AND AMENITIES OF R.P.AREA

S.No.	Type of Services and Amenities	No. of Units
1.	2	3
A	Health :	
	1. General Hospital	1
	2. Specialised Hospital	Nil
	3. Dispensaries	2
	4. Hospital's Bed (BHEL Hospital)	158
B.	Education :	
	1. Nursery School	Nil
	2. Primary Schools	6
	3. Middle Schools	Nil
	4. Higher Secondary Schools	2
	5. Colleges	Nil
	6. Technical/Specialised/ Professional Institutions	Nil.
C.	Social and Cultural :	
	1. Town and Community Hall	1
	2. Clubs	1
	3. Museum/Zoo	Nil
	4. Swimming Pool	1

NOTE: All is situated at BHEL Township

	5. Religious Buildings(existing in (R.P.) Area)	11

1	2	3
D. C.	Recreation :	
	1. Children Park	Except BHEL township there are no proper play grounds or parks in other settlements of the Ramachandrapuram Patancheruvu area.
	2. Parks	
	3. Picnic Spots	
	4. Play Areas/Grounds	
	5. Small Play Grounds	
	6. Stadiums	
	7. Cinema and Hall	2 (Only two theatres are located along the Bombay National Highway No. 9 in the area
E.	Other Amenities :	
	1. Post and Telegraphs	1(at BHEL Township)
	2. Small Post Office	2
	3. Telephone Exchange (i.e. No. of telephone connections)	70
	4. Electric Sub-Stations	2
	5. Police Station	2
	6. Fire Station	1 (at BHEL Township)


EXISTING
FACILITIES
NOTES
LEGEND
EDUCATION
PRIMARY SCHOOL
HIGH SCHOOL
HEALTH
GENERAL HOSPITAL
DISPENSARY
HEALTH CENTRE
RECREATION
CINEMA HALL
RELIGIOUS BLD.
TEMPLE
MOSQUE
CHURCH
GURUD WARA
SOCIAL CULTURAL
PATANCHERUVU
RAMCHANDRAPURAM
ICRISAT
SHELL FACTORY
SERI
NALAGANDLA
PLANNING AND DEVELOPMENT STRATEGIES OF
RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P.
FIG. -3-7
GULAM REZA
ALI ZADHE
North
Sheet

3.7.2 Sewerage and Storm Water Drainage :

Industrial township of BHEL is having its own sewerage disposal plant and drainage system. In housing and land development project of Hyderabad Urban Development Authority which are under implementation, the drainage facilities are also taken care of as part of the comprehensive programme of planned development.

As there are no sewerage mains in the vicinity, independent sewerage disposal is done.

In Srinivasanagar Colony Ramachandrapuram, and Bandlaguda, areas open nallahs flow and carry sullage water of these areas and discharge into natural rivers and contaminate the water. Due to improper drainage in rest of the areas in Ramachandrapuram Patancheruvu area, roads suffer from water logging.

3.7.3 Electric Power :

BHEL Industrial township is having its own, transmission line and adequate power supply. Meanwhile during the last five years consumption of power has increased two times in domestic use and more than three times in Industrial use. The street lights are installed only at important places and roads of the Srinivasanagar Colony Ramachandrapuram and

Patancheruvu area. The source of electric supply is from St te Electricity Board and now at present there are two local Electricity Sub-stations in this area. Where as in this area rate of electricity traffic is 0.40 ps per units for domestic consumption.

3.7.4 Health :

At present there is one full fledged hospital with 158 beds in the BHEL Township. One health centre with 30 beds maintained by the Government is functioning at Patancheruvu. Besides these, there is one EST dispensary at Patancheruvu exclusively meant for industrial workers with provision for treatment of out- patients only, and also there is one dispensary in Ramachandrapuram. Except BHEL Township, health and medical facilities are inadequate at Ramachandrapuram Patancheruvu area.

3.7.5 Education :

Except BHEL industrial township, in Ramachandrapuram Patancheruvu area at present there are 6 primary schools and 2 high schools functioning within this area. There are no other training institutes and adult education centres in Ramachandrapuram Patancheruvu area. Most of the schools are located along the Bombay National Highway No. 9. This leads to traffic delays poses a lot of difficulties for school

children and others.

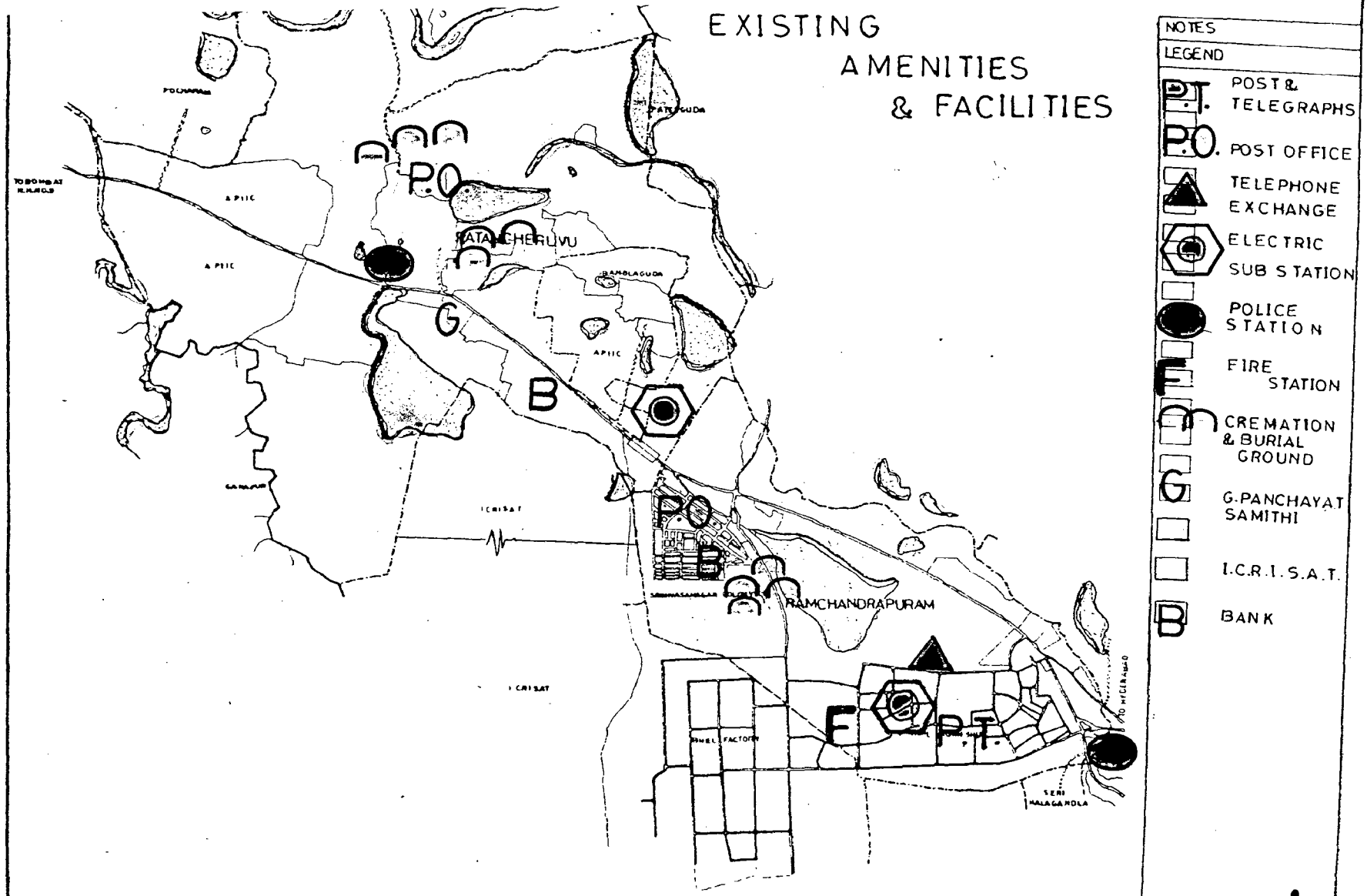
High Schools and Primary schools have been provided in this area which are situated far from residential area. Therefore, there is inadequacy of education facilities in both the areas.

3.7.6 Social and Cultural Institutions :

Except BHEL Township there are no social and cultural institutions i.e. lack of open air theatre and clubs and other facilities like recreation area, museum, Auditorium and Conference hall etc. in this area. Only there are 11 Religious Buildings in Ramachandrapuram and Patancheruvu area.

3.7.7 Recreation :

BHEL Township has its own parks and playgrounds etc. whereas there are no proper playgrounds or parks, picnic spots stadium, in this area. There are only two cinema halls located along the Bombay National Highway No. 9 which is not favourable, according to the situation. There are few open spaces and one playground in Srinivasanagar Colony but these are not maintained properly. Some portion of these playgrounds has been converted into sewage dumping grounds.



PLANNING AND DEVELOPMENT STRATEGIES OF
RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

FIG. 3.7.8

GULAM REZA
ALI ZADHE
URDP THESIS 1986-88
DEPARTMENT OF ARCHITECTURE & PLANNING
U.O.R. ROORKEE U.P.

North

Sheet no.

3.7.8 Other Services and Amenities :

(a) Post and Telegraph Office : There is one post office and one telegraph office located at BHEL Township. At Patancheruvu area there is only one post office. Except BHEL Township there are no telephone exchange in this area.

(b) Police Station : There are two police stations, one is located near the entrance of BHEL Township and another is located at Patancheruvu area, near bus stop.

(c) Fire Station : There is no fire station, in this area except BHEL Township.

(d) Cremnation and Burial Ground : There are two cremnation and Burial ground in Ramachandrapuram and Patancheruvu Area.

(e) Dhobi Ghats : There are no proper Dhobi Ghats in this area. except BHEL Industrial Township.

(f) Dairies : BHEL Township is having its own dairy farm and there is no major dairy in this area. Only few private dairies are located in Ramachandrapuram Patancheruvu Area.

Fig. 3.7.8

3.8 INTEGRATED ZONAL DEVELOPMENT OF THE SURROUNDING AREAS

(a) Industries (b) Environmental impact on Area

Ramachandrapuram Zone comprises of various settlements

given below :

(1) Patancheruvu (2) Bandlaguda (3) Ramachandrapuram, (4) Ameenpur, (5) Chandanagar, (6) Taranagar (7) Seri Lingampally (8) Kondapur, (9) Madeenaguda, (10) Patelguda (11) Manmole (12) Seri Nalagandla (13) Nalagandla, (14) Kothaguda (15) Kanchanguchi Bowli (16) Muttangi, (17) Tellapur, (18) Gopanpalli, (19) Gachi Bowli (20) Illapur (21) Pocharam (22) Kachi reddy Palle (23) Hafeezpet.

Due to the improper facilities in the nearby villages, villagerss come for their needs as well as migrate towards Ramachandrapuram Patancheruvu area for the sake of working purpose in industrial and private sector i.e. (house helper) etc. This tends to create a lot of problems such as Burden on city, and services, like community facilities, crowded on roads, increasing commercial needs, social problems, growing of slums, unhygienic drains, scattered growth of shops etc

Therefore if all the problems are not tackled very soon there is a possibility of haphazard growth through out the Ramachandrapuram Patancheruvu area. For avoiding migration towards industrial township of Ramachandrapuram Patancheruvu area is very essential to provide all kinds of community facilities and amenities for those villages which are situaed around the Ramachandrapuram Patancheruvu Area.

Hence it is necessary to provide facilities and amenities to cater the daily needs of the entire surrounding villages. The villages with high population and more activities must be linked with pucca roads in the Ramachandrapuram Patancheruvu area.

Environmental Impact on Area :

BHEL and Patancheruvu attracted huge of population after establishment of BHEL and other medium and small scale industries at Patancheruvu. Due to job opportunities, large number of migration has taken place. Except BHEL township, the vegetation is very scant in the industrial area at Patancheruvu as well as we have vast open land in Ramachandrapuram and Patancheruvu , laying without any proper maintenance some of this vast and open land is filled with industrial solid waste and effluent which has created environmental pollution. In the general back ground of the region the growth of BHEL industry and Patancheruvu industrial town is important.

In Ramachandrapuram BHEL factory and Patancheruvu industrial area is in progressing phase and it will give more job opportunities to the people of the region. Environmentally BHEL and Patancheruvu industrial area plays an important role for nearby area.

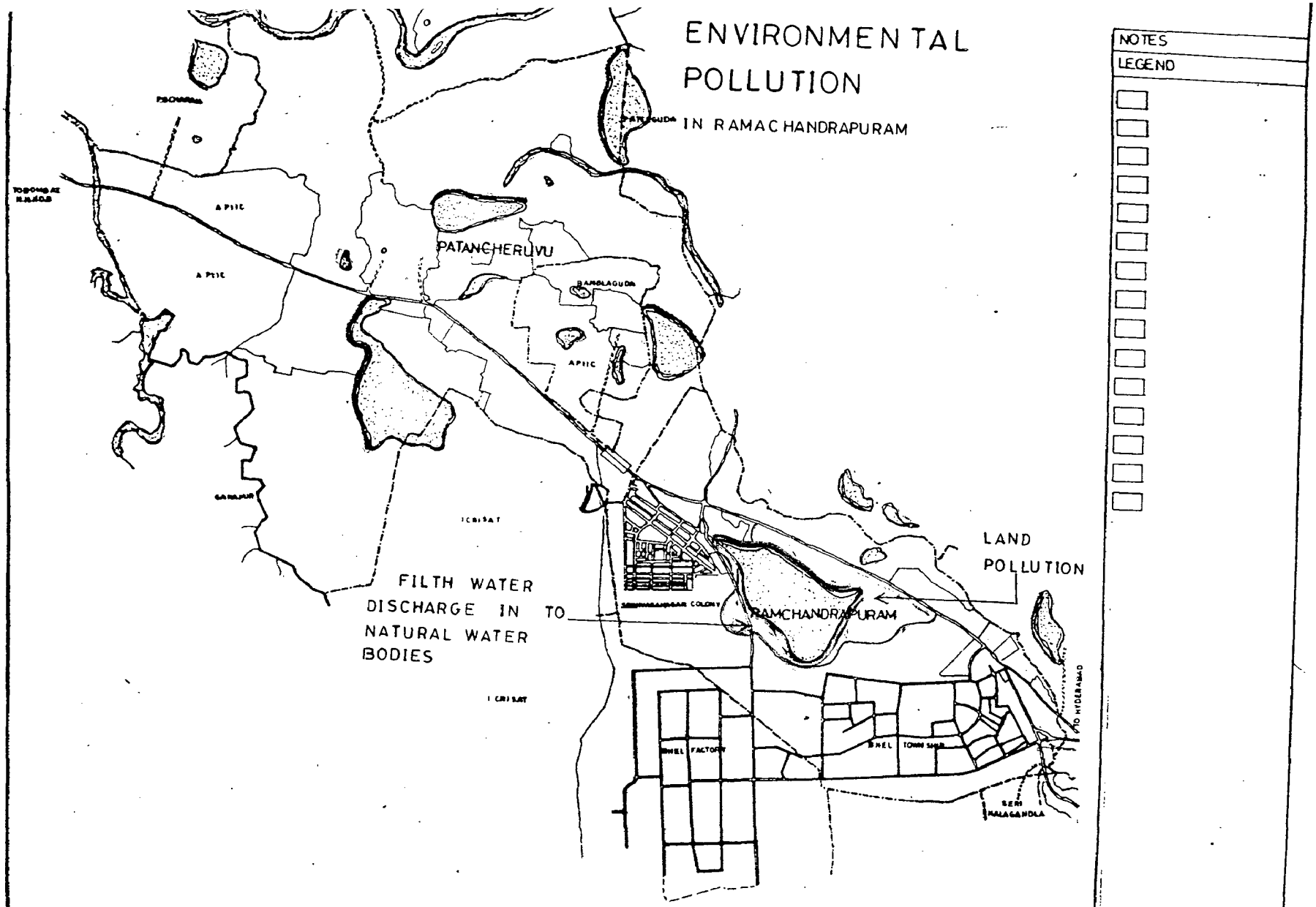
3.9 ENVIRONMENTAL PARAMETER/GUIDELINES FOR COMPREHENSIVE DEVELOPMENT :

In terms of pollution, Ramachandrapuram Patancheruvu area has three types of pollution: Air, Water and Land Pollution, But in BHEL Township living area is away from the factory and the township covered by large number of trees along the roads and inside the houses etc. So the residents are getting less amount of air pollution, where as in Ramachandrapuram, Srinivasa-nagar Colony, Patancheruvu, Bandlaguda, smoke due to moter vehicles and specifically industrial soote etc. is more and polluting the environment. Water pollution and air pollution increasing in Ramachandrapuram Patancheruvu area, and it has been found to have impact on the residents of the township and surrounding villages particularly affecting the younger generation.

The industrial solid waste discharged into the natural nallahs without treatment has caused serious hazards to flora and fauna of the area.

Dust, smoke and noise have created unhygenic living condition in the area, Air pollution is to be controlled by putting green belt and buffer zone.

Efforts have been made in BHEL Township to plant two to three rows of shady trees on both side of the major and minor roads.



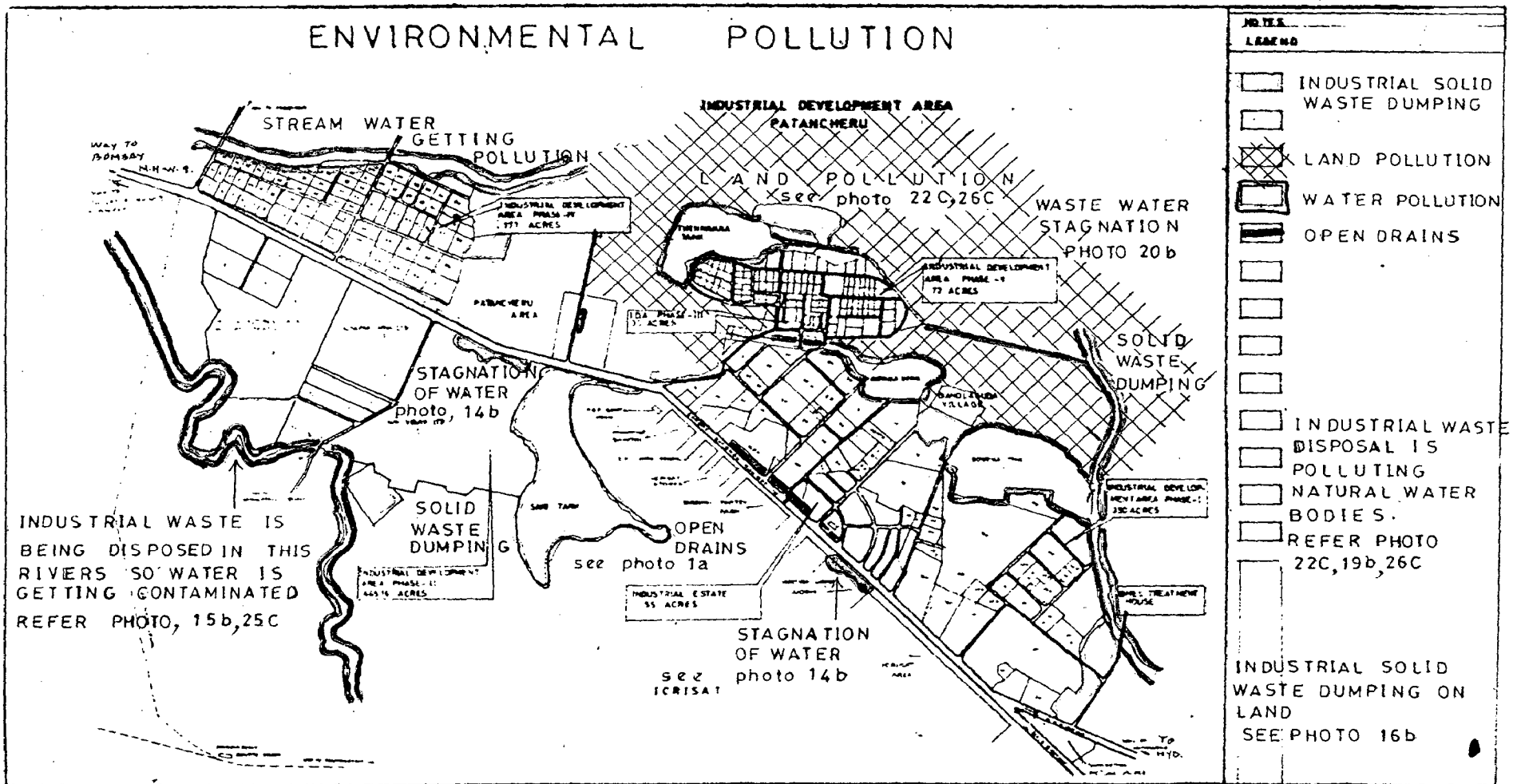
PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

FIG. 3.9

GULAM REZA ALI ZADHE

North

sheet no.



PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

GULAM REZA ALI ZAIDI

FIG. 3.9 a

Environmentally BHEL Township has less pollution as compared to Ramachandrapuram Patancheruvu area. Water pollution ro some extent is tolerable, because the township has its own supply and treatment plant. Effluent of the plant goes far away from the residential areas. The natural beauty of the hilly area on the North side of Ramachandrapuram Patancheruvu area is being lost due to exploitation of the hills.

To avoid pollution there is need of thick buffer zone, between the factory and residential area. It is to be provided in order to ensure fresh air and unpolluted atmosphere for the town. And strict enforcement of the pollution preservation act is necessary. Fig 3.9, 3.9a

CHAPTER - IV

4. ANALYSIS OF DEVELOPMENT PLAN FOR RAMACHANDRAPURAM PATANCHERUVU AREA :

4.1 To analyse the various land uses and to plan for future structure, it is necessary to study the present problems, inadequacies of Ramachandrapuram Patancheruvu area. It has been discussed in previous chapter that the Ramachandrapuram Patancheruvu area desperately needs assessment of future requirement to develop industrial area as well as other land uses.

Basically the economic and social structure of the Ramachandrapuram Patancheruvu area will be greatly influenced by announcement and expansion of Industrial area.

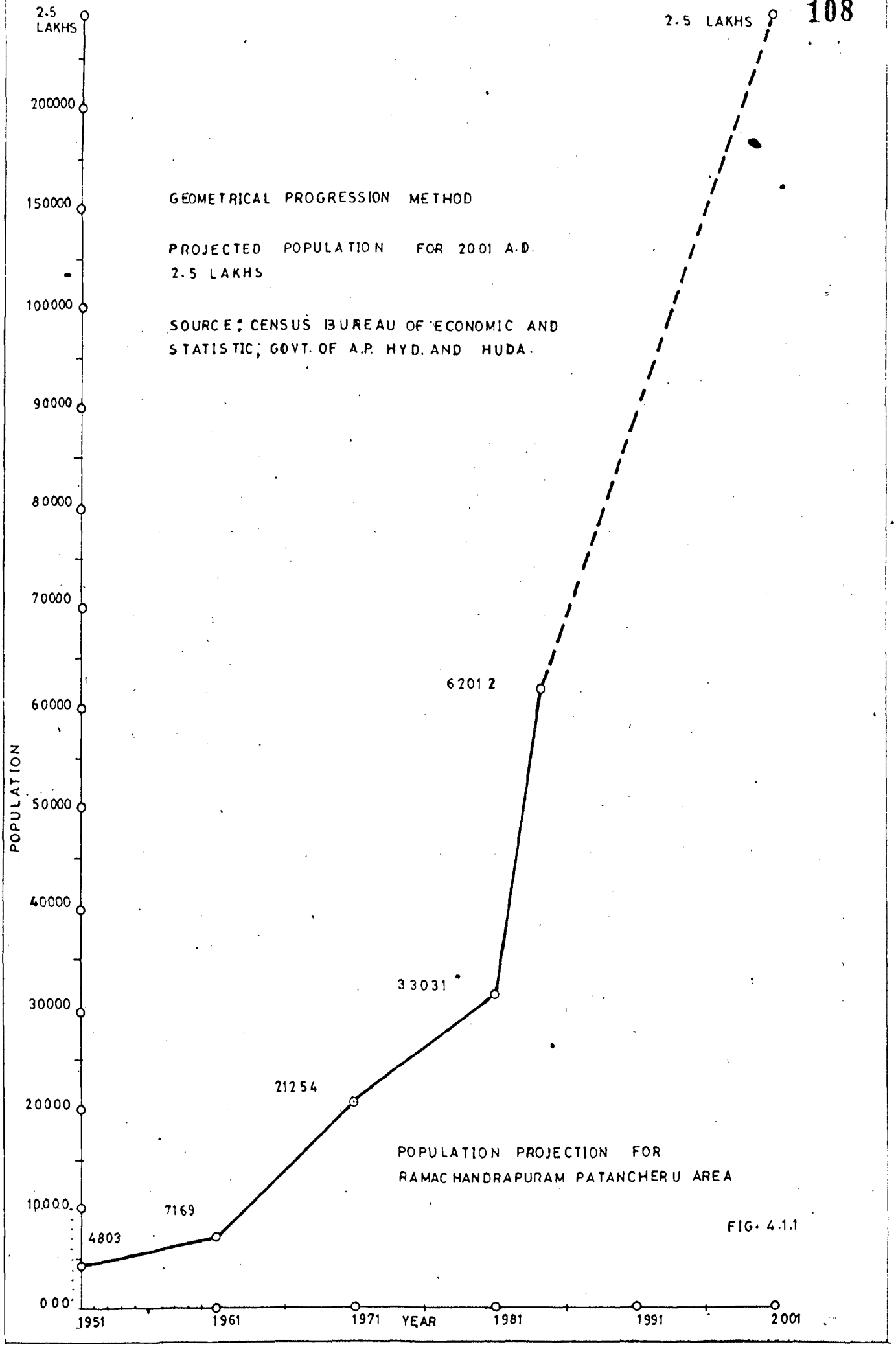
At present, the production of industries is increasing fast, and it will rise up more in the coming years.

Naturally, the industrial development will generate activities, and rise the production and economy of the region.

4.1.1 FUTURE POPULATION :

The future population of this area is estimated to be about 2.5 lakhs for the year 2001 A.D.

The estimation of the population is done by



POPULATION PROJECTION FOR
RAMACHANDRAPURAM PATANCHERU AREA

FIG. 4.1.1

Geometerical Increase Method. In this method, it is assumed that the percentage increase in population from decade to decade remains constant.

The future population is given by the following formula :

$$P_n = P_0 \left[1 + \frac{r}{100} \right]^n$$

Where :

P_n = Population of n^{th} year (i.e. n^{th} = 2001 Year)

P_0 = Present year population i.e. (62,012)

r = Rate of increase

n = Number of years

From 1951 to 1981, growth rate increase is 7.2

So,

$$P_{2001} = P_{1981} \left[1 + \frac{7.2}{100} \right]^{20}$$

$$= 62,012 \left[1 + 0.072 \right]^{20}$$

$$= 62012 \times 4.016946$$

$$= 249099$$

Say = 2.5 lakhs approximately.

Increase in population from 1981 to 2001

250000 - 62012 = 187988

Increase in population = $\frac{187988}{20}$ = 9399

in one year.

Rate of Growth = $\frac{9399}{62012}$ x 100 = 15.15 %

4.1.2 Residential Density :

Land in BHEL Township has been very luxuriously used, with residential density of nearly 56 person per acre. Where as in Ramachandrapuram Srinivasanagar Colony residential density is 123.42 P.P.acre, in Patancheruvu it is 85.36 P.P.acre, and that in Bandlaguda residential density is 64.95 P.P. acre. It is essential to reduce the difference and an average density of 123.42 persons per acre, for Ramachandrapuram Srinivasanagar Colony and other area. It is to be achieved up to year 2001 A.D. Therefore the density of population in the residential area is to be controlled by means of suitable rules and regulations.
Fig. 4.1.2

4.1.3 Land Development and Housing Requirements :

Housing units, according to 1971 census, was insufficient. Till today, due to inadequacy of housing, thousands of workers are commuting to Ramachandrapuram

Refer Table No.

Patancheruvu area from Hyderabad as well as from surrounding areas.

This backlog has caused inconvenience and higher occupancy rate, particularly in BHEL, Chandanagar area. This causes formation of the slums, uncontrolled development of houses in various parts of the town.

With further expansion of the BHEL and Ramachandrapuram industrial area, it is essential to tackle the acute shortage of houses in this area. Otherwise in year 2001 the problem will became manifold.

Though HUDA has already implemented Chandanagar Township Phase I and II for industrial workers, but this is inadequate.

According to the information from HUDA* the Central sponsored scheme of small and medium township is inadequate. Central Government had given one crore rupees to state Government, of which 60 % is in the form of loan. With such a meagre finance State Government is not able to cope up with the increasing housing problem, more over, not in condition to develop the land for present and future development.

* HUDA : Hyderabad Urban Development Authority

REFER TABLE NO. 4.1.3

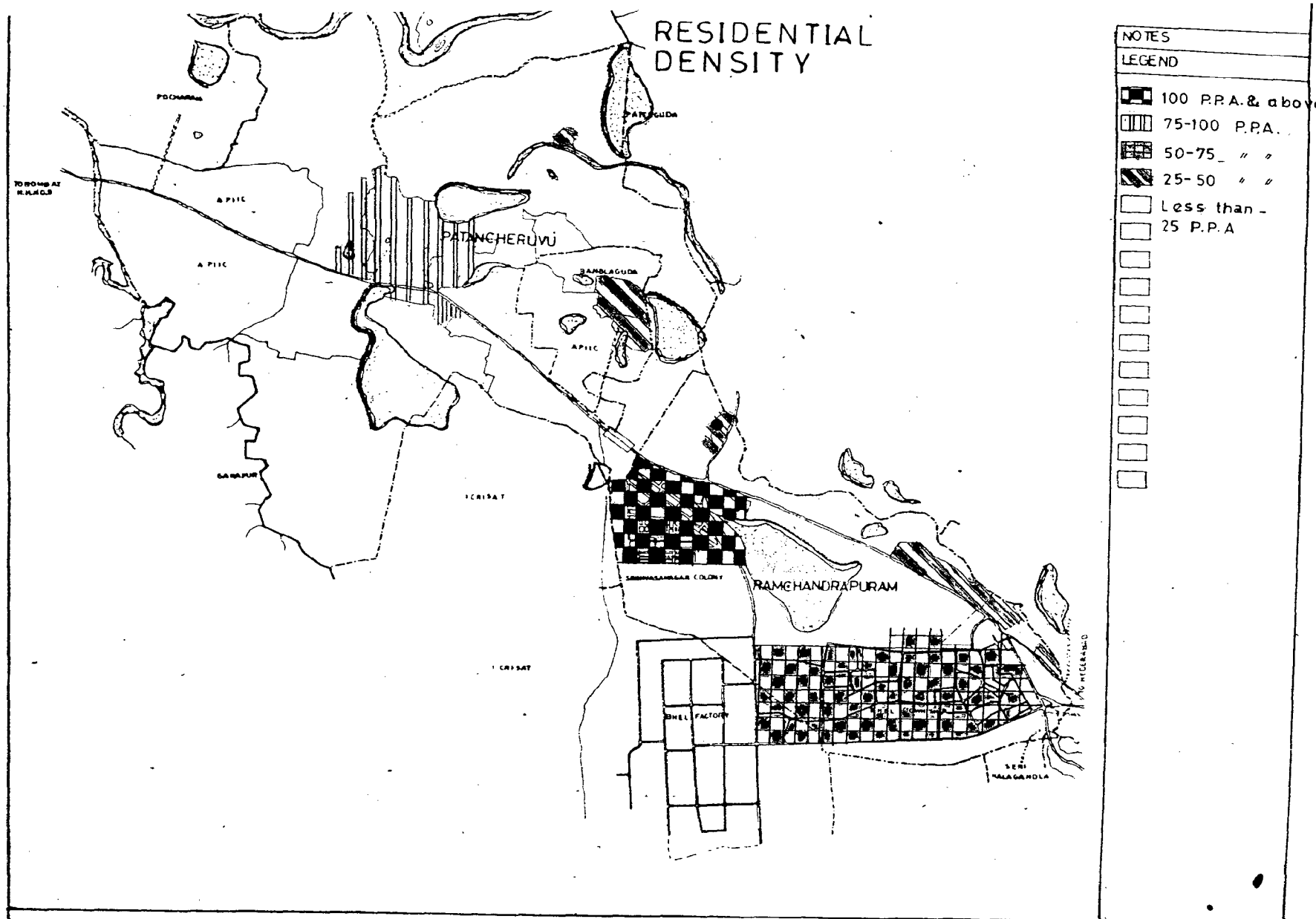

RESIDENTIAL DENSITY
NOTES
LEGEND
100 P.P.A. & above
75-100 P.P.A.
50-75 " "
25-50 " "
Less than 25 P.P.A
PATANCHERUVU
RAMCHANDRAPURAM
ICRISAT
SHELL FACTORY
PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P
FIG. 4.1.2
GULAM REZA ALI ZADHE
North
sheet

TABLE NO. 4.1.3

DETAILS OF TOTAL NUMBER OF HOUSES PROPOSED IN VARIOUS CATEGORIES AROUND R.P. STUDY AREA

The layout prepared provides only 1,404 residential plot of the following categories :

S.No.	Category	Size	Area	No. of Plots
1.	H.I.G.H.	13x25	325 sq.m.	146
2.	M.I.G.H.	10x21	210 sq.m.	399
3.	L.I.G.H.	7x14	98 sq.m.	479
4.	E.W.S.	5x10	50 sq.m.	380
			TOTAL	1404

4.1.4 Trade and Commerce:

For Ramachandrapuram Patancheruvu area specialized market and retail trade is to be equipped with whole sale and retail goods and conditions of shops is to be improved. At Patancheruvu area shops - along the Bombay National Highway should be avoided at present and provide separate market and commercial centre in a planned manner.

4.1.5 Industries :

BHEL factory and other large scale industries provides opportunities to open ancillary industries in Ramachandrapuram area.As well as in Patancheruvu it is necessary to provide buffer zone, and green belt in between the Residential and Industrial area. Also to provide junk yards for industrial waste, and to provide treatment plants and proper chimmenies for industrial area.

4.1.6 Traffic and Transportation :

The study of modes of transport at Ramachandrapuram Patancheruvu has revealed that slow moving vehicles and heavy trucks have registered a very moderate increase whereas the number of fast moving vehicles has increased at a much faster rate, mainly it is because of the Bombay National Highway which is also linking to various small and majore cities and regional settlements near by.

The existing bus stop at Patancheruvu area requires expansion, and a new bus stand is needed for Ramachandrapuram area as well as require to improve the junctions bridge culverts and all other obstructions to be provided. At the same time it is required to widen the Bombay Nationa Highway No. 9 for convenient of regional and internal traffic.

4.1.7 Service and Amenities :

Except BHEL township, it is essential to provide all adequate services and amenities i.e. different norms is to be adopted. (HUDA) Hyderabad Urban Development Authority is required to recommend the norms for different activities which is needed for Ramachandrapuram and Patancheruvu Industrial area, should be provided.

4.1.8 Water Supply and Swerage :

Except BHEL township, Ramachandrapuram Srinivasanagar Colony and Patancheruvu is not served by proper underground sewer line

This town requires underground sewer and sewerage treatment plants in order to make the final effluent acceptable for letting out in to any nearby natural nalah. So that to serve the existing areas and future needs. It is necessary to examine the ground water potential through detailed investigation in this area. In fact, there are number of small tanks and wells, which are rainfed, the

water available has to be quantitavely and qualitatively analysed. Hence a treatment plant is needed for Ramachandrapuram Patancheruvu area so that sufficient water can be made available to the population of both the towns.

4.1.9 PLANNING AND DEVELOPMENT STRATEGIES BASED ON ANALYSIS OF DEVELOPMENT.

Analysis of various landuses in Ramachandrapuram and Patancheruvu area shows that it is thoroughly required and essential to tackle the existing problem as soon as possible, so that for present and future backlog lapses could be controlled in planned manner.

The residential density at Srinivasanagar Colony, Ramachandrapuram is increasing, it is essential to reduce the average density of this area. Housing is inadequate at present, need to tackle the requirements of the future housing. Meanwhile the condition of shops which is growing unauthorise and enhancing the number of shops day by day along the Bombay National Highway No. 9, creating ribbon development and accident hazards.

Proper markets and commercial centres should be proposed. There is a scope for large and small scale industries in this area, therefore, the setting of a particular industry should be carefully decided by taking into account the various requirements of that industry.

So far Bombay National Highway No. 9 plays an important role because it links to regional settlements and many major cities. It is very essential to be widened, and necessary to improve the major lapses of this National Highway for better ease of the internal and regional traffic.

Hence it is thoroughly required to provide services and amenities for this area by adopting norms, and standards for the present and future needs of this area.

As far as water supply and sewerage is concern, this area does not have proper drainage, it exists but remain uncovered drain nearby their houses entrance. It is unhygenic and it is necessary to provide proper drain and a treatment plant for water supply. This problem needs to solved for the acute shortage of water for present and future of this area.

CHAPTER - V

5. STRATEGY FOR DEVELOPMENT OF RAMACHANDRAPURAM AND PATANCHERUVU AREA :

5.1 AREA FOR EXPANSION AND PROPOSED DEVELOPMENTS (2001 A.D.) :

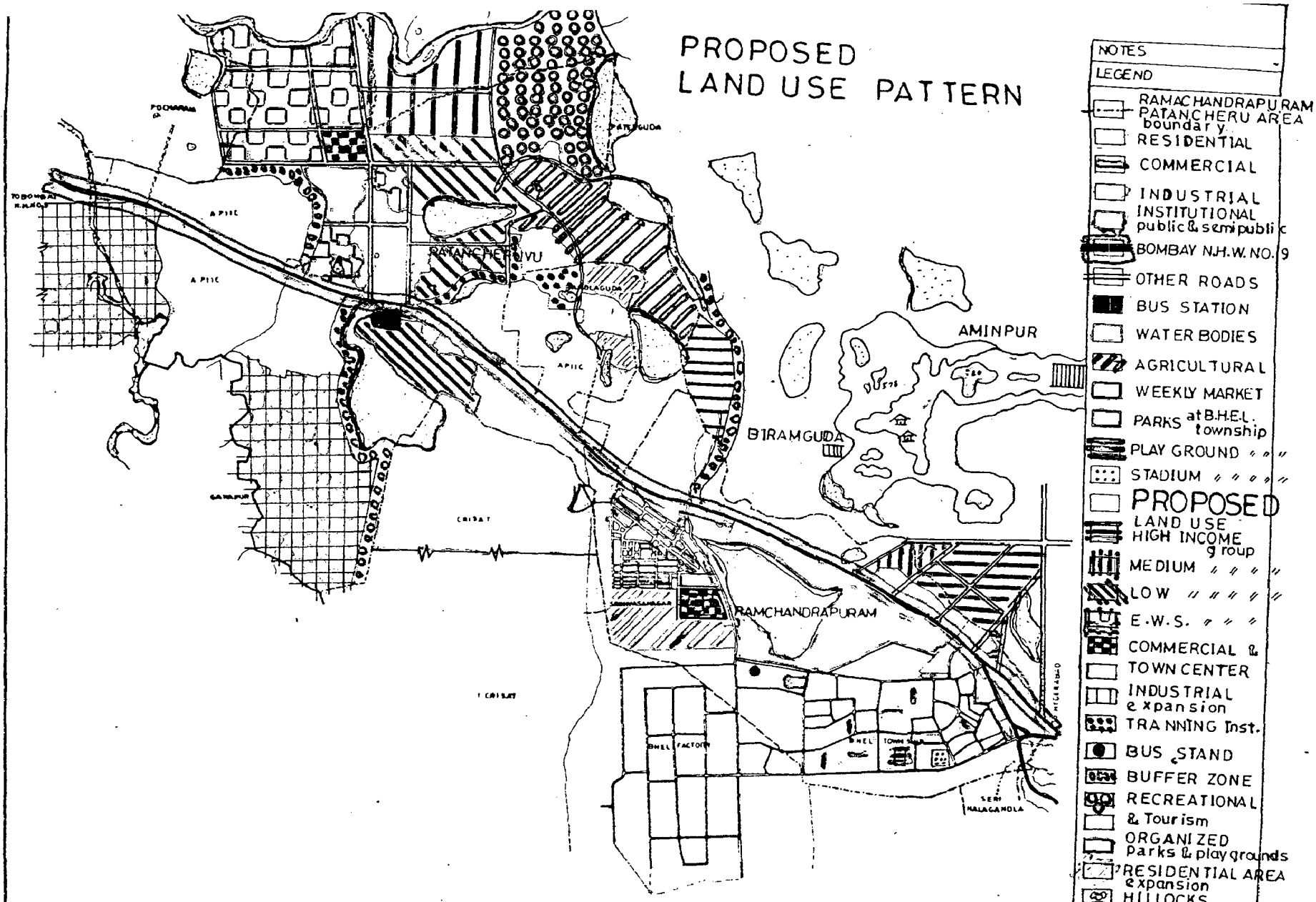
For healthy environment development of Ramachandrapuram Patancheruvu area in future including the removal of existing problems and redevelopment of area, correct projection of expansion of over all land uses is required. As a major policy population projected for 2001 A.D. has been considered for the town level land uses. While facilities which are shared and required by surrounding villages shall be provided as per total population of the town and its hinterland.

5.2 PROPOSAL FOR RAMACHANDRAPURAM PATANCHERUVU AREA FOR 2001 A.D.

5.2.1 Residential :

New Residential areas for Patancheruvu have been proposed to the North and North East of existing Patancheruvu town. Where as the proposed residential area in Ramachandrapuram is in the North East Direction between Aminpur village and BHEL Township, as well as further expansion of land at Srinivasa-nagar Colony i.e. towards South East directions.

The high income group should be about 10 %., Medium income group about 20 %., low income group about 30 % and



PLANNING AND DEVELOPMENT STRATEGIES OF RAMACHANDRAPURAM PATANCHERU AREA HYDERABAD A.P

FIG. 5.2

GULAM REZA ALI ZADHE

North

sheet

economically weaker section about 40 % of the total Residential area :

All the above categories should be provided and convenience of the employers who are working in the industrial area. Table No. 5.2.1, Fig. No. 5.2

5.2.2 Commercial :

A town centre has been proposed with all kinds of fulfledged facilities for new proposed area as well as to cater the needs of existing population and surrounding villages. This town centre is located in between the new and old area of Patancheruvu towards North East direction, Therefore, for Ramachandrapuram area it has been proposed a commercial town centres in Southern side of Srinivasanagar Colony. In addition to this, these town centres would also serve the sub urban areas.

For the town centres of the both town, there should be provision of 3.5 shops per thousand population and 1.5 mobile shops per 1000 population, therefore, for the population of 2.5 lakhs population needs according to standards are as follows:

At the Town Centre:

Number of Pucca Shops	500
Number of Mobile Shops	125

At the Sector Level: For Population 12,000 :

Number of Pucca Shops	42
Number of Mobile Shops	25

At the Neighbourhood Level : For population of 6,000

Number of Pucca Shops	18
Number of Mobile Shops	6

5.2.3 Institutions (Public and Semi Public)

Ramachandrapuram and Patancheruvu towns are not administrative towns. But due to the proposal of new Residential areas for both the towns, difinitely it is required that new offices and institutions for the future population of nearly 2.5 lakhs in both the township should be provided. These institutions would include Govt. Offices, Courts, Jails, Tehsils, Development Board Office etc. and community facilities and utilities etc. These institutions will distributed at town centre level, of both the townships. At various places of the township they will put, for the ease of public activities.

School facilities from nursary school level to Higher Secondary School level as well as higher educational facilities to be provided at various level of residential areas. COPP has recommended the following norms for educational facilities :

1. One Primary-cum-Nursery School for 400 to 500 seats per 3,500 population. One secondary school of 650 seats expandable to 1,000 seats from a population of 9,000 to 10,000. One academic college for population of 1,50,000 and one technical school should be provided.

2. The recommendation regarding health facilities given by COPP are as under:

   i) One Health Clinic for 12,000 population.

   ii) One Health Centre having emergency unit and 4 to 6 beds along with attendant facilities attached to it for each 35,000 to 40,000 population.

3. One or two civil Hospital depending upon the requirement of the town.

Therefore, for the population of 2.5 lakhs will need the following facilities according to the standards : 5.2.3

TABLE NO. 5.2.3

PROPOSED COMMUNITY FACILITIES AND UTILITIES FOR RAMACHANDRAPURAM PATANCHERUVU AREA (BASED ON T.C.P.O. and COPP

FACILITIES	TYPE	NUMBER WILL BE REQUIRED
1	2	3
Educational	1. Primary cum Nursery School	62
	2. High School	25
	3. Inter College	2
	4. Degree College	1
	5. Technical School	1

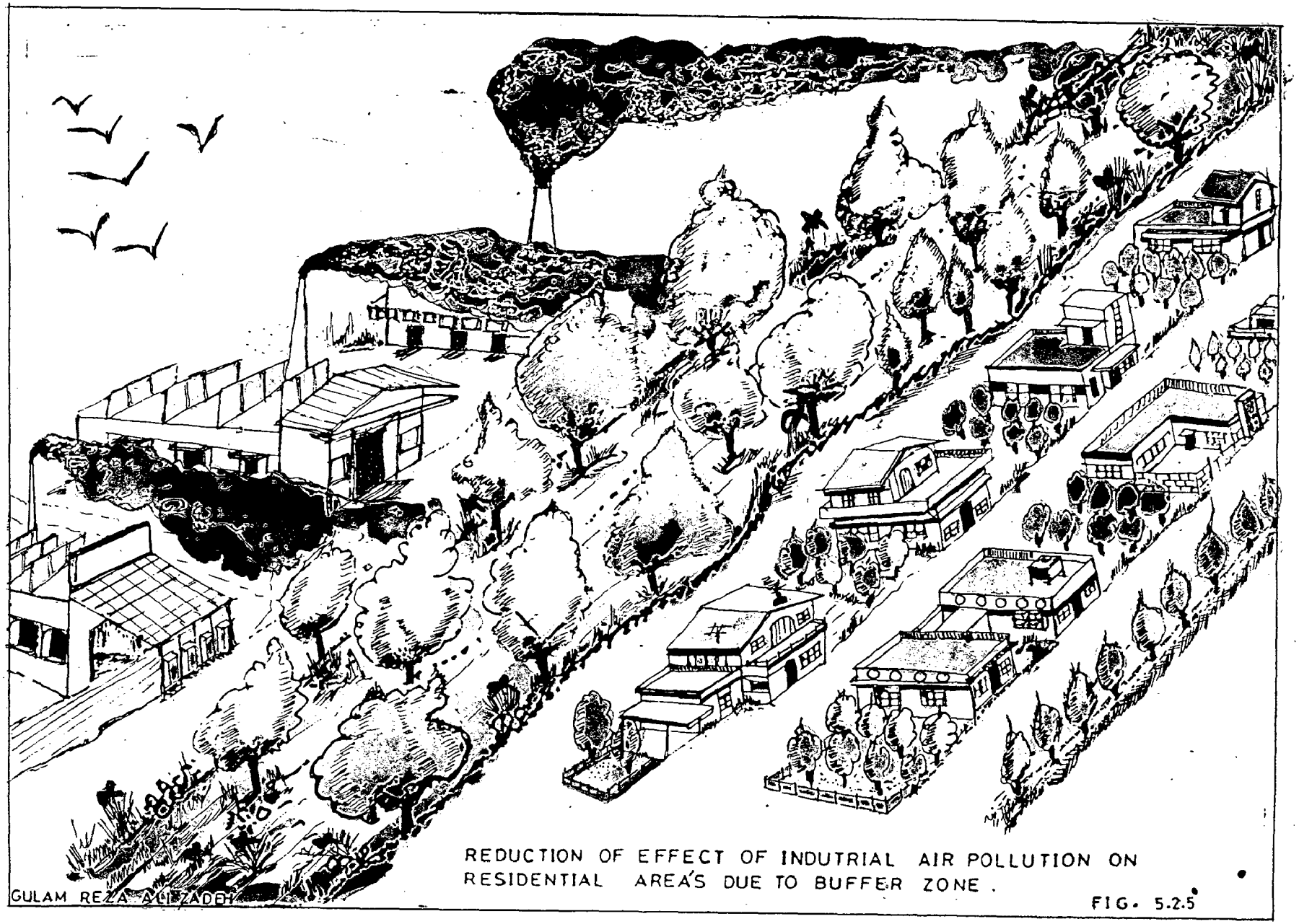
1	2	3
Medical	1. Health Clinic	20
	2. Health Centre	6
	3. Hospital Civil	1
	4. Specialized Hospital	-
Public Utilities:	1. Water Supply	7.2 MGD
	2. Storm Water Drainage	
	3. Public Lavatories	
	4. Refuse Collection and Disposal	
	5. Sewage Treatment	
	(Appendix No. VI)	

5.2.4 Transportation:

Already there is a bus stand in Patancheruvu area, and the frequency of buses in this area is 30 minutes.

These buses are going to Hyderabad and surrounding villages. So far, the year 2001 A.D. there is a need for expansion of the existing bus stand, so that the capacity can be increased for future needs. Nearby 60 to 70 buses will be required to be provided per day in this area.

As well as it is necessary to propose one bus stand in Ramachandrapuram for better accessibility of this area.



REDUCTION OF EFFECT OF INDUTRIAL AIR POLLUTION ON RESIDENTIAL AREA'S DUE TO BUFFER ZONE.

GULAM REZA ALIZADEH

FIG. 5.2.5

The Government and Private bus services for Region and other towns of the states as well as public transportation system for intracity services such as mini buses, auto rickshaws three wheelers etc. are available. A taxi stand is also planned close to each of the bus stands. A total of 7.20 percentage of the total proposed developed area, has been allocated for road and circulation network which does not include pathways and access ways.

5.2.5 Industrial :

It has been proposed that nearly 22.80 percentage of the total developed area is allocated for industrial purposes, this has been located in South-West direction beside the Bombay National Highway No. 9. It has also been proposed to provide green belt between Bombay National Highway, and proposed industrial area. Another portion of the proposed industrial area is located on South direction, beside ICRISAT.

To avoid effect of industrial pollution in residential areas a thick buffer zone has been proposed between industrial area and residential area at all necessary points. The functions of this green buffer would be: Appendix VII, Fig. 5.2.5

i) To protect encroachment of other uses,

ii) To separate and protect residential area from any nuisance produced by industry(such as noise, dust, smoke etc.)

5.2.6 Conservation and Recreation :

There is a lack of Recreational and play grounds facilities in both Ramachandrapuram and Patancheruvu areas except BHEL township. It has been proposed to provide fulfledge

organised parks and play grounds in the area. In the Patancheruvu, it has been located near proposed town centre, beside this a recreational and tourism spot has been proposed, which is located in the North East direction of Patancheruvu area. This site has flowing river side by, and number of water bodies which will enhancing the aesthetic beauty of the spot if they will be preserved.

Similarly in Ramachandrapuram it has been proposed to provide fulfledge organised parks and playgrounds. This is located around the Natural Water bodies which is in between the Srinivasanagar Colony and BHEL Township.

This location for organized parks has been decided, because it is accessible to both the towns. Further this will help in maintaining the hiterto undeveloped land and to preserve natural water bodies from industrial pollution.

The Ramachandrapuram Patancheruvu area is a Industrial township dominated in the whole zone. On the Northern side of this area there is a village called Amminpur, this village is situated at highest point of Ramachandrapuram areas.

The range of hillocks present an interesting skyline providing scenic beauty to the area.

In this area there are few natural water bodies within the rocky slopes which are all rain fed.

The conservation of this environment will need planned development of this area. Therefore, has been proposed to provide a recreational and tourism centre, not only for the particular town but for the entire zone.

5.2.7 Water Bodies :

There are many natural water bodies, exists in this area. These water bodies thoroughly need to be preserved from not getting polluted with the discharge of industrial waste etc. This will give benefit to the agricultural uses, moreover, conservation would help in cooling of towns and make it more aesthetic. These water bodies help in raising underground water table.

5.2.8 Agricultural :

The remaining agricultural land in proposed area is around 6.40 percent of the total area in Ramachandrapuram Patancheruvu area. But there is a lot of provision for their uses, as the region can fulfill agricultural needs of the town very well. To conserve the fertile land from industrial hazards and wastes it is thoroughly essential to avoide all kinds of industrial pollution towards agricultural land in this area.

TABLE NO.5.2.1

PERCENTAGE OF VARIOUS LAND USES IN THE PROPOSAL FOR 2001 A.D.

S.No.	LAND USE	PERCENTAGE OF TOTAL AREA
1.	Residential	43.50
2.	Commercial	1.20
3.	Institutions Public and Semi Public	5.50
4.	Transportation	7.20
5.	Industrial	22.80
6.	Conservation and Recreation	7.48
7.	Water Bodies	5.92
8.	Agricultural	6.40
	TOTAL	100.00

5.3 REQUIREMENTS OF INDUSTRIAL AREA :

There are various types of industries and it is not the intention to list the requirements of each individual industry. But the following are the basic requirements of industrial area.

1. Amenities in the form of landscape features such as park, trees, buffer zone green belt, etc.

2. Availability of cheap land.
3. Facilities for industrial waste disposal.
4. Nearness to markets.
5. Nearness to related industries.
6. Nearness to source of supply of raw materials.
7. Public services such as electricity, sewerage and water supply.
8. Supply of skilled and unskilled labour at reasonable rates.
9. Topographical conditions of site such as good drainage, level, firm soil, etc.
10. Transport facilities by rail, road etc.
11. And other basic infrastructure which are required should be provided for better development of industrial areas.

5.4 IMPACT OF THE GROWTH OF THE INDUSTRIES UPON SURROUNDING AREA :

1. Due to Development of industries the economic structure of the Ramachandrapuram Patancheruvu area and sub-urban area will improve and will be bring prosperity in the area.
2. Unemployed persons of Ramachandrapuram Patancheruvu area will get employment in various section of industries.
3. Eventhough various preventive measures had been suggested but due to large scale industrial development the air, water and land will be polluted some extent.

4. Industrial Development will enhanced influx of the surrounding Rural Population to Ramachandrapuram Patancheruvu Area.

5. Due to large scale migration the problem of housing will be further aggravated.

6. Traffic congestion: the grouping of industries develop problems of traffic congestion which are not too easy to solve.

7. The industrial development always tends to effect the traditional cultural of the concern region, which has not so far been taken into account in the industrized countries, and therefore, for preservation of cultural of the nation it is important to consider the different aspects of impact of the industrial growth on the tribal tradition.

8. The establishment of the new industries in the area will reduce the agricultural land.

CHAPTER - VI

5. CONCLUSION AND RECOMMENDATIONS

Excluding BHEL Township, the rest of Ramachandrapuram Patancheruvu area has developed in an uncoordinated manner in the past three decades, there has been a lot of increase in the industrial activities, and also the town has grown haphazardly So there is a need of orderly planning and development are to be taken for healthy growth.

FINDINGS AND LESSON OF THE STUDY :

1. Planned industrial investment by the Central and State Government during the Third Five Year Plan, in accordance with the national policy for rapid industrialization.

2. The population structure and occupational structure shows signs of maturation and stablization after the period of unmaturally high growth during 1961-71.

   There is influx of imigration from surrounding villages to Ramachandrapuram Patancheruvu area.

3. Ramachandrapuram Patancheruvu area has showed a period of rapid industrial growth in terms of labour employment during the last two decades.

   In this area industrialization has failed to

generate balanced self-sustained growth of town.

4. Large tract of land is laying vacant right in between Ramachandrapuram Srinivasanagar Colony and BHEL Township as well as along the Bombay National Highway No. 9. This has given birth to slum areas, Joggi Jopdi and loss of the town character.

The scattered and unplanned character of development of the residential areas reflect the lack of future vision of a town.

The land within the planned areas has been used in a proper manner.

5. Compared to the BHEL Township in Ramachandrapuram Patancheruvu area the provision of town services and utilities in present state is inadequate and inconvenient. BHEL township has its own water supply and sewerage system and treatment plant

ENVIRONMENTAL ISSUE :

6. Due to heavy industrial growth the air, land and water pollution has increased in Ramachandrapuram Patancheruvu area. It has a serious impact on the residential areas of the town, particularly on the younger population. Also it has led to the contamination of the agricultural land

Air pollution is appreciable and needs an alternative, measures for control, e.g. plantation or green belt and buffer zone etc.

Strict enforcement of the pollution prevention act is necessary.

7. CAUSES OF UNPLANNED AND HAPHAZARD GROWTH OF RAMACHANDRAPURAM PATANCHERUVU AREA :

- Lack of proper planning in this area from the beginning
- Lack of policy decision in this area.
- Lack of municipal authority in this area.
- Influx of immigrants in to this area.
- Inadequate provision of housing in the township area for low income group people.
- Lack of planning control in the peripherial area.

8. LINKAGES BETWEEN TOWNSHIP AND PERIPHERIAL AREAS :

- Heavy flow of regional and internal traffic during peak hours of working shifts of BHEL factory and Patancheruvu Industrial area creates problem on the Bombay National Highway No. 9.
- Direct linkages between the two industrial areas namely the BHEL factory and the Patancheruvu Industrial Estate and Hyderabad creates traffic problems due to flow of raw material.

- There is direct linkage between Ramachandrapuram Patancheruvu area and Hyderabad Development Industrial Area.

9. ECONOMIC LINKAGES :

- Most of the employees of BHEL factory live in BHEL township. Thousands of the employees commute daily from Hyderabad city to Ramachandrapuram Patancheruvu area.
- There is a direct trade relation with peripherial areas as well with surrounding villages and Hyderabad city.
- In Ramachandrapuram Patancheruvu area the main problems are shortage of water and inadequate provision for housing.
- Lack of adequate local transport system.

10. MAJOR LAPSES IN PLANNING :

- Scattered growth of shops and lack of common and community facilities and services.
- Narrow width of Bombay National Highway No. 9.
- Inadequate housing for the weaker section in township area.
- No allocation of land for new activities.
- Lack of peripherial control from the initial stage.
- No Municipal Corporation or legal provision to enable the local authority to exercise control over the local

panchayat which can not have able control on the township in a orderly manner.

- Acute shortage of water in this area during summer season

11. LESSONS FROM THE CASE STUDY :

- In this area during the intitial stages the acquisition of land was done in excess of the requirement. It should be controlled.
- There is a need for preparation of development plan, it should give broad policy guidelines for location of major land use.
- Environmental consideration specially related to industrial location environmental control measures must be ensured.
- An authority with legal support be created for acquiring and developing land well in advance for setting up of a large industrial complex to promote efficient land management.
- The authority should have adequate power of lavying taxes and raise its funds and should not depend on the government aid. The larger industrial undertakings are required to contribute for over all town development.
- Unintended growth of slum which are common consequences of uncontrolled town growth have to be checked and efforts be to (i) minimise the negative effect of such

growth by providing housing.

(ii) Provision of urban services and amenities in this existing area.

- Legal provision to enable the local authority to excercise control over the development of peripherial area and over the pockets of private land within the area.
- Necessarily a common authority is to be set up to look after town facilities and services i.e. suitable authority like development board or municipal Corporation act.

12. POLICY GUIDELINES FOR FUTURE DEVELOPMENT :

- To encourage a linear development of town and Patancheruvu Industrial Area.
- Restrict the Industrial growth to the area between the railway line and the Bombay National Highway.
- To encourage future development in accordance with the existing environmental problem.
- Future development should be in such a manner so that the unused land can be utilized for maximum benefit.
- For Ramachandrapuram Patancheruvu area future development of the new residential areas should be far away from the industrial plant to avoid pollution hazards.
- To control the deteriorating environment of the existing villages and slums which is in future are expedited to be the seat of migrant population, therefore these

villages must be provided with urban services, amenities, pucca road and electricity etc.

- To diversify the economic base of the town by providing new facilities of trade and commerce specially small scale industry.

13. SUMMARY OF STRATEGIES FOR DEVELOPMENT.

- The industrial land use should be confined between the railway line and Bombay National Highway No. 9. At the present there is no railway line at Patancheruvu industrial area so it is essential to provide the railway line. No industrial activities should be permitted very near further along the Bombay National Highway No. 9 in a linear fashion in view of the increasing pollution problems and accident hazards.
- The general land use pattern should be :

1) Development of areas for industry in such a way that transportation of raw material and finished goods is quite convenient.
2) Development of specific areas for industries cfeating serious air, land and water pollution.
3) Development of trade based commercial areas.
4) Mixed land use should be discouraged, so proper zoning regulations must be strictly enforced.
5) Decentralization of the work centres in Ramachandrapuram Patancheruvu area.

6) Need of work and living area relationship.

7) Encourage small scale industries in commercial area.

8) Comprehensive transport system, should be developed.

9) Take care of the increasing air pollution and land contamination.

10) Future residential development of Patancheruvu and Ramachandrapuram area must be done in the Northern portion of the area.

11) Provide buffer zone between industrial area and the residential area.

12) Provide urban facilities and services in a planned manner.

13) The central sponsored scheme of small and medium township is inadequate. Central Government had given one crore rupees to state Government of which 60% is in the form of loan.

14) To provide house for the workers who commute daily from Hyderabad city and surrounding villages to Ramachandrapuram Patancheruvu Industrial Area.

15) (HUDA) Hyderabad Urban Development Authority need sufficient loan assistance from Central Government to to tackle the remaining housing scheme in this area.

16) Provide land for retired industrial workers to settle in the town.

VII BIBLIOGRAPHY

BIBLIOGRAPHY

BOOKS :

1. Anthony Downs, Urban Problems and Prospects, Printed in Chicago, U.S.A. - 1976

2. Albert Parker, Hand Book of Industrial Air Pollution, Mc Gram - Hill Book Company (U.K.) Limited - 1977

3. Baldwin - G.B. Industrial Growth in South India - Case Studies in Economic Development. Free Press, Glencose, Illinois, U.S.A. - 1959.

4. Chaudhuri , M.R, Indian Industries Development and Location, Shrimathi M.Chaudhuri, Prince Anwar Shah Road, Calcutta - 1966.

5. Chandra, R. Planning and Development Strategy for Future Growth of Roorkee Town, M.U.R.P. Thesis, University of Roorkee, U.P. November, 1978.

6. George Rosen, Industrial Change in India, Industrial Growth, Capital Requirements, and Technological Change. P.S.Jayasinghe, Asia Publishing House, Bombay - 1958.

7. Gallion, Arther, B' The Urban Patterns. New York, Van Nortrand and Co. - 1962.

8. L.U.D.A. Integrated Town Development Programmes of Ramachandrapuram Patancheruvu Area. Hyderabad - 1980-83

9. Moore E. Wilbert The Impact of Industry Prentice- Hall of India Private Limited - New Delhi - 1969

10. National Council of Applied Economic Research - Survey of Backward District of A.P., V.G.K. Thathachary- Paresile Bhawan, 11, Indraprastha Estate- New Delhi- 1970.

11. Nawab Ahmad - Landuse Planning and Development of Ranikhet Cantonment with Special Reference to Civil Areas. M.U.R.P. Thesis, University of Roorkee - U.P. February-1986

12. Planning Commission, Government of India, The Seventh Five Year Plan, Industrial Policies and Programmes, Govt.of India - October - 1985

13. Rangwala, S.C., Town Planning Chartar Book Stall, Anand,1977

14. Ranjan, A., Analytical Review of Growth and Development of Selected Industrial Towns - With special Reference to Bhilai M.P., M.U.R.P. Thesis, University of Roorkee, U.P. September - 1983.

15. Tulsi Ram Sharma and S.D.Singh Chauhan, Indian Industries, Development, Management, Finance and Organisation, Shiva Lal Agarwala and Company Agra-3, 1971

16. T.N.Kapoor - Industrial Development in the State of Indian Dept. of Commerce and Business Management Punjab University Chandigarh - 1960.

17. Upadhayay, S, Growth of Industries in India, Ganendra Nath Banerjee National Publishers Calcutta - 1970.

18. Vakil, C.N. and Rao, U.S.M. Industrial Development of India

JOURNALS :

1. Ghuman Singh Jagjit. Trees, land Scaping and Environment Conservation in Human Settlements. Journal of the Institute of Town Planners India, V.P.Mittal - Sept. 1980.

2. Land Requirement for Industry in Urban Area. Journal of Urban and Rural Planning thought, P. 65, S.P.A. New Delhi, 1966.

3. Kulshrestha S.K. Green Belts in and Around the City, Problems and issues Journal of the Institute of Town Planners, India, V.P.Mittal, Vol. 5, No. 1 (27) Sept- 1986.

4. Lee, tan, Industrial City Patterns, Journal of Town Planners, India, No. 42-43, March-June 1965.

5. Mittal - Ved from (Editors Desk)
Planning and Control of Ribbon Development. Journal of the Institute of Town Planners, India, V.P.Mittal, Volume 4 No, 3(125) Feb - 1986

6. Nath - V, Planning for Urban Growth, Journal of Urban and Rural Planning thought, S.P. A. New Delhi- April 1966.

7. Nair, A.L. Development of Industrial Township Journal of Institution of Town Planner's, India, No. 49- 50, March, 1967.

8. Pathak Chitranjan., Development Problems of the Dhanbad Jharia Industrial Area, I.I.T. Kharagpur, Journal of Urban and Rural Planning thought, S.P.A. Page No. - 137 New Delhi- 1966.

9. Ratnam, T.S., Planning of Industrial Township in the Public Sector, Journal of the Institution of Engineers (India) Vol. 64, Pt AR,1, April 1984.

10. Ram Subramaniam, K.A., Legal and Administrative Problems of Industrial Township, Journal of the Institution of Town Planners, India, March - June 1965, No. 42 and 43.

11. Swamy Krishna M.C., Cost of Urban Infrastructure for Industry as Related to City Size in Developing Countries, India, A Case Study. Journal of Urban and Rural Planning Thought, S.P.A. New Delhi, October, 1970, Page No. 260.

12. Sachitaanandam, A.M., Regional Development of Industrial Towns Journal of the Institution of Town Planner's India, March 1969.

13. Saini, N.S. and Mahavir, Urban Development Planning Strategies and Techniques - I , S.P.A. New Delhi - 1985.

14. Vastava M.P. and Bansal, R.P. Need for a Decentralised Pattern of Industries in India, Journal of Urban and Rural Planning Thought, S.P.A., New Delhi - April - 1966, p. 96

REPORTS :

1. A.P.Industrial Infrastructure Corporation Ltd., Built Your Industry on a Strong Foundation Hyderabad - 1973

2. B.H.E.L. Ramachandrapuram, Hyderabad, A Profile of Growth Hyderabad- 1984-85.

3. Hyderabad Urban Development Authority, Annual Report Hyderabad - 1982-83.

4. Parthasavathy (I.A.S.), Andhra Pradesh District Gazetteers, Hyderabad - 1983.

5. Rangareddy and Medak, District Profile, Population and General Features (. Census) Bureau of Economic and Statistic Govt. of A.P.Hyderabad - 1978.

6. Raj Gopal, M.V. , A.P.District Gazetters, Medak, 1976

VIII PHOTOGRAPHIC STUDY OF RAMACHANDRAPURAM PATANCHERU AREA

(1a) THIS PHOTO TAKEN FROM THE HEART OF PATANCHERU AREA SHOWS, THAT ROAD SHOULDER ARE OCCUPIED BY HAPHAZARD GROWTH OF KOKHAS, KACHA SHOPS ALSO STAGANT WASTE WATER CREATES, UNHYGEINIC CONDITIONS.

(2a) PEDESTRIAN WALK WAYS ENCROACHED BY UNAUTHORISED PARKING OF RICKSHAWS, AUTO SCOOTERS, AND LORRIES AS WELL AS BY IRREGULAR KACHA SHOPS, ALONG THE BOMBAY NATIONAL HIGHWAY. THIS TENDS TO DELAY REGIONAL AND INTRACITY TRAFFIC AT PATANCHERU AREA.

(3a) VIEW SHOWING JAY PRAKASH COLONY IN PATANCHERU AREA. THE DRAINS ARE OPEN AND POORLY MAINTAINED, THIS CREATES UNHYGEINIC CONDITIONS.

(4a) THIS VIEW SHOWS THE HEART OF SRINIVASANAGAR COLONY, KUCHA SHOPS, AND KOKHAS AND STAGNATION OF WASTE WATER AND FILTH CREATES UNHYGEINIC.

(5a) HAPHAZARD GROWTH OF SHOPS AND WOOD SELLERS ON THE NATIONAL HIGHWAY SHOULDERS, THIS LEADS TO ACCIDENTS AND CONGESTION

(6a) THIS VIEW TAKEN FROM THE FRIENGE OF RAMACHANDRAPURAM ROAD LINKS TO BHEL TOWNSHIPS. SHOWS THAT ONE SIDE OF THE ROAD ENCROACHED BY KOKHAS.

(7a) AT RAMACHANDRAPURAM PLENTY OF VACANT LAND REMAINS UNMAINTAINED AND UNDEVELOPED STRAY ANIMALS GRAZE IN THIS AREA.

(8a) THIS VIEW SHOWS SANGEETA MOVIE HALL, IT IS SITUATED NEARBY NATIONAL HIGHWAY, THEREBY CREATES CONGESTION ON THE ROAD.

(9a) NEAR THE ENTRANCE OF RAMACHANDRAPURAM, SRINIVASANAGAR COLONY THERE IS LACK OF PARKING SPACE, AND HAPHAZARD GROWTH.

(10a) GENERAL STREET VIEW AT THE ENTRANCE OF RAMACHANDRAPURAM SRINIVASANAGAR COLONY THE PHOTO SHOWS THAT IN GENERAL UNHYGEINIC CONDITIONS PREVAILS IN THISAREA.

(11b) AERIAL VIEW OF SRINIVASANAGAR COLONY SHOWS THE HIGH DENSITY OF DEVELOPMENT.

(12b) NEAR RAMACHANDRAPURAM BHEL TOWNSHIP, OLD BOMBAY ROAD IS VERY CONGESTED, DUE TO THE HAPHAZARD GROWTH AND ENCROACHEMENT OF FOOTPATHS AND PEDESTRIAN WALKWAY. SLOW AND FAST MOVING TRAFFIC MIX TOGETHER CREATES TRAFFIC PROBLEMS.

(13b) VIEW SHOWING THAT ROAD SHOULDER CONVERTED INTO COW SHEDS, AND SLUMS, AT RAMACHANDRA-PURAM AREA.

(14b) STAGNAT RAIN AND WASTE WATER ALONG THE NATIONAL HIGHWAY BEING USED FOR WASHING AND BATHING.

(15b) THIS VIEW TAKEN AT PATANCHERU INDUSTRIAL AREA SHOWS THE WASTES OF INDUSTRIES BEING DISCHARGED IN THE NATURAL NALAH WITHOUT TREATMENT

(16b) DUMPING OF INDUSTRIAL SOLID WASTE IN THE GROUND CAUSES NUISANCE IN PATANCHERU AREA.

(17b) LORRIES ARE PARKED ALONG THE BOMBAY NATIONAL HIGHWAY NEAR THE ENTRANCE OF PRATAP STEEL INDUSTRY IN THE BEGENNING OF PATANCHERU AREA

(18b) PEDESTRIAN AND FOOTPATH, ENCROACHED BY SCOOTERS, AND VEHICLES ETC. ALONG THE BOMBAY NATIONAL HIGHWAY NO. 9

(19b) TOP FERTILE LAND, AND WATER RESOURCES ARE EFFECTED BY INDUSTRIAL WASTE.

(20b) THIS VIEW SHOWS PATANCHERU INDUSTRIAL AREA NEAR BANDLAGUDA, THE INDUSTRIAL WASTE IS DISCHARGED ON THE LAND WITHOUT PROPER TREATMENT.

(21c) THIS VIEW TAKEN FROM PATANCHERU INDUSTRIAL ESTATE SHOWS THE CHIMENYS THROWING SMOKE INTO THE ATMOSPHERE, THEREBY CREATING AIR POLLUTION.

(22c) THIS VIEW SHOWS THE VAST STRECH UNUSED DEVELOPED LAND, IN PATANCHERU INDUSTRIAL AREA.

(23c) VIEW SHOWING NEARBY BHEL TOWNSHIP SPECIFICALLY FROM THE BEGINNING OF RAMACHANDRAPURAM, THE BOMBAY NATIONAL HIGHWAY SHOULDERS ARE ENCROACHED BY HUTS, KACHA SHOPS, KOKHAS ETC.

(24c) VIEW SHOWING NEARBY RAMACHANDRAPURAM BHEL TOWNSHIP SHOP AND OTHER ACTIVITIES HAVE GROWN HAPHAZARDLY AND THEREBY CREATED PROBLEMS FOR THE TRAFFIC.

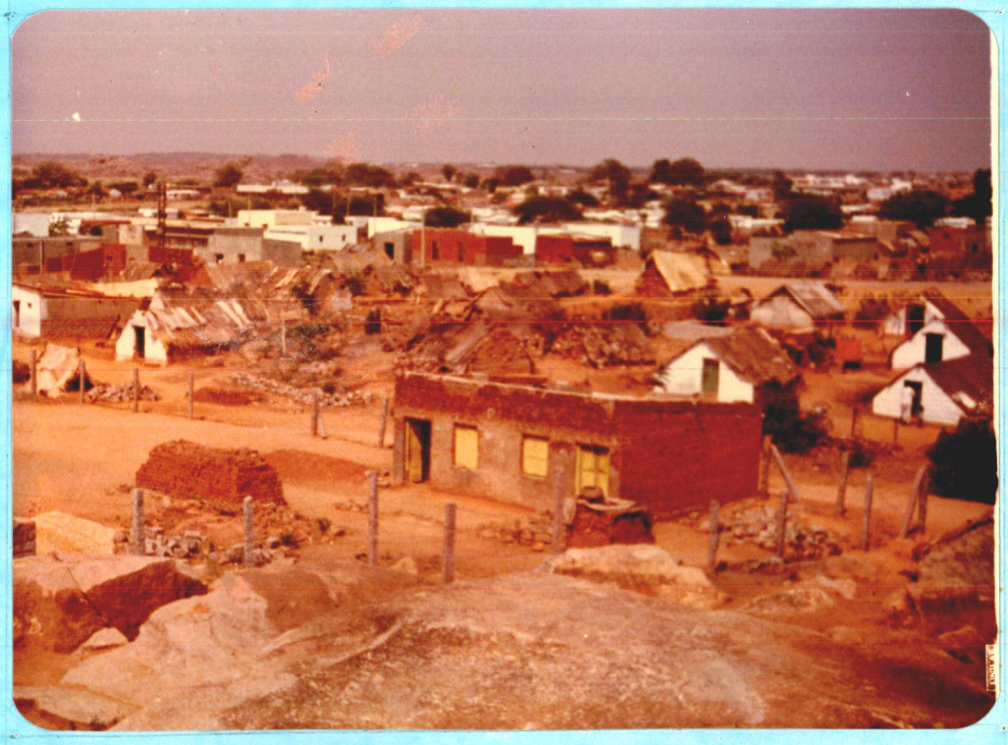
(25c) THE LAND AND AIR ARE POLLUTED BY THE INDUSTRIAL AND OTHER ACTIVITIES.

(26c) AGRICULTURAL LAND CONTAMINATED DUE TO PROPER TREATMENT OF INDUSTRIAL WASTE.

(27c) VIEW SHOWING LACK OF PROPER DRAINAGE AT CHANDANAGAR NEAR, BHEL TOWNSHIP ALONG THE NATIONAL HIGHWAY STAGNATION OF WASTE AND RAIN WATER CREATES NUISANCE IN THE ENVIRONMENT.

(28c) LACK OF PARKING SPACE AT WEEKLY MARKETS AT RAMACHANDRAPURAM AREA.

(29c) THE HILLOCKS SURROUNDINGS THE RAMACHANDRAPURAM CHANDANAGAR TOWNSHIP HAVE BEEN EXPLODED, THIS HAS LEAD TO LOSS OF SEAINIC BEAUTY AND IMBALANCE OF ECOLOGY.



(30c) VIEW FROM PERIPHERY OF RAMACHANDRAPURAM SHOWING CHANDANAGAR TOWNSHIP WHICH IS WELL PLANNED BY (HUDA) DUE TO THE INADEQUATE HOUSING THE PEOPLE HAVE DONE UNAUTHORISED CONSTRUCTION THEREBY GIVING RISE TO SLUMS.

(31d) AT CHANDANAGAR, THIS POCKETS OF LAND IS OCCUPIED BY KACHA HOUSES, AND SLUM ETC.

(32d) A VIEW OF THE DEVELOPED PORTION OF CHANDANAGAR TOWNSHIP.

IX CASE STUDIES

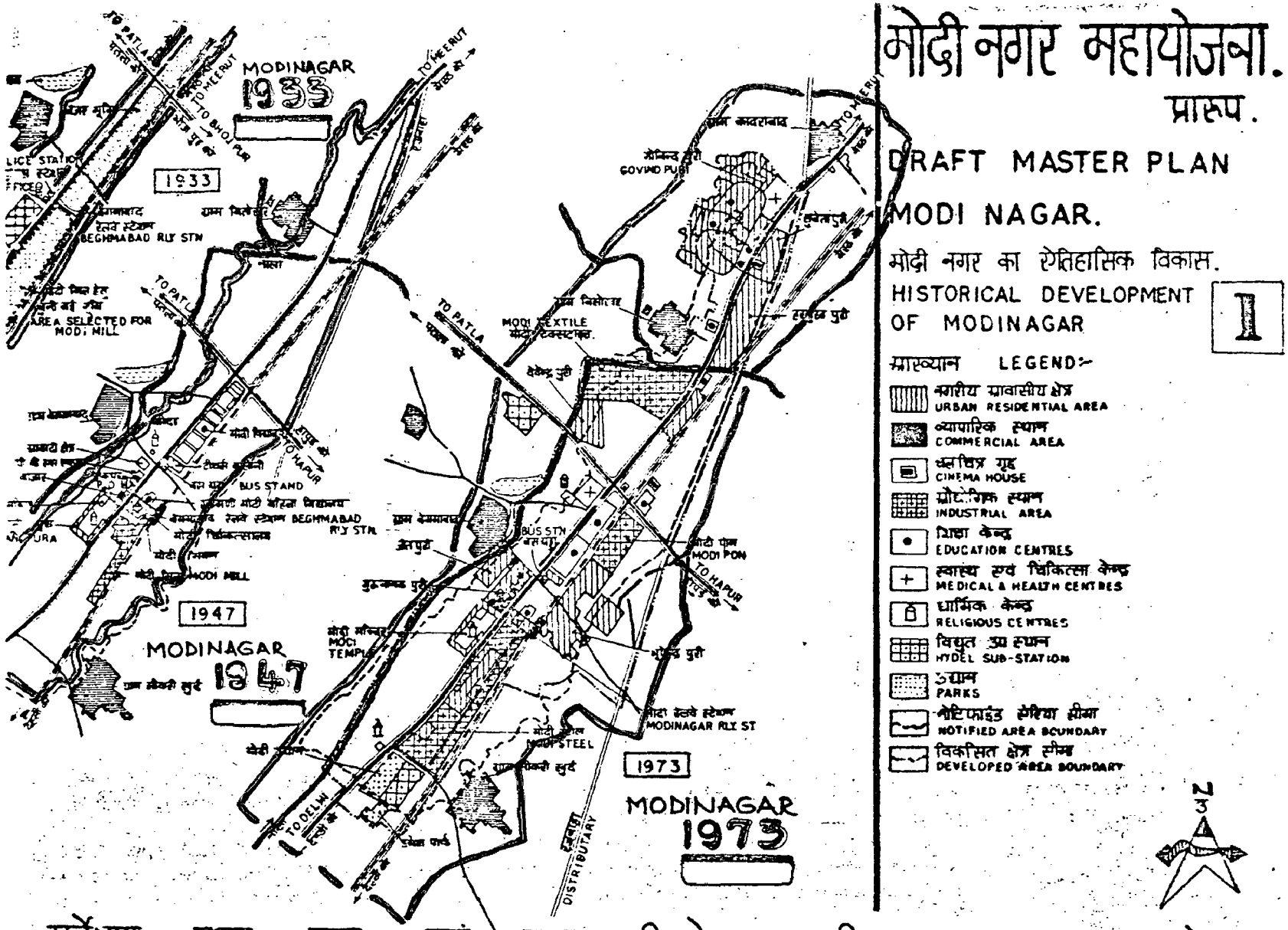
CASE STUDY

MODINAGAR MASTER PLAN

Modinagar has a prominent place on the industrial town. In addition to this major activity, Modinagar also functions as a regional service centre for the surrounding rural population. By virtue of its location along the state Highway No. 45 between Meerut, Ghaziabad and Delhi and due to the diverse natural of its economic base, the town is idealy suited to become an important "Growth Centre" of the national capital Region (N.C.R.) and the Meerut Bulandshahar Sub-Region of N.C.R. keeping these considerations in view, Modinagar has been designated to develop as a regional urban centre specializing in industrial activity and to function as a regional growth centre for the fural population of the region under its influence.

Therefore, the preparation of Draft Master Plan for Modinagar was undertaken in March 1973 at the request of controlling Authority, Regulated Area, Modinagar. The draft master plan for Modinagar presented through this report has been prepared on the basis of preliminary surveys and studies conducted during the first initial phase of the project. The proposals made in the Master Plan have been made after giving utmost consideration to the existing and past pattern of development as well as Modinagar future requirements of growth upto 1991. However consideration of proposals made in an earlier Master Plan prepared for Modinagar, by this Department could not be kept, because, due to various factors, development in the past has not taken place according to the master plan.

Modinagar is situated on the State Highway No. 45 between Ghaziabad and Roorkee, at a distance of 40 Kms. from Delhi and 24 Kms. from Meerut, on latitude $28^{\circ}56'$ North and



मोदी नगर महायोजना.

प्रारूप.

DRAFT MASTER PLAN

MODI NAGAR.

मोदी नगर का ऐतिहासिक विकास.

HISTORICAL DEVELOPMENT OF MODINAGAR

1

प्रास्थान LEGEND:-

- नगरीय आवासीय क्षेत्र URBAN RESIDENTIAL AREA
- व्यापारिक स्थान COMMERCIAL AREA
- चलचित्र गृह CINEMA HOUSE
- औद्योगिक स्थान INDUSTRIAL AREA
- शिक्षा केन्द्र EDUCATION CENTRES
- स्वास्थ्य एवं चिकित्सा केन्द्र MEDICAL & HEALTH CENTRES
- धार्मिक केन्द्र RELIGIOUS CENTRES
- विद्युत उप स्थान HYDEL SUB-STATION
- उद्यान PARKS
- नोटिफाईड एरिया सीमा NOTIFIED AREA BOUNDARY
- विकसित क्षेत्र सीमा DEVELOPED AREA BOUNDARY

N

सर्वेक्षण खण्ड, नगर एवं ग्राम नियोजन विभाग, उत्तर प्रदेश.

Longitude, 77°35' East. It is an important industrial town of the Meerut-Bulandshar Region, which is a sub-region of the bigger National Capital Region (N.C.R.) comprising part of the State of U.P., Haryana and Rajasthan and Union Territory of Delhi, the town which covers pacts of found revenue, villages-Begamabad, Kadrabad, Bisokhar and Sikri Khurd in Ghaziabad Tehsil, has no identity of its own in revenue records. It is of vacant origin having been founded, by Sri Grujar Mal Modi who established a Sugar Factory in 1933 and named the place after himself.

POPULATION CHARACTERISTICS:

In 1951 Modinagar notified Area, which comprised an area of 5.95 sq.Km. taken out of four villages (Begamabad, Kadrabad, Bisoker and Sikri Khurd) had a population of 12,304. This increased to 24,266 persons in 1961. The rate of growth of population in this decade was about 97 percent. Thereafter in the previous decade (1961-71) the population of Modinagar notified Area increased by 79 percent to a size of 43,488 persons.

Assuming that the average rate of increase in the past decade has remained constant after 1971, the population of Modinagar in the year 1973 is estimated to be of the order of 50,500 persons. Current surveys of villages falling in the regulated Area of Modinagar conducted by the town & Country Planning Department, Meerut have revealed that in addition to the population residing in Modinagar about 21,000 workders and 3,000 students come to Modinagar every day for work and education from these villages. In addition, it is estimated that about 3,500 persons came to Modinagar for availing the town's civic and community facilities from outside the Regulated Area. It is therefore, estimated that with the addition of this floating population Modinagar, dwells to a population of 78,000 in the day time.

S.No.	Land Use Category	NOTIFIED AREA MODINAGAR				URBANISED AREA, MODINAGAR		
		AREA		% DI TRIBUTION		AREA		% DISTRI
		Acres	Hectares	Developed Area	Total Area	Acres	Hectares	Developed Area
1	2	3	4	5	6	7	8	9
1.	Residential	435	176.12	43.41	29.45	450	182.19	42.95
2.	Commercial	22	8.91	2.20	1.40	23	9.32	2.19
3.	Industrial	180	72.88	17.96	12.20	190	78.90	18.13
4.	Community Facilities	70	28.34	6.99	4.74	80	32.39	7.63
5.	Utilities & Services	15	6.07	1.49	1.02	15	6.07	1.43
6.	Govt. Office	5	2.02	0.50	0.33	5	2.02	0.48
7.	Traffic & Transportation	275	111.33	27.45	18.65	285	115.38	27.19
8.	Garden	20	8.09	-	1.35	50	20.24	-
9.	Parks	30	12.15	-	2.38	30	12.15	-
10.	Agriculture	350	141.70	-	23.73	594	240.48	-
11.	Vacant	70	28.34	-	4.75	70	28.35	-
	GRAND TOTAL	1,472	595.95	-	100 %	1,792	725.50	-

P R O B L E M S

1. MAINTENANCE OF INFRASTRUCTURE :

Growth Patterns:

The main cause of city is located at a distance of 40 and 24 Kms. from Delhi and Meerut along the State Highway, No. 45.

HOUSING

1. Shortage of Housing
2. Central infrastructural Development with regards to town water supply and sewerage is adequate only in few areas.

WHOLESALE TRADING:

1. Business is transacted on Both sides of state Highway.
2. No structure or stalls have been installed and the Transactions take place in the open air. Bullock Carts are parked near by and in a most disorderly fashion. Therefore with increasing in the quantum of traffic on this highway. No proper parking of truck and carts, and loading and unloading space.
3. Consequently, the activities of the Mandi will spill over on the Tibra Road, resulting in encroachment, congestion and other related traffic conditions.
4. There is no other major wholesale activity in Modinagar.

5. Most of the industrial products are sold by the individual industrial units either directly or through their agents, in the external markets.

RETAIL TRADING:

1. Retail shopping activity in Modinagar is scattered throughout along the state Highway passing through the town.

2. Shopping activity along the State Highway have resulted in the creation of a large quantum of unwanted traffic of local nature along with the road sides.

3. Some of the old shopping areas near the Roadways Bus Station and Modinagar Mills, specially those consisting of Khokas need redevelopment, near the Bus Stand. 'Khokas' have formed a double row of shopping within the reserved sight of way of the State Highway. In addition to regular shops and Khokas, Hawkers and footpath dealers cover most of the pedestrian walkway available along the fast traffic lanes of the High Ways.

INDUSTRY:

1. The concentration of industries at two major focal points. i.e. (1) Modinagar and Allied Industries Groups and Modi Spinning and Weaving Mills, along the existing State Highway has resulted in the concentration of all other allied uses at these focal points:

   a) Causing thereby congestion and undesirable mixing of

incompatible and land uses like residential land use with commercial, Transportation and Industrial Land uses.

TRAFFIC AND TRANSPORTATION:

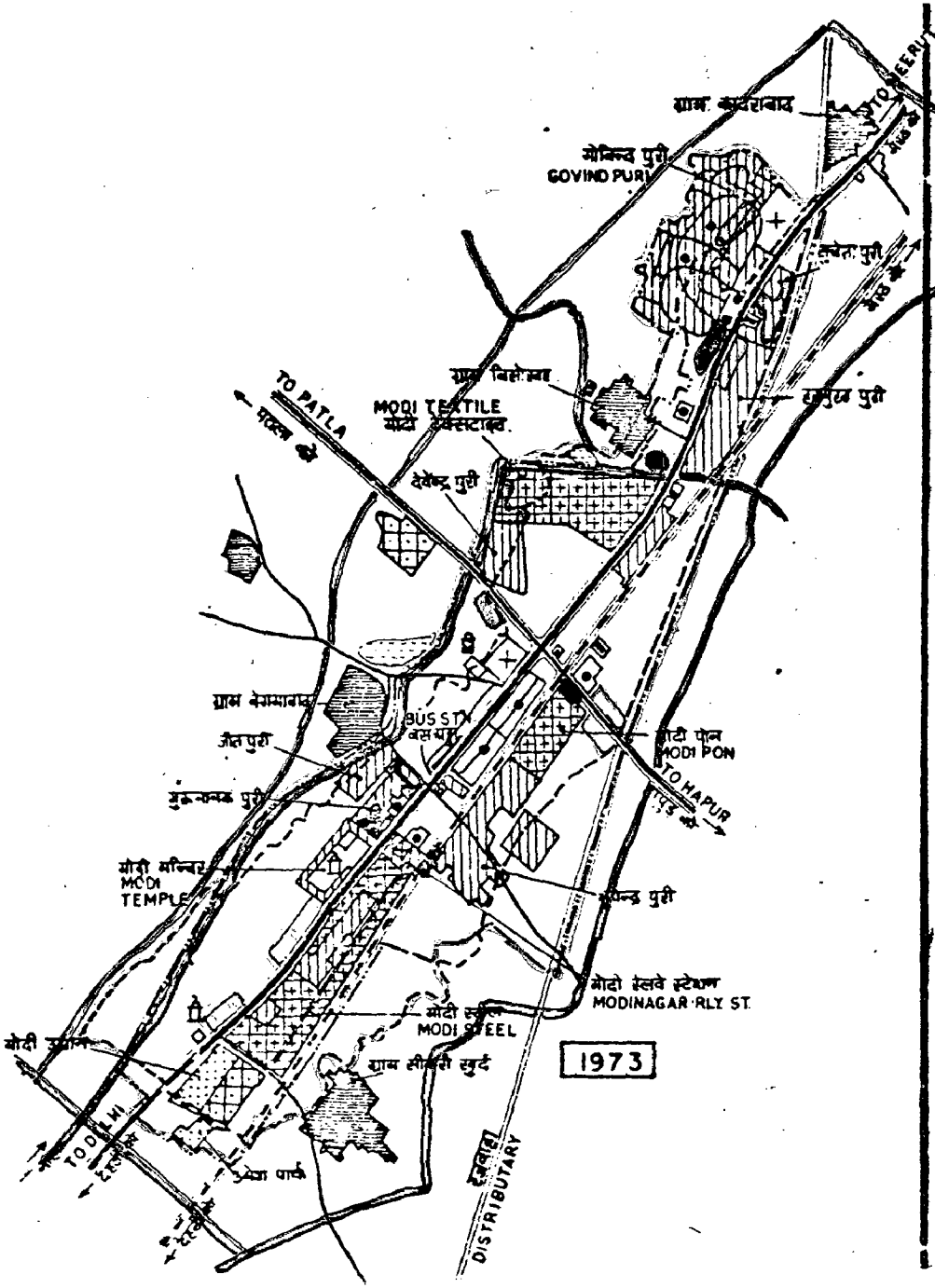
1. Besides heavy vehicular movement on the State Highway.
2. Halting facilities for local Bus Services between Meerut and Modinagar, and also, used by inter-city Taxi and Tampo services plying on the Ghaziabad-Meerut State Highway. Also intermixing of slow and fast traffic, increase in travel time, and increased accident hazards. The need for a road overbridge location of Modipan at its present location most of the development in Modinagar, was located along the State Highway towards North-West of Railway Line.

COMMUNITY FACILITIES :

1. Community facilities having short of the requirements.
2. Local Hospital also do not adequate.
3. Open space, parks, playing grounds is very meagre.

UTILITIES & SERVICES :

1. No centralised water supply.
2. Drainage, besides, water supply, forms a major problems in the Notified Area.
3. No proper access to natural Drainage Channels.
4. Modinagar is drained by Kadrabad drain, the water which collects in the Begambad pond does not drain out into the Kadrabad drain and remains stagnat in the pond.



प्रारूप.

DRAFT MASTER PLAN

MODI NAGAR. CASE STUDY

IDENTIFICATION OF PROBLEMS

- UN HYGIENIC DRAIN AT GOVIND PURI
- UN COVERED DRAIN AT GOOCHETA PURI
- ENCROACHMENT OF FOOTH PATHS, AT HARMOK PURI
- UNAUTHORISED KOKAS NEAR GOVIND PURI, AT N. HIGHWAY
- LACK OF INDUSTRIAL EFFLUENT TREATMENT NEAR MODI TEXTIL
- STAGNATE WATER CAUSING UNHYGIENIC CONDITION AT PATALA ROAD
- INDUSTRY EFFLUENT DISCHARGED WITHOUT TREATMENT FROM MODI PON
- LACK OF PARKING AT S. HIGHWAY BOTH SIDE NEAR BUS STATION.
- ENCROACHING OF FOOTH PATH ALONG THE ROAD BY UNAUTHORISED KHOKAS WAY FOR GURUNANK PURI.
- LACK OF PARKING & FOR LOADING & UNLOADING OF LORRIES, NEAR MODI TEMPLE & MODI STEEL.

5. The whole of the region around Modinagar suffer from bad drainage and flooding due to run-off water.

6. Due to the large magnitude of industrial activities in Modinagar. The problem of proper treatment and disposed affluent and waste should be tackled in a planned manner. At present these affluents are disposed in Nallas, river streams, presumably without treatment.

URBANISED

There is less centralised system of water supply or treatment and disposed of sewage.

X APPENDICES

APPENDIX NO : I

Industrial Development Areas/Industrial Estates

Sl. No.	Name of the Estate	Extent of land Acquired (in Acres)	Plots Developed	Sheds Constructed	Land ++ cost per Sq. mt. (in Rupees)
1.	2.	3.	4.	5.	6.
Srikakulam District					
1.	IDA, Srikakulam	16.38	37**	6**	10
2.	APIE, Amadalavalasa	19.52	48**	4	5
3.	MIE, Balaga	1.50	7	—	10
4.	IE, Seetampet	5.00	—	20**	3
Vizianagaram District					
5.	APIE, Vizianagaram	32.49	52	13	50
6.	IDA, Nellimerla +	180.14	79	—	19
Visakhapatnam District					
7.	i) IE, Vizag-7	50.16	—	38	75
	ii) APIE, Vizag-7	15.95	54	—	75
8.	IDA, Vizag-12				
	i) Block A	102.26	19	—	40
	ii) Block B	103.90	216	42	40
	iii) Block C	152.77	9	—	40
	iv) Block D	313.50	120	55	40
	v) Block E +	291.32	254	25	yet to be fixed
9.	AIE, Pedagantyada +	196.55	178	25	yet to be fixed
10.	APIE, Anakapalli	21.92	72	4	20
11.	IE, Araku	7.34	13**	2	3
12.	IE, Paderu	6.67	7**	2	3
13.	IE, Chintapalli +	4.30	16	—	3
East Godavari					
14.	SEIE, Kakinada	6.80	10	15	40
15.	IDA, Kakinada	46.72	48	20	40
16.	IE, Samalkot	25.75	19	28	under revision
17.	MIE, Rampachodavaram	15.68	18**	4	4
18.	MIE, Gopalapuram	2.64	2	3	—
19.	i) IE, Dowleswaram	34.31	52	17	15
	ii) IDA, Dowleswaram	168.31	17	5	15
20.	IDA, Kadiam	73.48	2	—	—
West Godavari District					
21.	i) IE, Eluru	22.38	48	4	18
	ii) IE, Eluru (Expan) +	14.87	35	6	yet to be fixed
22.	IE, Palakol	12.24	28	—	10
23.	IE, Bhimavaram +	36.81	42	—	110
24.	IE, Tanuku	24.58	67**	—	50
Krishna District					
25.	i) IE, Vijayawada	53.93	57	34	100
	ii) AN Vijayawada	275.68	1174	73	60
26.	IE, Machilipatnam	25.00	47	—	10
27.	IE, Gudivada	34.07	97	—	20
28.	IDA, Kondapalli +	434.00	443	14	50
Guntur District					
29.	APIE, Guntur	21.81	40	—	40
30.	i) AN, Guntur Ph-I II III	143.00	845**	26	Ph-I II 36 Ph-III under revision
	ii) AN, Guntur (Expan.) +	140.00	727	—	yet to be fixed
31.	IE, Narasaraopet	25.00	54	4	6
32.	IE, Pericharla	10.11	14	10	18
33.	APIE, Bapatla	46.77	55**	—	6
34.	APIE, Tenali	8.48	35	4	40
35.	IE, Sattenapalli	23.68	87**	4	10
36.	IE, Nowluru	81.33	71**	12	under revision
37.	IE, Nadikudi +	50.87	109	6	yet to be fixed

1.	2.	3.	4.	5.	6.
Prakasam District					
38.	i) APIE, Ongole	21.70	29	—	15
	ii) SEIE, Ongole	23.38	22	21	15
39.	IE, Markapur	44.92	148**	—	9
40.	WC, Ongole +	17.86	46	—	yet to be fixed
Nellore District					
41.	APIE, Nellore	33.28	90	—	40
42.	WC, Nellore	51.95	101	—	25
43.	i) AN, Nellore	37.42	255	—	25
	ii) AN, Nellore (Expan.) +	56.74	210	16	yet to be fixed
44.	IE, Gudur	15.00	22**	6	6
45.	IDA, Pennamagadu	20.41	33	—	5
46.	IDA, Kavali	30.00	30**	4**	12
Cuddapah District					
47.	IE, Cuddapah	37.34	43	17	12
48.	IDA, Cuddapah	415.51	**	—	4
49.	IDA, Kodur	35.00*	—	—	yet to be fixed
50.	APIE, Proddatur	16.93	41	8	8
51.	IDA, Proddatur	158.00	**	54	3
52.	IE, Yerraguntla	16.78	20	—	8
53.	IE, Rajempet	30.75	34**	6	under revision
54.	IE, Rayachoti	24.57	13**	—	6
Chittoor District					
55.	i) APIE, Chittoor	19.14	27	7	11
	ii) APIE, Chittoor (Expan.)	39.27	62	10	yet to be fixed
	iii) AN, Chittoor	23.92	168**	—	11
56.	i) APIE, Tirupathi	41.41	79	10	30
	ii) APIE, Tirupathi (Expan.)	57.41	47**	12**	yet to be fixed
	iii) SIE, Tirupathi	3.15	1	7	30
57.	IDA, Gajulamandyam	623.07	78**	14	12
58.	IDA, Kambakkam	104.00*	—	—	yet to be fixed
59.	IDA, Tirupathi +	24.91	64	—	under revision
60.	IE, Srikalahasti	76.09	49**	—	3
61.	IE, Madanapalli	29.22	41**	8	12
Anantapur District					
62.	APIE, Anantapur	59.05	68	—	10
63.	RIE, Sadlapalli	38.13	40	10	4
64.	IE, Kadiri	49.29	61**	8	5
65.	IE, Tadipatri	9.09	13	8	18
66.	IDA, Guntakal	57.31	46**	10	3
67.	IDA, Gooty +	51.52	107	6	yet to be fixed
Kurnool District					
68.	i) IE, Kurnool	16.75	25	10	15
	ii) IE, Kurnool (Expan.) +	14.78	20	10	15
	iii) SEIE, Kurnool	11.48	26	15	15
69.	i) IE, Nandyal	9.01	10	10	20
	ii) IE, Nandyal (Expan.)	14.81	11	14	20
70.	IE, Dhone	29.75	73**	—	3
71.	APIE, Adoni	229.51	41**	4	6
Rangareddy District					
72.	IDA, Kukatpally	108.00	76	30	100
73.	IE, Vikarabad	31.62	20**	25	10
74.	IE, Chevella +	32.15	44	—	yet to be fixed
75.	IDA, Jeedimetla	921.86	401**	387	60
76.	IE, Medchal	126.58	131	24	30
77.	SEIE, Kattedan	250.00	201**	454**	40
78.	AN, Hyderabad	202.22	1259**	6	50
79.	IE, Moula Ali	51.60	63	13	75
80.	IDA, Nacharam	700.00	288**	19	50
81.	IDA, Uppal	456.00	104**	14	50
82.	i) IDA, Cherlapalli Ph-I	94.00	80	34	30
	ii) IDA, Cherlapalli Ph-II +	472.00	259	25	yet to be fixed

1.	2.	3.	4.	5.	6.
83.	i) EC, Kushaiguda	681.68	76	82	85
	ii) EC, Kushaiguda (Expan.)	10.17	46	—	85
84.	IDA, Mallapur	187.05	189	40	50
85.	IE, Kukatpalli +	16.00	94	14	yet to be fixed
86.	IDA, Balanagar	49.94	55	—	100
87.	i) APIE, Balanagar,	55.05	81	—	100
	ii) SIE, Balanagar	6.00	8	14	100
Hyderabad District					
88.	IE, Sanathnagar	91.00	32	100	125
89.	IE, Chandulal Baradari	25.82	29	28	75
Warangal District					
90.	IE, Warangal	25.31	67	34	40
91.	KAN, Warangal	18.19	152**	6	40
92.	APIE, Jangaon	30.00	38**	—	10
Medak District					
93.	i) IE, Patancheru	56.26	67	34	40
	ii) IDA, Patancheru	1091.32	275**	45	40
94.	i) IDA, Pashamylaram Ph-I	170.00	101**	24**	yet to be fixed
	ii) IDA, Pashamylaram Ph-II	1129.00*	—	—	yet to be fixed
95.	IDA, Yelumala	308.26*	—	—	yet to be fixed
96.	AIE, Ramachandrapuram	25.17	13	35	50
97.	RIE, Zaheerabad	24.13	34**	12	16
98.	IDA, Zaheerabad +	140.00	16	—	yet to be fixed
Nalgonda District					
99.	IE, Nalgonda	29.00	46**	—	30
100.	IE, Suryapet	41.36	60	19	10
101.	IDA, Miryalaguda	54.46	80**	20	15
102.	IDA, Bhongir +	63.26	59	—	15
103.	IDA, N. Sagar	382.00*	—	—	yet to be fixed
Nizamabad District					
104.	IE, Sarangpur	56.07	11	34	20
105.	IE, Bhodan	8.56	13	7	under revision
106.	IDA, Kamareddy	20.85	27**	6	under revision
107.	AM, Nizamabad	23.95	184**	—	30
108.	RIE, Kisan Nagar	20.00	11	8	6
Adilabad District					
109.	IE, Nirmal	42.37	42**	10	5
110.	IE, Mancherial	25.60	—	22	6
111.	IE, Adilabad	32.00	42**	6	15
Karimnagar District					
112.	IE, Karimnagar	34.65	32	28	20
113.	IDA, Ramagundam	52.62	36**	4	20
Mahabubnagar District					
114.	IE, Mahabubnagar	34.06	28	34	15
115.	IDA, Palem	32.02	28**	6	3
116.	IDA, Kothur	180.00	64	12	25
117.	IE, Jedcherla +	23.01	46	8	30
Khammam District					
118.	i) IDA, Khammam	102.72	131**	6	20
	ii) IDA, Khammam (Expan.) +	27.00	49	4	yet to be fixed
119.	IE, Kothagudem	53.17	30**	12	5
120.	IDA, Bhadrachalam	17.23	45**	4	10
121.	IDA, Palwancha	1017.45*	—	—	under revision

* Undeveloped land available
** Vacancy available for allotment
\+ Estate under development
++ Land cost applicable until 31.3.87. However, the rates are subject to revision without notice.

APPENDIX No. II

INDUSTRIES IN THE LARGE SECTOR IN HYDERABAD AND ITS ENVIRONS

Sl.No.	Name of the Industry	Location	Year of Establ-ishment	Capital invest-ment Rs. in lacks	No. of persons employeed	Products manufactured
1	2	3	4	5	6	7
PUBLIC SECTOR						
1.	India Government Mint	Saifabad	1903		582	Domestic Coins
2.	Government Distilleries	Narayanaguda	1946	12.24	174	Liquor Gulmohwa
3.	M/s Republic Forge Co.	Moula Ali	1957	150(A) 120(S) 120(P)	316	Alloy Steel Forgings
4.	M/s Hyderabad Construction Co. Ltd.	Azambad	1934	39.37	42	Acetic Acid and Butyl-Acet
5.	M/s Gangappa Cables	Uppal	1965	219	178	Super Enamelled paper cover copper and Alluminium windi wires
6.	M/s Union Carbide(Ind) Ltd.	Moula Ali	1967	1.5	420	Drycells and batteries
7.	M/s Sbaw Wellace & Co., Ltd.,(Andhra Winery & Distellery)	Malkajigiri	1965	81.57	84	Wines, Whiskies and Brandi

		4	5	6	7
M/s Usha Flour & General Mills Ltd.	Kukatapally	1965	13.2	39	Maida, Ravua, Atta and Bran etc.
M/s Hyderabad Deccan Cigreettee Factory	Meesheerabad	1930	4.0	106	Cigareettees
M/s Hyderabad Chemicals	Azamabad	1941	8.57	140	Pharmaceutical Preparations, Ether Solvents and Ether Anaesthetic "Infantete" Gripe Water and patent and proprietory medicines.
M/s Deccan Porcelain & Enamel Works Ltd.	Bakaram	1941	1.71(A) 1.70(S&P)	74	House-hold, hollowares and hospital military enamelwares
M/s Hyderabad Polteries Ltd.	Bakaram	1946	12.85(A)	120	S.G.Piples, Roofing tiles, fi Bricks and fittings etc.
M/s J.B.Mangharam	Tank Bund	1950	10	124	Biscuits and Confectionery
M/s Alpins Studio	Masta Tank	1957	1.5	17	Aluminium bromide sheets, identity cards, tabels for industrial use, charts for defenoe,art trays and processed glass and lanterus slides
M/s India Leaf Spring Mfg.Company,(P) Ltd.	Sanathnagar	1959	5.0	120	Automobile Leaf Springs
M/s Andhra Roller Flour Mills	Naualnagar	1961	6.5	93	Maida, Ravven,Atta, and Bran
M/s Spectra Structurals P) Ltd.	Moula Ali	1963	25(A) 7.93(S&P)	50	Roof Trusses, Columns purlins etc.

1	2	3	4	5	6	7
18.	M/s Southern Electrodes (P) Ltd.	Moula Ali	1963	10(A) 9(S) 9(P)	40	Arc Welding Electrodes
19.	M/s A.P.Electrical Equipment Corporation	Sanathnagar	1963	168	480	Electric Meters
20	M/s Veljan-Hydrair(P) Ltd.	Balanagar	1965	15(A) 7.6(P&S)	65	Air & Hydraulic Cylinders,Contrc Fitters, regulators lubricators etc.
21.	M/s Andhra Re-rolling Works	Mossapet	1964	10	250	M.S.Rounds,angles & Flats etc
22.	M/s Shri Krishna Bottlers Ltd.	Tankbund	1965	10(A) 12(SP)	106	Aerated Waters
23.	Indecor Laminates(PVT) Ltd.	Sanathnagar	1965	10(A) 5.82(SP)	30	Plastic Laminated Sheets
24.	M/s Venkateswara Roller Flour Mills	Sanathnagar	1968	15	43	Maida, Ravva, Atta and bran etc.
25.	M/s Gun-Sip(P) Ltd.	Sanathnagar	1964	73.98	N.A.	Automobile Springs and Leaves Springs. The concern has not yet entered the sales market
26.	M/s Indo-Swing Ltd.,	Balanagar	1966	N.A.	N.A.	Safety raxor blades
27.	M/s Southern Engineers (P) Ltd.	Uppal	1967	3.0	25	Pre-cast cement concrete products
28	M/s Salimar Biscuts (P) Ltd.	Uppal	1956	30(A) 16.46(S&P)	4100	Biscuits
29.	M/s Mahaveer Cotton Mills Ltd.	Azamabad	1968	8	60	Cotton Yearn

NUMBER OF FACTORIES FUNCTIONING IN 1968 IN HYDERABAD, SECUNDERABAD & ITS ENVIRONS

Sl.No.	Type of Factory	Hyderabad City	Hyderabad City East	Hyderabad City West	Secunderabad	Tandur	Medcha
1	2	3	4	5	6	7	8
1.	Rice Mills	12	3	1	4	1	2
2.	Rice & Oil Mills	1	-	-	1	-	-
3.	Rice & Dal Mills	2	-	-	-	-	-
4.	Rice & Flour Mills	3	-	-	1	3	-
5.	Dal Mills	39	-	-	-	-	-
6.	Dal & Flour Mills	1	-	-	-	1	-
7.	Dal & Oil Mills	1	-	-	-	-	-
8.	Flour Mills	3	-	-	-	2	-
9.	Oil Mills	26	-	-	2	3	-
10.	Saw Mills	25	-	-	11	-	-
11.	Printing Presses	48	-	-	28	-	-
12.	Glass Industries	7	-	-	-	-	-
13.	Iron & Steel Works	27	-	-	12	-	-
14.	Engineering Works	55	-	-	22	-	-
15.	Textiles	6	-	-	-	-	-
16.	Ice Factories	2	-	-	1	-	-

1	2	3	4	5	6	7	8
17.	Chemical & Pharmaceuticals	13	1	-	-	-	-
18.	Cement Works	2	1	-	1	-	-
19.	Tile Works	4	-	-	-	-	-
20.	Bone-Meal Factories	2	-	-	-	-	-
21.	Tanneries	9	-	-	-	-	-
22.	Mineral Grinding Industries	4	-	-	-	-	1
23.	Aluminium Works	-	-	1	1	-	-
24.	Stone Works	1	-	-	-	5	-
25.	Match Factories	7	-	-	1	-	-
26.	Beedi Factories	4	-	-	6	-	-
27.	Confectionery	3	-	-	1	-	-
28.	Furniture Works	2	-	-	1	-	-
29.	Button Factories	4	-	-	-	-	-
30.	Miscell neous	163	3	1	59	-	-
TOTAL		476	8	3	151	16	3

APPENDIX NO: IV

LIST OF INDUSTRIAL UNITS IN RAMACHANDRAPURAM - PATANCHERUVU TOWNSHIP

PAST GROWTH 1976, 86, 83.

Sl. No.	Name of the Establishment.	Items produced Services given.	Average daily Employment.	Size of electric power connection.	Other sources of power.	Source of raw materials.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	M/s. Pratap Steel Rolling Mills (P) Ltd.	Iron and Steel Products.	350	6450 KVA.	—	—
2.	M/s. Hyderabad vaccume Metalizers (P) Ltd.	Metallized Plastic Film and paper.	13	75 KVA.	—	—
3.	M/s. Sri Saibaba Cellulose Pvt. Ltd.	Bleached cotton lintes (cellulose pulp).	41	70 KVA.	--	--
4.	M/s. Deccan Alloy castings.	Steel & Alloy Steel castings.	15	300 KVA.	—	—
5.	M/s. Tant Cap Electronic Ltd.	Tantalum capacitors.	150	430 KVA.	--	—
6.	M/s. Venkateswara Transmissions Ltd.	Diesel & Battery locomotions.	75	30 H.P.	—	--
7.	M/s. National Chemical Industries.	Borium Carbonate, Sodium Sulphide.	20	2500 units per month.		
8.	M/s. Wilmington Electronic (Chemicals) Pvt. Ltd.	P.T.F.E. tubes, corted wires, tapes etc.	3	60 KVA.	--	--
9.	M/s. Bapuji Electronics & Chemicals Pvt. Ltd.	T.T.F.E. Components for Electronics & Chemical Industries.	6	20 KVA.	—	--

Contd.....

(1)	(2)	(3)	(4)	(5)	(6)	(7)
10.	M/s. Libra Chemicals.	Sodium Azide.	6	75 KVA.	--	--
11.	M/s. Manjira Rubber Industries.	Cycle and Rikshaw tools.	28	120 KVA.	--	--
12.	M/s. Polyweave.	H.D.P.E. Woven Bags.	30	46 KVA.	--	--
13.	M/s. Tirumala Clay works.	Tiles only.	35	1,300 units.	--	--
14.	M/s. Bharat Metalic Powders Ltd.	Metal Powers.	22	750 KVA.	--	--
15.	M/s. Asian Wire Ropes Pvt., Ltd.	Steel Lires ropes and stand wires.	120	315 KVA.	--	--
16.	M/s. Hyderabad Pulp Products Pvt. Ltd.	Cotton pulp for rayons, explosives etc.	15	50 KVA.	--	--
17.	M/s. A.P. Scooters Ltd.	Scooters.	300	350 KVA.	--	--
18.	M/s. Sree Jaya Fastens Pvt. Ltd.	Bolts & nuts.	12	120 KVA.	--	--
19.	M/s. Strong Hold Industry.	Automobile replacement parts.	26	65 H.P.	--	--
20.	M/s. Dayal Plastic Industries.	Plastic mono filt cloth, cotton cloth, moulding items reprocess etc.	10	20 H.P.	--	--
21.	M/s. Venkataramana Printing Press.	Printing and binding.	8	3 H.P.	--	--
22.	M/s. Lakshmi Chemical Industries.	Barium Chemicals.	14	74 H.P.	--	--

Contd.....

(1)	(2)	(3)	(4)	(5)	(6)	(7)
23.	M/s. Modern Steel Company.	6 mm and Mild	20	140 KVA.	--	--
24.	M/s. Denison Hydraulics India Ltd.	Hydraulic equipment.	100	100 KVA.	—	--
25.	M/s. Fenoplast (P) Ltd.	PVC Leather cloth of various types.	10	250 KVA.	--	--
26.	M/s. Nagarjuna Steels Ltd.	Cold Rolled Steel strips.	300	1500 KVA.	--	--
27.	M/s. Sahney Furis Rhone	Automotive Electrical equipment.	500	300 KVA.	—	--
					Phase - II.	
28.	M/s. Volgha Limited.	Zolane E.C.	21	150 KVA.	--	--
29.	M/s. Bharat Heavy Electricals Ltd.	Electrical equipments.	8441	6,360 KVA.	Power generator.	--
30.	M/s. Pioneer Engineering Syndicate.	Pre-stressed corerecte pipes.	130	250 KVA.	—do--	--
31.	M/s. Industrial Air Technics Ltd.	Air pollution control equipment.	12	55 H.P.	--	--
32.	M/s. Shamal Paper Bound Industry.	Cord Boards.	7	40 H.P.	--	--
33.	M/s. Mysore structural Ltd.	Prestrusted concrete, Railway sleepers.	74	30 KVA.	--	--
34.	M/s. Sri Rama Engineering Industries.	Job Works to BHEL.	21	30 H.P.	--	—
35.	M/s. Aruna Ancillary Industries.	Job works to BHEL.	15	22 H.P.	--	—
36.	M/s. Inapura Ancillary Industries.	Job works to BHEL	13	20 H.P.	--	--
37.	M/s. Lalitha Industries.	Job works to BHEL	25	48 H.P.	--	--

Contd.....

(1)	(2)	(3)	(4)	(5)	(6)	(7)
38.	M/s. Prasad Engineering Works.	Job Works to BHEL	18	60 H.P.	--	--
39.	M/s. Vijaya Industries.	Scooter seates.	7	15 H.P.	--	--
40.	M/s. C.H. Capacitors.	Low voltage power capacitors.	10	30 H.P.	--	--
41.	M/s. Kesons Fabrication Works.	Job Works to BHEL.	150	60 H.P.	--	--
42.	M/s. Lakshman Machine Tools.	--do--	30	30 H.P.	--	--
43.	M/s. Navabharath Industries.	--do--	20	35 H.P.	--	--
44.	M/s. Vijaya Engineering.	--do--	15	35 H.P.	--	--
45.	M/s. Soma Industrial Engineering Works.	--do--	13	18 H.P.	--	--
46.	M/s. Chamfab Weldors (P) Ltd.	Fabrication of Tanks, Pressures vessels etc.	50	75 H.P.	--	--
47.	M/s. Sharada Industries.	Job work for BHEL.	14	2400 units.	--	--
48.	M/s. Weld Fabricators.	Light, Medium & Heavy Fabrications.	8	51 H.P.	--	--
49.	M/s. Fatchine Tools.	Job Works to BHEL.	16	74 H.P.	--	--
50.	M/s. Kaamer Industries.	Job work to BHEL.	21	38 H.P.	--	--
51.	M/s. Anjaneya (P) Ltd.	Scooter parts for M/s. Andhra Pradesh Scooters.	10	50 H.P.	--	--

APPENDIX NO. V

List of Industrial Units Located in Patancheru.

RECENT GROWTH 1984,85,86 APPENDIX NO. V

S.No.	Name of the Firm.	Plot/Shed	Line of manufacture.
	INDUSTRIAL DEVELOPMENT AREA::PHASE I PATANCHERU-502 220.		
1.	M/s.Khaja Enterprises	1-A	Structural fabricatio &
2.	" Narasai High way filling.	1-B	Petrol Bunk.
3.	" Tirumala Clay Works.	2-A	Mangalore Tiles.
4.	" Process Steels (P) Ltd.	2-B	Wire Drawing.
5.	" Sri.Hanuman Re-Rolling Mills.	2-C	Steel Re-Rolling.
6.	" Fire Statio-n	2-D	Fire Station.
7.	" K.Nagabhushanam	2-E	-
8.	" Bharat Metalic Powder.	3-A	Metalic Alloy Powders
9.	" Quinn India Limited.	4-A	Leather Chemicals.
10.	" Indo Hacks (P) Limited.	4-B	Hacksaw Blades.
11.	" Cubex Tubings Ltd.	4-C	Copper Tubes.
12.	" Muthuguru Enterprises.	4-D	Wooden Packing & Interior decorators.
13.	" Shaney Paris Rohne Ltd.	5-A&6-A	Automotive Electrical Equipment.
14.	" Deccan Alloy Castings.	5-B	Alloy Steel Castings.
15.	" Midwest Alloy Castings.	5-B1	Alloy Steel Sheets.
16.	" Shakti Cables.	5-C&6-C	Cables.
17.	" Hyderabad Vaccum Metalizers.	6-B	Metalised Plastic fil & Paper Printing.
18.	" Ramachandra Tools Ltd.,	7	Cutting Tools.
19.	" APSEB Sub Station.	7-B	Power Supply Station.
20.	" Jindal International (P) Limited.	7-A1	Aluminium Extrustions
21.	" Sripada Chemicals(P) Ltd.	7-A2	Oxalic Acid.
22.	" Vidyut Steel Limited.	8 & 9B	Steel Castings.
23.	" Veljan Hyderairs (P) ltd.	9-A	Penumatu & Hydraulic Equipment.
24.	" Bension Hydraulics India limited.	10-A	Hydraulics Pumps.
25.	" Transwing Cargo Movers	10-B	Transport Organisatio
26.	" Syndicate Enterprises.	10-C	Commercial Complex .
27.	" Sun Cables.	11-A1	PVC Cables.
28.	" Buddy India Limited.	11-A2	Forgings of Steels.
29	// Bajaj India (P) ltd.	11-A3	Industrial mateny

S.No.	NAME OF THE FIRM	Plot/Shed	Line of Manufacture
30.	M/S.Jindal International(P)ltd	11-A	Aluminium Extrusions.
31.	" Agrawal Rubber Ltd.,	11-B	Rbbrs.
32.	" SAS Entrprises.	12	Fabrication.
33.	" Nagarjuna Steels Ltd.,	13 & 14	Cold Rolled Strips.
34.	" Sai Corporation.	15-C	Agriculture Implements.
35.	" Alloy Nitrades.	15-A	Nitrades.
36.	" Telephon Exchange.	16-A & B	Telephone Exchange.
37.	" Hotel International.	16-C	Hotel.
38.	" Ambuja Petro-Chemicals.	17-A, 18-B	Pathalic Anhydrid
39.	" Hyderabad Pulp Products (P) Limited.	&20-A 17-B	Processing&Mfg Cellulose Products.
40.	" Ferro Cermics	17-C	Ferrids.
41.	" Haichem Limited.	17-D	Fine Chemicals.
42.	" A.F.Scooters Limited.	18-A	Scooters.
43.	" Navabarath Electronic.	18-C	Tantalium Capasitors.
44	" Shuet Pack Industries	18-E	EggTRAYS.
45.	" Vijaya Industries.	19	Zinc Oxide & Lead Oxide.
46.	" Arihant Engineering Co Private Limited.	20-B	Mechanical Engineering.
47.	" Feno Plast(P)limited	21	PVC Leather Cloth.
48.	" Golconda Abrisives Ltd.,	22	Gringing Wheels.
49.	" Helical Tubes&Ducts(P)Ltd	23-A	Rounded Helical Tubes&Ducts
50.	" H.E Industries.	23-A1	Borewell Hand pumps.
51.	" Inter [illegible] Polymers.	23-C	Expoxy Resins.
52.	" Venkateswara Transmission (P) limited	23-D	Locomotive.
53.	" Foseon Company	23-Dii	Rexin Coated Sand.
54.	" Esteem Engg. Enterprises (P)limited.	23-Dii	Cylinder lines&Pre-cission castings.
55.	" Jayn Fastaners(P)Ltd.,	24-A	Industrial Fastners.
56.	" Indo Fluorell (P) Ltd.	24-B1	Chemicals.
57.	" Jayn Fastaners(P)ltd.		
58.	" Gromor Chemicals(P)Ltd.	2[illegible]-2	Chemicals.
59.	" Deccan Leathers Ltd.	25&25-A	Finished Leather goods.
60.	" Chowgule Matrix Hobs Ltd.	26-A	Gear Hubs.
61.	" Indian Ocean algintesltd.	26-B	Sodium Alginate.
62.	" Asian Wire Ropes Ltd.,	26-C	Wire Ropes.
63.	" Rana Partap Re-rolling Mills limited	27&28	Steel Ingots.
64.	" Partap Fastners(P)Ltd.	29	Industrial Fastners.
65.	" Sangeetha Picture palace	-	Cinema Theatre.
66.	" M.Manikyam	A-1	Petrol Bunk.
67.	" A-1 Enterprises.	A-2	Ice Factory.
68.	" Bright Servicing Units	A-3	Mechanical Work Shop.
69.	" Rahul Enterprises	-	Weigh Bridge.
70.	" Gopinagh	12	Agriculture.
	Phase - I Sheds.		
71.	" Ever Bright Plastics	1A&1-B	Plastic Goods.
72.	" Assam Carbon Products.	2A&2B	Carbon Brushes.
73.	" Metang cast limited.	3A& 3B 4A & 4B 5A & 5B	Alloy Ferrous. castings.
74.	" Gururaja Engg. Works	6 1A	Job Works Engineerings.
75.	" Bhutada Cable Inds.	6B	PVC Wires and Cables.
76.	" Packwell Industries.	7A	Tin Containers.
77.	" Golden Products.	7B	Tin Containers.
78.	" Srinivasa Saw Mill & Wodden Packing Inds.	8A	Wooden Packing and Sizing.
79.	" Deccan Phyto Chemicals.	8B	Strycheinn Brucine & other salts (Drugs and drug intermediate)

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Sl.No.	Name of the Firm	Shed No.	Line of Manufacture
Phase-II			
80.	M/S. Volrho Limited	Plot.No.1.	Zolone.
81.	" Novopah (I) Limited.	2.	Practical Boards.
82.	" Shanker Associates.	4A	Chemicals.
83.	" Laxmi clay Structrals(P)ltd.	4B	
84.	" Vanilline & fine chemicals	5&6	Fine Chemicals.
85.	" Coramandal Prestecrets	9	Stressed conorats pipes and RCC Pipes.
86.	" Biological E Limited.	7&8	Drugs and Pharmaceuticls
87.	" R.C.C.Sales(P)limited	10-A	Machine tools and accesseri
88.	" N.V.Investment(P)Ltd.	10B	Spl.Machine moulds accessorise & safety Razers
89.	" Unique Properties &Securities(P)Limited.	10C	Plastic Components.
90.	" Emerald Investments(P)Ltd.	11A	Hot and cold rolling mills
91.	" NukinIngestments(P)Ltd.	11B	Plastic Components.
92.	" Samrat Investments(P)ltd.	11C	Spl.Machine moulds& and Safety Razars
93.	" Malhotra Dominion Contact Lenses.	11D	Contract Lenses.
99.	" PJ Chemicalsltd.m	I2A&I	~~Fatty~~ Alkylamines. → Alkylamines.
100.	" Thrillinga Metal Inds.,	14	Tin Containers.
101.	" Anant Tin Industries.	14-B	Tin Containers.
102.	" Baby Drum Mfg.,		
103.	" San Napkins	17-A	Sanitary Napkins,Surgical pads Baby diapers.
104.	" ION Exchange(P)Ltd	19-A	Chemicals for the treatment and conditioning of water for boilers.
105.	" Relieable Paper&Board Inds	47.	
106.	" G.P.Ice	20&21	Ice&allied products.
107.	" Asain Paints(I)Ltd.,	50to56	Paints,Anamels,Varnishes
108.	" Karanataka Oxygen(I)Ltd.		
109.	" Flowchem(P)Limited.	48	
110.	" Hytics Containers.		
PHASE-III			
111.	" Director of E.S.I.	45 to 49	Establishement of Dis .
112.	" Kingston Plastic(P)Ltd	72 to 73	HDPE Pipes.
113.	" Swati Engg.Enterprises	74 to 75	Fabrication of Che., plant equipment such medium and high Pressoure vessels&Carbon steel.
114.	" Fr.Joseph Puthumana		School.
115.	" Venkateswara Picture palace		Cinema Theatre.
116.	" Sree Rama Enterprises.		Auto Garrage & Servicing
117.	" Shasha sai Plastic		
118.	" Kobu Engineers.(P)ltd.		
119.	" Deccan Engineering works.		
120.	" Bhanya Engineering works.		
121.	" Ajaya Enginering.		
122.	" Veka & Maghno Fabs(P)ltd.		
123.	" Sri.Guru Engine ring Works.		
124.	" Speed Steel Industries.		
125.	" Electro Flux (P)ltd.		
127.	" Industrial Metal Finishes.		
128.	" Balaji Industries.		
129.	" Rock Grinlers Engeneers.		
130.	" Sarada Fabrication.		
131.	" Indira Engineering Works.		
132.	" Troimech Engeneering(P)Ltd.,		
133.	" Sri Sai Srinivasa Industries.		
134.	" Vasanthi Enterprises.		
PHASE -IV.			
135.	" Peniale Gases	1 to 3	Indigo
136.	" B.M.F.Beltings Ltd.,	4 to 22	V.Belts.
137.	" Padma Enterprises.	5	Furniture works.

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Sl.No.	Name of the Firm	Plot/Shed No.	Line of Manufacture.
138.	M/s. Medak Stainless Rolling (P) limitdd	6 to 20	Stainless Steel Re-Rolling
139.	" Saibaba stone polishing Industry.		
140.	" Sri.Krishna Enterprises.	8	Thread Rolling Dies.
141.	" C.P.C Pharmaceuticals Ltd.	9 to 10	Basic Drugs&Formalations
142.	" Ranka Cables (P)Limited.	11to15	ASSR Conductors
143.	" Bhagyanagar Oils Refinery	16	Refund Oils.
144.	" Pinakini Alloy Castings.	17	Alloy Steel Castings.
145.	" Hyderabad Oxygen(P)Ltd.	21	Industrial Gases.
146.	" Neeraj Chem	25	Chemicals
147.	" JJ Mark Well & House Industries.	26to29	High Pressuere Hydraulic Steam pneumatic hoses.
148.	" Dexo Laboratories.	30to35	Basic Drugs.
149.	" Standard Organics Ltd.	36to44	Basic Drugs.
150.	" Asrani Tubes.Ltd.	45to47	G.I.&Black Pipes.
151.	" Reliance Cellulose Products Limited.	49 to 54	CMC Cellolose Products.
152.	" Kousalaya Chemicals Ltd.		
153.	" Gee Bee controls(P)Ltd.	57	Electrical Sddensi coils & Power Filters.
154.	" Texas Valve Actuators(P)Ltd	58	Linear valve actuators & Rorary Valve actuators.
155.	" Premier Tubes(P)limited	61to64	ERWaluminium Tubes Fitings
156.	" Adroi Hea & Treatments.		
157.	" Alluddin Paper Industries.		
158.	" Anukampa	65	PVC Compound.
159.	" City Iron Works.	A-1	Fabrication Work.
160.	" Nova Resins & Chemicals ()P)Limited	A-2 melanine formaldehayan	Amino Resins such
161.	" Libra Structural Works		
162.	" Coorg Chemicals(P)Ltd.	A-3toA-4	Hexamine
163.	" Srinivasa Ice Factory		
164.	" Venkateswara Detergents,	A-6	Synthetic Detergents.
165.	" A.B.Allied Products.		
PHASE-V.			
166.	" Nagarjuna Paper Mills	1 to 3	Special Tissue Paper
167.	" Synergetice limited	4 to 7	Electronic toys,
168.	" Chemi Rubbers	8 to 10	Auto tubes auto flaasand solid rubber tyres,
169.	" Ganapan Cotton waste spinning mills	9,10,15&16	Yarn from cotton waste.
170.	" Kottam Industries	11	Eng Mechine shop
171.	" Padma Engg.Works.	12	Gen.Engg.Workshop
172.	" Vijaya Crank well	13	Gen.Machine shop
173.	" Polyman palstic Inds.	14	Jerry Cans.
174.	" Lashmi Engg.Works.	21.	Mechanical Work Shop
175.	" Rayalaseema Tin Metal	31-A	Tin Metal Containers.
176.	" Hypack Industries.	39-B	HDPE Film
177.	" Secunderabad Printed Cartons	41-A	Printed materials for tele
178.	" Amareswari Industrial Packing Corporation	41-B	Watch Straps.
179.	" Abida Aromatics	41-C	Chemicals.
180.	" Forgewell Engineers	42-B	Forgins.
181.	" Electro Mechanical Fabri-	43-A	Control Pannels.
182.	" Shakti Plastics	43-B	Injection moulded plastic goods.
183.	" Plastic Extrusion	44-A	Poluthene film (HDPE)
184.	" Jain Chemicals ltd.	44-B	Sodium Silicate.
185.	" Mid west Grinates Pvt. limited.	44-C	Polishing of Stones.

Contd .....5.

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-6-

Sl.No.	Name of the firm	Plot/Shed No.	Line of Manufacture.
186.	M/s Industrial Intermediates	D-1	Chemicals.
187.	" Kanaka Durga Engg. Indu.	D-2	General Engg.&Mechanical
188.	" Crown Metal Industries.	D.4	General Engg&Work Shop
189.	" Sunita Industries	D.5.	Printed Wax coated
190.	" Hindustan Wood Works.	D-6	Decorative Wood furniture.
191.	" Poly Fibre Industries.	D-7	High Molecular, High Denimity Polythene film.
192.	" Sunita Industries.	D-8-	General Engineering and Mechanical Works.
193.	" Quality Printed circuit Boards.	D.9	Printed circuit Board pres machines componentsscreen Printing works.
194.	" Controls Automation India (P)Limited	D-10	Electronic temperature controllers.
195.	" Insta print(P)ltd.	D-11& D-12	DryTRasfersheets and printing.
196.	" Visaka Asbestos Cement Products limited.		effluent and soot of this industry is to dangerous - 196 Asbestos Sheets.
197.	" Charminar Paper Mills (P)=limited.		Papers.
198.	" Godavari Fabricators.		Machining&Fabrication.
199.	" Wilia India Limited.		Carbide Tools.
200.	" Sonar Lamps&Caps (P)Ltd.,		Electrical Bulbs and fittings.
201-	" Akil Pharma(P)Ltd.	P	Pharmaceuticals.
202.	" Deccan Drugs.		Drugs and Pharmaceuticals.
203.	" Laxmi Porcelian Ltd.		Porcelain.
204.	" B.S.Bycycles(P) Ltd.		Cycle parts.
205.	" Dolphim flour mills.		Maida, Ravva, Atta.
206.	" Shalimar Flour mill		Do.
207	" Gopal Flour Mill		Do.
208.	" Indo Japan Watch Company		Watch compnents.
209.	" Sree Manufacturing Co.		Spinning Mill
210	" J.N.T.Textiles.		Textile Mill.
211.	" Nagarjuna Coated Tubes Limited.		Steel tubes.
212.	" Nagarjuna Signode ltd.		Signodes.
213.	" Annapurnai Pulvarizers (P)ltd.		Pulvarizers.
214.	" Pioneer EngineeringSyndicate		Cement pipes.
215.	" Hyderabad Lamps.		Bulbs.
216.	" Numerical Controls Limited.		Electronic Equipment
217.	" Hyderabad Connectronic limited.		Electronic.
218.	" Doxan Laboratories.	D.1 &E2	Pharmaceuticals.
219.	" Charminar Industries.	D-5	Structural Steels.
220.	" Arathi Polymers	D-6	Polypropyline
221.	" Laxmi Poly packs	D-11	poly propylin.
222.	" Saba Plastics-	D-23	Plastic Moulding.
223.	" Intermoulds(P)ltd.	D-24	Dies and moulds.
224.	" Hyderabad Polymers.	D-25	PVC Compounds.
225.	" Sridhar Industries.	B-2	Chemicals.
226.	" Willmington Electronics.		Electronic components.
227.	" sai industries.	C-1	Aluminium conductors.
228.	" Strong hold industries.	C-3	SSUtencils.
229.	" Jain Metal Industries.	C-4	SS Utencils.
230-	" Agrico Industries.	D-2	Furniture
231.	" Andhra Liquor Manufactures.	E-1	Liquors.
232.	" National Chemicals	D-9&D-10	Barium Carobonate
233.	" Libra Chemicals	D-7 &8	Fine chemicals.
234.	" A.S.Reddy(track)	D-21	Industrial Instruments.
235.	" Machine Shop	D-20	

Contd.....6.

Sl.No.	Name of the Firm	Plot/shed	Line of Mfg. Manufacture.
236. M/s	D.K.Steels	D-12	SS Utencils
237. "	Dhoolchand jain	E-4	SS Utendils.
238. "	Haichem	B-3	Binery explosives.
239. "	Polyweave	B-5	Cotton Fabrics.
240. "	Dayal Plastic	C-5	Plastics.
241. "	Vijaya Rubber Products.	E-5	Rubbe r.
242. "	Praveen Fibre Glass	E-?	Sleeves.
243. "	Agrawal Rubbers.	E-6	
244. "	Bright Metal Industries	E-8	SS Utendils.
245. "	Telephone Exchange	D-2 ?	Exchange
246. "	Excel Engineers	E-7	Precision Turne' and mille
247. "	S R R Enterprises.	D-3	Sulphuric Acid.
248. "	Saslar Mellables	A-1&A-2	Ferretic apetalitic
249. "	Nayastrap	A-5	Strapping
250. "	Saibab Cellulose	A-10&A-11	Cellulose.
251. "	Pragathi Packing	D-26	Corrugated Boxes.
252. "	Asha Enterprises	A-3&A-4	Hard Ware.
253 "	Manjeera Rubber Industrie	A-6-7&8	Rickshaw Tyres adn tubes.
254. "	Saibaba Cellulose	A.9	Cellulose
255. "	Moderan Steels	A-12&A-13	
256. "	Industrial Internati nala-14,15,16 corproation		Leather Good s.
257. "	Yuvadharathi Chemicals	B-6	Zinc Oxide.
258. "	Hyderabad Insulated Wires	B-7&8	Cables.
259. "	Pawan Industries.	B-9&C-15	Cycle Spokes
260. "	R.K.Iddustrics	B-10&C-15	Cycle spokes.
Ramakrishna wooden packing	Industries	C-17	Wood Packing.
262. "	Prakash Redd Lines.	D-24&D-25	Transport.
263. "	Florotech cables	D-13,14,15	Teflon.
264. "	National Chemicals.	D.16,17	Barium chloride.
265. "	Tibrwwala steels	D-18,19	SS Re-rolling.
266. "	Vinit Metal Industries	C-11,12	SS Utencils.
267. "	Sriram systems&Forms(P)Ltd.	E-12,13	
268. "	Swadeshi K agazUdyog	E-9,10	Hand Made paper.
269. "	Modern Rice Mill	E-11,E-11/A	Rice Mill
270. "	Sai Corporation	E-16,17	Agriculture implements.
271. "	M.C.A.Chemicals	B-12,13,14,15	MonochloroAcidic acid.
272. "	Modern Foundries.	B-17&C-18	CI Castings.
273. "	Raghave General Engg.Works	B-16	General Engg.Works.
274. "	Allied Forgers	F-1	Allied forgers.
275. "	PerfectHeat Treaters.	F1/2	Heat treatment
276. "	Perfect Engg. Works.	F1/A	Machine Shops
277. "	Kansas Chemicals	C-2	Sodium sulpha e
278. "	S tate Bank of HYD	A-17	Bank.
279. "	Aravind Pattern Mfg.&Wood Patterns	C-16	Wood Patterns.
280. "	Punjab Hotel		Hotel
281. "	Gurunanak Engg.Works.		
282. "	Cytozyme A.P.Limited	B-1	Formulation of Plant.
283. "	National Chemicals Industries.	C-13	

APPENDIX NO. VI

PUBLIC UTILITIES AND SERVICES:

(i) Water Supply :

It needs hardly be emphasized that while fixing up the source of water supply, care should be taken to see that it is capable of being developed in stages to meet the ultimate demand of the main industry, ancillary industries and the town However the requirement of water for industries would depend upon the type of the industries to be developed. While the COPP have recommended a supply designed to give 40-50 gallons (180-225) litres per head per day for domestic use only, the National Building Code have suggested ensuring a continuous water supply at the rate of minimum 135 liters/head/day for esidential premises, the requirements of water for non-residential buildings and uses being extra. For industrial project towns it would be appropriate to plan for a notable water supply of 40 gallons per head per day which should suffice to meet both residential and non-residential demand of water in the town. Water supply for uses other than residential may be planned in accordance with the recommendations made in the National Building Code. This however does not include unfiltered water required for fire-fighting, street washing and watering of parks and open spaces for which it would be advisable to have a separate network. Water drawn directly from nearby streams or from wells without any treatment should be used for such operations.

SOURCE: TCPO , COPP.

If water for town consumption is drawn in bulk from as existing water supply system, the storage Reservoir could be located appropriately in a suitable town-level open space. If the town is to have its own water purification system and the same can be located near the source of water, purification plan could preferably be located on the outkirts of the town and developed as a town-level open space. In all cases of siting the purification plant and reservoir it is imperative to ensure that there are no pollution hazards. Further the distribution system should appropriately be designed to cater to the ultimate population and for 1-1/2 to 2 times the average demand with continuous supply.

(II) STORM WATER DRAINAGE :

The recommendation made by COPP in their report that the storm water drainage system should normally be designed for 1/2 'to 1' of rainfall per hour, is adequate, and should be appropriately adopted for public sector project towns. In places having heavier rain water run-off, it would be necessary to make suitable provision in the drainage system to prevent flooding of areas during heavy down-pour.

I) PUBLIC LAVATORIES :

Adequate provision of public lavatories should be made in all public parks and open spaces, as well as in commercial and

complexes where there would be congregation of people. This would be in addition to public toilets within the premises of public buildings. The public lavatories in parks should be suitably designed and camouflaged so that they are easily accessible and at the same time do not become an eye-sore.

(IV) REFUSE COLLECTION AND DISPOSAL :

The following recommendations for refuse collection and disposal shall adequately meet the requirements and may be followed:

a) Properly designed enclosures at suitable places in the town must be provided for depositing refuse from houses.

b) The general building refuse should be dumped separately from the organic refuse.

c) Disposal of general building refuse may be done through controlled tipping in low lying area : in and around the town .

d) For disposal of organic refuse composting method through a mechanical composting plant should be adopted and the manur marketed. Compositing on land is not advacated as it will create environmental hazards.

SEWAGE TREATMENT :

The COPP report has emphasized the need for exploring the possibility of secondary treatment of sewage on land either through well-controlled sewage farming or by the provision of oxidation ponds before deciding upon other costly treatment works such as the activated sludge plant or high rate trickling filter. In most of the public sector industrial towns the secondary treatment of sewage will be appropriate to adopt. The sewage treatment process should be so designed that effluent after proper treatment can be used for watering the public parks and open spaces and the manure is marketed. It is further suggested that the sewage treatment plant should be located on the out-skirts of the town after giving due consideration to the wind direction and should be adequately segregated from the adjoining development by means of thick tree plantation. Land requirements for the treatment plant may be met out of the total allocation for open spaces in the land use structure.

APPENDIX NO. VII

PERFORMANCE STANDARDS FOR INDUSTRY

Nuisance Element (1)	Ill Effects (2)	Methods & Instruments for Measurement (3)	Standards (4)	Methods of Controls (5)
Noise	1. Interference in speech communication 2. Fatigue 3. Annoyance 4. Permanent hearing loss to a certain degree	1. Sound level meter to measure intensity levels. 2. High quality crystal or condenser 40 to 50 lbs. microphone. 3. Magnetic tapes 4. Impact noise analyser		Noise intensity roughly can be said to be decreasing as the square of the distance but noise measurement being in logarithmic scale loudness drops slowly in upper bracket. Set back & tree plantation very useful method. Using instruments and devotes to reduce noise at the source accoustic absorbing materials in building.
Smoke	1. Blackened or corroded building 2. Increases personal laundry bills 3. —do—lightening due to darkness and dust 4. —do— need for interior and exterior painting 5. Hazard to aeroplane & motor transportation 6. Damage to vegetation 7. Eye, throat & nose irritation 8. Increases illness like sinustis 9. Damage to merchandise 10. Psychological effect due to overcast skies and frost 11. Depreciation of property 12. Waste of fuel	1. Ringlman chart sheds of grey no. 0, 1, 2, 3, 4, 5, compared to colour of smoke to give % density when the number is multiplied by 20 2. Umbrascope & smoke-cope instruments to find out the density	Smokeless fuel to Ringlman. No. 3 (60%) density according to location with respect to residential area & prevailant wind direction.	1. Use of alternative fuels as gas oil or electricity. 2. Improving method of firings. 3. Special treatment to extract coal particles and chemicals.

(Continued)

(1)	(2)	(3)	(4)	(5)
Dust and Dirt	1. Explosive dust clouds may be formed 2. Bad working conditions 3. Loss of material 4. Ill health	Measuring particles in the emission in terms of grains per cft. by taking a sample. Nuisance can be assessed by the height of stack, velocity & temp. of emission.	No emission of dust, dirt & flash to restricted emission of 0.3 grains per cft. of fuel gas at 500 degree F.	Various types of dust arrestors can be used according to requirements.
Odour	1. Annoyance 2. Ill health	1. Determination of threshold concentration of odoriferous gases. 2. Determination of the type & intensity of odours. Osmometer-odour measuring device. Expert panel of 5-10 persons finding our average of counts given by members.	No emission of odourous gases to certain permissible levels.	Landscaping and buffer planting. Removing at the sources by passing the gases through an absorbing liquid etc. using of other tolerable masking odours. Locating major nuisance industries in down-wind direction & sufficiently away.
Toxic Gases	1. Corroded buildings 2. Damage to Vegetation 3. Eye, throat, nose irritation 4. Increases illness 5. Waste of chemicals	Toxic gas content as parts per million of the volume of the air	Not exceeding than PPM Hydrogen sulphide 0.1 flourine 0.1 nitrous fumes carbon 5.0 monoxide 15.0 sulphur diaoxide 0.3	—do—
Glare & heat	Disturbance to eye and general comfort	Intensity of light and temperature can be measured.	Not specified but operations restricted	Property walls high enough for protection generally not permitted in residential area.
Fire & safety hazard	Danger to life & property		Use of combustible material restricted	Three zones for different types of material used. 1. (i) incombustible to moderate burning materials (ii) free or active burning to intense burning materials (a) enclosed within incombustable walls (b) 40′ set back or automatic sprinkler(iii) flamble vapours at ordinary temp. prohibited.

(*Continued*)

(1)	(2)	(3)	(4)	(5)
				2. (i) free to active burning materials (a) enclosed within incombustible walls (b) protected by automatic sprinkler (ii) flamable vapours at ordinary temp. prohibited.
				3. (i) Fast burning material (ii) flamable vapours at ordinary temp. permitted except within 600 feet of any other use.
Industrial sewage	If let into open stream— 1. danger to public health & safety; 2. danger to acquatic & other life; 3. damage to property if let into municipal sewage— 1. added cost of special treatment; and 2. expansion or alteration of municipal sewage may make expansion of industrial area also difficult		Generally direct discharge in stream prohibited. Standards in terms of B.O.D., total solid contents etc. may be prescribed.	1. Zoning out industries separately which require special sewage treatment. 2. Compelling individual industry, to treat the sewage to bring to a particular standard.
Traffic & transportation	1. Disturbing noise of vehicles 2. Emission of smoke & noxious carbon monodixe with same effect mentioned earlier 3. Traffic congestion causing annoyance & loss of time & money because of stationery & moving commercial vehicles 4. Need of special types of road surfacing	1. Number of vehicles, trip per acre of industrial area per day 2. Noise, smoke & obnoxious gases can be measured as mentioned earlier	No standards can be prescribed as industrial processes and therefore traffic generation is liable for change. For noises smoke & gases standards mentioned earlier are to be adopted.	Industries generating heavy traffic & requiring railway siding etc. should be zoned separately so that roads of adequate widths, parking & other facilities can be provided.

(*Continued*)

(1)	(2)	(3)	(4)	(5)
Aesthetic	1. Untidy & ugly sights 2. Bad working conditions reducing efficieney of workers 3. Unpleasant environment for residents.	No special measures	Adequate setbacks side & rear margins landscaping & maintenance of property.	1. Effective architectural control 2. Restricting industries which accumulate large dump of wastes or raw maiertal to a separate zone screened with trees from other land uses.
Sentimental	Psychological antipathy towards certain industries because of imaginary nuisance	—do—		Problem needs a scientific approach. Enforcement of performance standards with guarantee against any fear of nuisance. Electromagnetic interference and radioactive emission are still in research stage may be required to be dealt within special cases only.

TREES SUITABLE FOR BUFFER PLANTING

S.No.	Name of the tree	Height (feet)	Spread (feet)	Value as
1.	Mango (Seeding) (Mangifera Indica)	45 to 50	40 to 45	economic
2.	Jamun (Eugelina Jambolia)	40	35 to 40	—do—
3.	Neem (Azadirachta Indica)	45 to 50	45 to 50	—do—
4.	Badh (Ficus Bengalensis)	40 to 50	50 to 70	flowering
5.	Shishum (Dalbergia Sissio)	46 to 50	30 to 40	timber
6.	Mahogany (Sweetenia-Mahogany)	50 to 60	45 to 50	—do—
7.	Tamarind (Tamarindus-Indica)	45 to 55	40 to 50	economic
8.	Inga Dulsis	35 to 50	30 to 40	flowering
9.	Silver oak (Gravilla Robusta)	35 to 40	15 to 20	—do—
10.	Ashok (Polyalthia longi-folia)	45 to 60	20 to 30	timber
11.	Peltophoram Ferrygineum	35 to 40	30 to 35	flowering

Flowering trees can be planted in 3rd or 4th row to break the only green foliage effect.

Pollution threat from VSP

om GIRIDHAR GURURAJAN
1984
Express News Service
HYDERABAD March 17,
he commissioning of the Vizag el plant will have far-reaching erse consequences on the life of growing industrial port city rs Prof. T Shivaji Rao the owned ecologist and expert on lic health.

part from the steel factory the ustrial belt of Vizag has an oil iery fertiliser plant rolling mills plant and a cement factory. this makes the city prone to se air pollution.

ated in a caved-in terrain the is surrounded by the Yarada va Simhachalam hill ranges three sides on the fourth by cks forming parts of eastern s.

ace every major project while ributing to the economic de- opment of a region inevitably cause a few environmental backlashes it is necessary for the authorities to foresee the adverse effects and take preventive measures so that the positive aspects are maximised and negative aspects minimised to ensure maximum good for the maximum number of people the environmentalist told ENS in an exclusive interview.

Prof Rao who is the principal of college of engineering Andhra University Waltair is largely responsible in awakening people and educating them on the consequences of interfering with nature. He mounted a compaign against the installation of the Mathura oil refinary through a number of articles.

NEERI REPORT

According to a report on the air-pollution survey conducted by the National Environmental Engineering Research Institute Nagpur that some areas in the valley are highly polluted and therefore it was suggested that no new industries should be permitted to be set up in such sensitive areas.

Prof Rao says since Visakhapatnam is located south of the Yarada hills a large portion of heavy particulate matter gets intercepted by the hill as the barrier. However these hills can in no way prevent the city from being invaded by finely suspended particulate matter and the noxious gases of sulphur and nitrogen emanating from the steel plant.

Besides the unfavourable topographical features the city experiences very undesirable meteorological features such as frequent atmospheric inversions land and sea breeze coupled with high humidity that signify a higher pollution potential zone.

To combat this the industries will not only have to install conventional air pollution control equipment but also ensure that additional air purification units are commissioned at times of atmospheric inversions and low wind, turbulence. In fact in many industrialised countries high-pollution units are shut down from time to time to maintain hygienic quality of air in the colonies. Perhaps this could be tried in Vizag.

COMPLAINTS

Several people particularly from villages of Mindi and Pillakavantipalem complain about the incidence of respiratory diseases watering of the eyes asthma chest complaints skin and nasal allergic and dermatitis. Even the rain water samples have indicated high acidity.

Moreover the open dumping of sulphur should be stopped imme

. Turn to page 9 col 2

Pollution threat from VSP

17 MARCH-1984.

APPENDIX
NO. VIII

From Page 1

diately. They should be stored in closable containers.

The Vizag Urban Development Authority should be advised by the Government not to start colonies in places like Madhavadhara located n the down-wind direction of the highly polluting industries and also within the smoke zone.

Measures are to be taken to assess the contribution of air pollutants from the Vizag Steel Plant in the light of already existing levels of pollutory in the city. Since the productions has yet to start this is the right time to prepare an environmental impact report. Such a report will definitely throw light on the existing levels of civironmental pollution in the plant area, its environs and its undoubted impact on the flora and fauna including the human population and public resorts.

For ensuring a safe environment indigenous technology could be utilised for industrial effluents treatment by using low-cost waste treatment methods like oxidation ponds, oxidation ditches, anaerobic ponds, and stabilisation ponds.

For water pollution control the industry has to invest 1 to 5 per cent of its capital cost. For air pollution control the industry has to install settling chambers, bag filters, cyclone separators, venturiscrubbers, electro-static precipitors, for removal of gas pollutants, wet scrubbers with appropriate chemicals must be used. And the company has to invest 15 to 20 per cent of its capital cost for air pollution.

PLANTATIONS

VSP and others can go in for extensive plantations not only to reduce dust and noise pollution but also to improve the aesthetic environmental appearance in view of the limitations in the effective implementation of various provisions of the air and water pollution control acts, Prof Shivaji Rao feels.

For ecective control of industrial pollutions one should not entirely depend upon the Pollution Control Board. The district collector will be able to take action against recalcitrants under Section 133 of Cr. PC but such corrective action can be taken by district adminstration only when there is a demand from those from suffering the harmful effects of industrial pollution.

Even, while planning the roads it must be seen that the orientation of the roads is such that the prevailing winds disperse and dilute the smoke and toxic gases released by lorries, trucks, scooters. The State Pollution Control Board proposes to request the Government to direct the Road Transport Corporation and police officials to take action against automobiles emitting high loads of smoke.

TELUGU GANGA

Asked about the experts committee opinion that though the Telugu Ganga project will have ecological effects in the shape of inundation of some forest area, compared to its economic and other benefits they are minimal, Prof. Shivaji Rao said the cost-benefit ratio has to be borne in mind in such a situation. For instance, the Alaska gas pipeline scheme in the United States which had been opposed by ecologists for several years was later accepted by them when the need for selfsufficiency in oil was felt as a crucial national requirement. Whenever environment input assessment reports of major development projects were prepared they were subjected to scrutiny through public hearings, so that the necessary modification could be made in the light of constructive criticism by experts and the general public.

Similarly, some other defence projects were accepted in view of their over-riding public interest. The ecological systems likely to be affected by the Telugu Ganga are not comparable to the unique flora and fauna of the evergreen tropical rain forest of the Silent Valley in Kerala.

ACCIDENTAL GAIN

"The bamboo and other conventional plantations which abound in the area can be reconstructed elsewhere to make up for the loss of amount on the project. If there are unique features that need to be preserved—as far as I know there are none—modifications to the projects can be suggested for their preservation.

In effect, an accidental benefit from the project will be that access to the wooded area on the hills be barred by the proposed canal so that the present practice of unregulated felling of trees by villagers and others can be curbed. With the hill on one side and with the canal abutting the hill slopes the access points to the wooded area will be restricted. With proper protection unauthorised felling of trees can be checked, more effectively than now. With the expected change for the better in the climate there will be improvement in the condition of flora and fauna in the area, the ecologist said.

APPENDIX - IX

Largest combined net sales among all daily newspapers in India

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Vol. LIV: No. 182 | New Delhi: Wednesday, May 7, 1986 | 16 Pages | 90 Paise

Factory fumes annihilating villages

By ASHWINI SARIN
Express News Service

GAJRAULA (District Moradabad), May 6.

It is happening just 100 km from New Delhi where laws are being framed to save the environment. Gas and fumes from a fertiliser and acid plant, in the Gajraula industrial area, have reduced hundreds of trees, including mango, to dry logs. Nearly a 100 head of cattle have perished. Many cattle-owners have sent their live-stock to distant places.

Residents of nearby villages have developed various types of diseases, hitherto unknown. Over 500 petitions from the hapless villagers to various authorities, from the President of India to the local tehsildar, have achieved nothing but assurances. The factory continues to shower the area with acid fumes and other poisonous substances. The effect is devastating—even old date trees and cacti, which are capable of withstanding the harshest of climates and atmospheric changes, have been burnt.

The misery of the villagers of Hasanpur tehsil began a decade ago when the UP Government acquired 500 acres of agricultural land to set up an industrial estate along the Delhi-Moradabad highway. The two chemical factories—Vam Organic Chemicals and Shree Acids and Chemicals—which have come up in the industrial area and have begun production, are certainly wreaking havoc on all kinds of vegetation and the local population. "We have taken all possible measures to check pollutants," Mr G. K. Gigras, works manager of the Shree Acids and the Chemicals, said. However, despite the claims of the factory management the devastation caused by the acidic fumes is visible to the naked eye.

A senior executive of the Shree Acids and Chemicals visited our office after an Express team visited the spot on Saturday. "Tell us what can we do in such cases?" he asked.

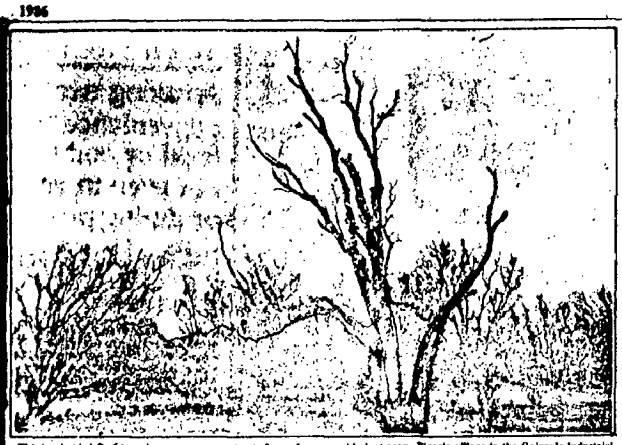
The indifferent attitude of the Uttar Pradesh Government is evident from the fact that another licence for a plant, similar to the Shree Acids and Chemicals, has been issued to the Vam Organic Chemicals despite wide-spread resentment in the area. The residents are so agitated that the Union Industries Minister, Mr Narain Dutt Tiwari, who was scheduled to visit the Gajraula industrial area, April 14 abruptly can-

Continued on P 6

Animals reduced to a skeleton due to fumes from an acid plant near Tigaria village in the Gajraula industrial area in Moradabad district. — Express photograph by R. K. Sharma.

APPENDIX - IX Contd.

1986



This is what is left of trees in a mango-grove due to fumes from an acid plant near Tigaria village in the Gajraula industrial area in Moradabad district. — Express photographs.

Factory fumes annihilating villages

Continued from P 1 Col 7

celled his visit following reports about the angry public. "We hold Mr Tiwari responsible for all that we are undergoing," said Amir Khan, a youth of Hasanpur, who is spearheading the movement. "It is very strange that the state Government, in stead of declaring the area as a fruit belt, decided to leave it open to the vagaries of poisonous chemical gases."

The Shree Acids and Chemicals began production of sulphuric acid and its Ganga Yamuna brand of single super phosphate fertiliser about a year-and-a-half ago. The residents of the area allege that the factory had stopped production for some time early this year and the trees in nearby fields and orchards began to show signs of a healthy growth. The factory, according to the residents, resumed production a month ago despite the fact that its clearance from the UP Pollution Control Board had lapsed. The factory management admits this fact but maintains that it can legally run the plant pending clearance from the Pollution Control Board for which they have already put in an application.

The plant managers maintain that they have taken adequate measures to check pollution and their research and development efforts in this direction have shown good results. "We have achieved the desired target to check pollution by December, 1985 against the July, 1986 deadline set for this purpose". He said the nearby Vam Organic Chemicals was throwing its effluents into the Bhakt Nadi, the water from which was consumed by cattle and used for agricultural purposes. The residents admit that cattle in the area fall sick because they drink water from the Bhakt Nadi. "We realised the devastating effects of pollution only after Shree Acids began production here," Mr Aziz Elahi, who owns a mango orchard near the factory, said. "Now if Vam also begins production, our plight and future can only be imagined".

The Shree Acids management produced a report from a host of local officials certifying that the factory was not affecting plant and animal life and was no threat to the environment. The management also presented us with a report of the state-owned Projects and Development India on emissions from the plant. The report says that emissions are within safe limits.

However, a perusal of various records and official documents gave credence to the villagers' allegations that local officials were hand-in-glove with the factory owners and were trying to undermine the dangers to vegetation and human life.

Take for instance the letter written by the local sub-divisional magistrate, Mr R S. Gupta, to Shree Chemicals on January 17 this year. The letter (No. 277) says that Mr Aziz Elahi and Mr Mubarak Ali Khan of Hasanpur had written to the President of India (about the pollution threat). The matter was inquired into by the Tehsildar and the report was sent to the district magistrate, Moradabad on November 19, 1985.

The SDM further writes on his own: "I have visited your factory a number of times, and have seen green crops of mustard & sugarcane all around. Apparently (sic) there appears no gas emission. However, the matter being technical, it may be referred to an expert committee."

The sub-divisional magistrate probably forgot about a report which the local Block Development officer had sent to him after inspection of the area on January 28, 1985. The report (translated from Hindi) said: "As per your orders I had gone to Tigaria Bour to see the ill-effects of gas and smoke emitted from Shree Acids and Chemicals on the crops in the area.

"Mango trees—The mango orchards which are near the factory have been affected very badly. The trees are drying up and leaves are falling. On some trees not a single leave is left. It seems that the mango trees will dry up after sometime.

"Neem, sheesham, badhal, shahtoot, eucalyptus, amla, ber, banana and papaya—the leaves of all these trees have fallen due to the ill-effects of the gas. There is a white coating on the leaves and it seems that all these trees will dry up after some time.

"Wheat, methi, gram and mustard—all these crops which are near the factory and to the East and over which gas smoke passes are in a very bad shape. It is possible that this will result in a 50 per cent to 100 per cent loss to the crops and farmers will be put to huge losses."

The medical officer in charge of the primary health centre, Gajraula, issued a "To whomsoever it may concern" certificate on January 18, 1986. It said: "Certified that in my period I have not seen either any case of gas-affected from the Shree Acids and Chemicals Ltd., Gajraula nor death."

The villagers question the need for issuing such a certificate by the doctor. However, in a video film which the villagers have got made, the same doctor has been recorded as saying that some people have complained about how their eye-sight was affected and that the effects would become more pronounced in future.

Nepal, gateman at the railway crossing near the acid factory.

The matter was also brought to the notice of the Union Ministry of Environment and Forests. Mr Dilip K. Biswas, a director in the ministry, had written on the issue to Mr Paritosh Tiyagi, chairman, UP State Pollution Control Board, vide his letter of December 27, 1985.

Another questionable feature is the role of politicians in the entire issue. The local Lok Dal MLA, Mr Samar Pal Singh, wrote to the State Pollution Control Board on January 17 this year that he had personally visited the factory and was convinced that the area faced no pollution threat. "Nevertheless if you feel apprehensive, you may get the gas, water or fumes technically examined from the point of view of pollution. We should, however, give no ear to the propaganda of laymen and vested interests." Mr Singh is a member of the State Pollution Control Board.

The stand taken by the local Congress-I MP, Mr Ram Pal Singh, is very surprising. While the plant management flaunts his letter to the secretary of the State Pollution Control Board on January 19, 1986, in which he had said that he had received no complaint from farmers about damage to their cattle and crops from the gas being emitted from the plant, he told me that he had written to the Prime Minister to order a high-level probe because the factory was playing havoc with the crops, cattle and human life in the area.

The Projects and Development India, the public sector undertaking which was commissioned by the Shree Acids and Chemicals to conduct work room and emission studies, has said in its introduction: "...The medium and large-scale fertiliser industries numbering about 130 are located in varying topographical and climatological conditions throughout the territory of India. ... In short, the inventory of air pollution varies from plant to plant. The air pollutants emnate from the production, utility and off-site plants along with handling operations through fugitive and fixed sources. The emissions diffuse into the atmosphere thereby creating air pollution problems in and around the surroundings."

For the residents of villages in Moradabad's Hasanpur tehsil, the struggle has just begun. An elderly resident of Tigaria said once Britishers had diverted a rail track on their request in such a manner that their village was not disturbed. "Look what is happening now. No one listens to us when we have our own Government." Nepal, a gateman on the railway crossing, at a stone's throw from the acid factory, has been making weekly trips to the railway hospital for treatment of diseases he attributes to gas from the acid plant. The doctors have not been able to diagnose his illness. The specialist's card describes the disease as duodenal ulcer with a big question mark. Nepal sobs as he describes his plight. "Shree Acid is not the end. Another killer plant is coming up in Vam Chemicals. But who is there to care about the poor?"

'Agra heading for drinking water crisis'

Express News Service

AGRA, May 6.

Agra city is heading for a drinking water crisis. The city's residents will be denied clean drinking water if a barrage is built on the Jamuna river near Gokul in Mathura district, according to Mr Satya Wrata Agarwal, retired chief engineer of the Agra Jal Sansthan.

The state Government recently announced that a barrage would be built in Mathura district to solve the drinking water problem of the city and pilgrims visiting temples there.

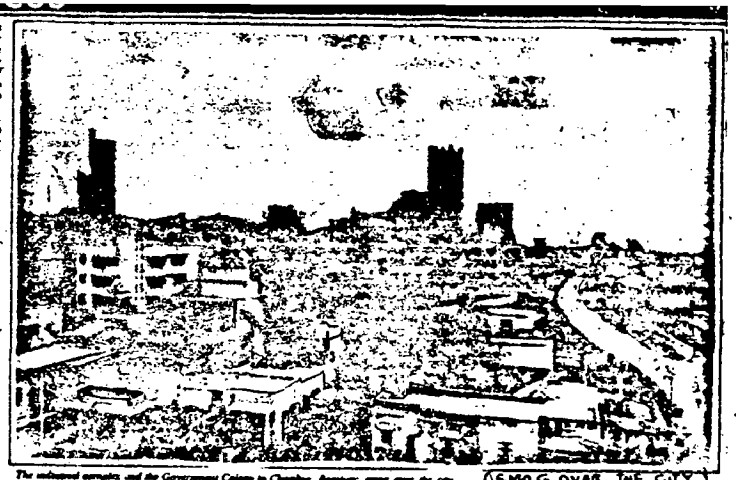
Mr Agarwal said town planners and irrigation experts of the Uttar Pradesh Government had ignored the fact that the only source of drinking water for Agra city was the Jamuna river and if water was diverted to Mathura district, Agra would face a crisis.

Mr Agarwal pointed out that Mathura had for a long time been getting its drinking water from tube-wells and ordinary wells. This was not possible in Agra city as the subsoil water here was saline.

Bombay: Choking on its own fumes

by Sarosh Bana

After the Bhopal disaster, consciousness about industrial hazards has escalated. Bombay has the dubious distinction of harbouring 40 per cent of the country's 69 pesticide units, which handle some of the most hazardous chemicals. These units, along with some power companies, are a constant source of air and water pollution in the city, creating unbearable pollution levels and posing considerable danger for citizens. Instead of responding to the warnings of environmental groups, the author says that the authorities continue to ignore the problem and also deliberately withhold information about violations of environmental laws and regulations.



The industrial complex and the Government Colony in Chembur, Bombay, smog over the city

(SMOG OVER THE CITY)

A tree, corroded as a result of air pollution near the BCF paper mill, Bombay