PHYSICAL PLANNING PROGRESS

Urban Development Directorate

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Foreword

To-day, a gigantic economic growth is at the door-step of East Pakistan. The Province stands committed to a programme of Industrial Development on a scale unprecedented in its history. Such programme of investment inevitably brings about definite social transformations and changes in our physical environment which necessitate careful and advance planning. In the past, these changes were not watched and guided. Almost anarchistically, land was being indiscriminately used for large and small industrial establishments constructing and expanding commercial areas and premises and also for building residential houses.

Fortunately, in the wake of the 1958 revolution the people of East Pakistan in general and the intelligensia and the Government officials who are associated with Physical Development, in particular, are becoming increasingly concerned about the poor planning and consequent haphazard physical development Land is a non-growing commodity and being very scarce in this part of the country the Government started taking keen interest and initiated various moves to arrest such haphazard and unco-ordinated physical development activities. With this end in view the Directorate of Urban Development was created in 1965. The problem laid before it is really great. The Directorate has been given the responsibility to co-ordinate the physical development activities in the Province and to advise the Government, the Autonomous Bodies and the Municipal Committees in this regard.

Basic Democracies and Local Government Department of the Government of East Pakistan have moved promptly towards achieving the same objective. On the 15th April, 1968 that Department, by a Gazette notification has directed all the Municipal Committees of the Province to prepare Master Plans for their towns within a period of three years. In the four-member Advisory Committee of the Basic Democracies and Local Government Department, one representative has been taken from the Urban Development Directorate. Programme of work and procedural details are being meticulously worked out in collaboration with this Directorate to ensure satisfactory completion of the Master Plans as envisaged in the rules by pooling the resources of the Municipal Committees and working out a harmonious method of utilising the services of qualified and experienced Town Planners available in the Urban Development Directorate.

Government of Pakistan on the request of the Provincial Government have been able to arrange for obtaining necessary aid under the UN Special Fund Programme for making available the services of foreign experts and training Pakistani personnel under the fellowship programme of the fund. This UN Special Fund Project will go a long way in achieving the objectives set before us.

Towards the close of May, 1968, All Pakistan Conference on "Our Cities and Towns" was held in Dacca under the joint auspices of Basic Democracies and Local Government Department and NIPA, Dacca. In the seminar the deliberations were participated by the representatives of various agencies connected with urban affairs. Keen interest was shown by the participants in Urban Planning and Development. All these show the earnestness of the people and the Government in improving the Physical environment of our towns.

In observance of the **Decade of Development** this Directorate chalked out a programme. One item in the programme is the publication of a brochure, depicting the asignments before this Directorate and the works so far done. An endeavour has been made to present, in short, a comprehensive picture of our activities.

G. RAHMAN,
Director, Urban Development,
Government of East Pakistan.

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Editor's Note

One of the vital needs of a developing country is the control of physical environment through planning. Historically speaking city planning together with control of environment was found to have been associated with the earliest known cities and citadels of the world. With the technological changes and the changes in the socio-economic structure, the process of environmental control has been modified to suit the changing needs of the age.

East Pakistan has a tradition in town building. Yet in this part of the country, urban planning in modern lines has very much lagged behind the rate of population increase and technological advancement. The history of physical planning in the present era, for East Pakistan, is very brief. Town Planning in the rudimentary form started only after independence and continued in the same form during the first decade. Since the preparation of the first Master Plan for the city of Dacca in the early fifties many plans remained as diagrams only to add to the ever increasing bulk of office records and files. But by the end of the first decade after independence an era of serious and proper approach to physical planning began. From 1958 due to the growing demand of land for various development purpose, planning started gaining some importance.

At the beginning of the Second Five-year Plan while plans were being prepared for Housing Estates to rehabilitate the displaced persons, it was realised that a properly equipped organisation for physical planning was essential to tackle the hydra-headed urban problems created due to heavy influx of population. Creation of Dacca Improvement Trust, preparation of Town and Country Planning and two other related schemes helped to get recognition for physical planning in the province. Development of industries during the Second Five-year Plan added fillip to the urbanisation which gathered further momentum due to increase in the investment programmes for industries in the Third Plan period. This anticipation of rapid urban growth and a dramatic increase in urban population accelerated the process of creation of a physical planning organisation, namely, "Urban Development Directorate," to rise equal to the occasion. Now it can rightly be said that the nascent stage of a planning organisation is over and the discipline of Physical Planning has succeeded in earning recognition in East Pakistan during the Decade of Reforms. Although ten-year is not even a fractionally significant period in the life span of an Institution, yet this Decade from 1958-68 unfolds the canvas of development and progress in the field of physical planning.

This brochure has been designed to portray the physical planning works for the province done by the planners of this directorate and those associated with them during this decade to improve the physical environment of the urban and rural areas.

I like to add here that the technical personnel of this organisation are conscious of the magnitude of the task entrusted to this directorate and the consequent increased responsibilities imposed on them.

I express my profound gratitude to our Director, Mr. Golam Rahman for his initiative, encouragement and guidance in preparing this brochure. I am thankful to Mr. A.M. Khan, Deputy Chief Planner and Mr. A.K.S. Ahmed, Senior Town Planner, for their co-operation and valuable advices. I like to record my appreciation for those officers and staff who have actively participated. My special thanks are due to Mr. Rafiqul Huq, Geographer, whose untiring efforts and unfailing enthusiasm have made this brochure come out of the press in this form.

M. A. ZAMAN,
Deputy Chief Planner,
Urban Development Directorate.

Genesis of Physical Planning in East Pakistan

Historically speaking East Pakistan remained purely an agricultural region even in the 18th century. During the Mughal period, Dacca was the only centre which had developed certain urban characteristics. Most of the urban dwellers belonged to the Mughal army, the artisans and service population retained by the rulers around them. Chittagong at that time was a small port and trade centre, occasionally visited by the Arabs, Portuguese and English traders.

During the latter part of the 18th century when the British rule was established in Bengal, the centre of attraction of trade, commerce, industry and administration shifted from Dacca to Calcutta and the region now comprising East Pakistan was made to turn into an agricultural land and a raw-material supply-base for the development of industry in and around Calcutta.

For facility of administration the British rulers at the same time divided the country into different regions. The seat of administration of each region developed into an urban centre. These centres had only a few administrative, judicial and other Government offices which also provided accommodation to the officials and non-officials. Subsequently professional traders settled, educational institutions grew up and health facility centres were established. Besides these administrative centres, a few other communication junctions and trade centres started showing signs of urban complexities. Later, the introduction of mechanised transportation system and improvement of roads accelerated the growth of these centres.

Up to the beginning of World War-II, there appeared no functional problems of the towns that grew up to meet the socio-economic requirements of the age and to satisfy the then mode and means of communication and they served their purpose usefully.

World War-II coupled with the famine of 1943 really brought the first wave of large-scale migration from country-side to the urban areas. Most of these immigrants instead of returning to the country-side stayed in the urban areas for better employment opportunities. This trend of inflow continued causing an increase in urban population and started posing problems for accommodation and for urban amenities.

After independence of the country in 1947, large number of refugees and persons connected with administration, commerce and industry with their dependents started to flow into the urban centres of East Pakistan in successive waves mainly from the adjoining areas of the province in such short intervals that it became extremely difficult even to accommodate them within the existing urban structure not to speak of providing them with proper amenities and facilities.

In addition, Government had to take up various development works throughout the province, resulting in the establishment of new offices for the Government as well as for autonomous bodies and construction of staff quarters for them. Simultaneously commercial and industrial activities started to gather momentum creating job opportunities in the existing urban centres causing influx from rural areas. All these factors combined together created insanitary living conditions and acute congestion in the already overcrowded areas of the towns. Whatever shelter and houses people erected within the town and in their fringes, in absence of proper planning, only led to the creation of slums and contributed towards unplanned extension of the towns.

Over and above, the problem became more acute by the growing dominance of automobiles from the point of view of traffic circulation and safety. The roads and communication system became functionally inefficient for the changed mode of transportation.

The First Five-year Plan had to pass through many hurdles and difficulties and the results achieved were not of very appreciable magnitude. Before embarking on the Second Five-year Plan the Government made an effort to prepare Master Plans for the two metropolitan areas.

The Second Five-year Plan provided opportunities for industrial investment almost tripple of the first plan. Such investment towards industrial development of the province committed to a process of urbanisation and accelerated the growth of urban centres. The change in the economic base and structure thus brought about, needed careful advance planning for the existing urban centres and the new industrial complexes.

For planning and development of the metropolitan areas Government created three statutory bodies, namely Dacca Improvement Trust, Chittagong Development Authority and Khulna Development Authority. These three areas together accounted for about 47 per cent. of the total urban population of the province as in 1961. Besides this, in order to rehabilitate the refugees and to provide housing for the public, Government of East Pakistan created the Housing Wing in 1958, under the Works Department. The function of the Housing Wing was to meet the demand of housing for the refugees and the public; that included preparation of plans for housing estates which were more or less extension of existing urban areas for the construction of low cost houses for the refugees and making provision of plots for the public. While doing so the physical planners realised that comprehensive planning for the existing urban areas as well as for the new ones to come were needed to prevent the haphazard growth that was likely to occur due to the impact of development activities.

In consideration of this conviction, "Town and Country Planning Scheme" was prepared by the Housing Wing of the Government with the object :

(i) to prepare plans for the Municipal areas and other towns suggesting the future land needs and indicating the location of public facilities, utilities and institutions requried;

(ii) to conduct studies relating to regional planning for the Province dealing with the problems directly arising from increasing industrialisation and concentration of population; and

(iii) to train personnel in the field of physical planning from various disciplines, such as, Civil Engineering, Architecture, Geography, Economics, Sociology and Law to meet the requirements of planners.

According to the objectives of the scheme Master Plans for a few district Headquarters were preparec in addition to the preparation of plans for the Housing Estates and some officers were also sent abroad for training in physicl planning.

In the Second Five-year Plan two more schemes were taken up by the Housing Wing, namely :

(i) Survey, investigation and planning o Rural Housing.

(ii) Preparation of legislation for town aid country planner.

The first one was meant for village planning and development. It envisaged:

(i) to enable the villagers live in good houses at moderate costs with appropriate sanitary acilities, spaces for domestic animals, etc.;

(ii) to educate the rural people on better living conditions through the demonstration of economic houses built mainly of local materials, improvement of indigenous method of water supply and sanitation and proper siting of civic amenities like dispensary, school community centre, etc., and

(iii) to enable the villagers live in happy and healthy environment and to solve their problems through self-help.

Research was conducted in the field of rural housing and plans prepared of the areas selected for the purpose.

The second scheme envisaged to frame legislation determining standards for residential densities, open spaces, residential neighbourhoods, construction and sanitary regulations and for other planning standards in order to guide and control the physical development in the province. In absence of properly qualified and experienced foreigner for the preparation of such legislation, as envisaged in the scheme, the work was done by an experienced officer of the Judicial Department.

During the latter part of the Second Five-year Plan while facts and figures were being collected for the preparation of the third plan, it was apparent that large scale expansion of industry would take place in the subsequent plan period. This Industrial expansion in turn together with expansion in trade and commerce were likely to cause rapid urbanisation resulting in major changes in the land utilization pattern and settlement heirarchy, along with the changes in the economic structure of the province.

With a view to bringing harmony between the anticipated economic and physical development, National Planning Commission and the East Pakistan Planning and Development Department started to formulate various new policies and programme. In this context John C. Eddison, Economic Adviser, Harvard University, produced a working paper highlighting the impact of industrial investment programmes and the overall land requirements for industrial and urban uses in East Pakistan. He remarked that land being a scarce commodity in this part of the country, it was essential that the massive industrial development programmes should be closely integrated with a systematic overall physical development plan for the province. This necessitated framing of a definite policy and programme for future urban development. Recommendations contained in Mr. Edison's paper were examined and discussed by the foreign experts, advisers, officials and planners of Central and Provincial Government. They recommended for the creation of an independent organisation for physical planning in East Pakistan. On the basis of their recommendations Government in collaboration with the Physical Planning and Housing section of the National Planning Commission made a request to the UN Special Fund for technical assistance. UN Special Fund agreed in principle to provide technical assistance.

In view of urgency for creating a separate Physical Planning Organisation, Government of East Pakistan created a new organisation, called "Urban Development Directorate" within the Works, Power and Irrigation Department in July 1965, and transferred all the incumbents working in the "Town and Country Planning" and "Survey, Investigation and Planning of Rural Housing" schemes of the Housing Wing to this newly created Directorate. The objectives of Urban Development Directorate are:

(*i*) to advise the Government on matters of policy relating to urbanisation, land use, and land development;

(*ii*) to prepare and co-ordinate regional plans; master plans, and detailed layout and site plans for the existing as well as the new urban centres excluding the areas covered by the present town development authorities of Dacca, Chittagong and Khulna;

(*iii*) to undertake socio-economic research and collection of data for determination of the location and pattern of future urban development;

(*iv*) to prepare programme for urban deveopment regarding selection of sites, acquisition of land, reclamation of land;

(*v*) to secure approval of programmes and plans and obtain necessary funds from the Government or any other agency, approved by the Government;

(*vi*) to advise the existing urban development atuhorities on their operations at their request.

On the other hand the UN Special Fund Assistance to Urban Development Directorate is available for a period of four and one half-years. The Special Fund Poject comprises:

(*i*) Research to provide the basis for policy decisions about the location of major industries, urban complexes and sites to be reserved, acquired and developed.

(*ii*) Studies on the availability of suitable land for the localities thus selected, the cost of site formation and the

relation of the new urban centres to transport facilities. This study will take into account the problems of flood control.

(iii) Preparation of plans based on field survey and framing and implementation of recommendations concerning land acquisition and design. This stage may involve the study of site formation by poldering or reclamation by urban canal system.

The function and scope of work of this Directorate has been enlarged over what was stipulated in "Town and Country Planning Scheme" by entrusting this Directorate also with the responsibility of co-ordinating all the physical development activities of the province. Having felt the necessity of a high powered committee to co-ordinate all the physical development activities in the province the Government formed the Urban Development Council headed by the Additional Chief Secretary (Development) of the Province.

Due to non-availability of qualified professionel and technical personnel the full strength of the Directorate could not be achieved. Yet within the limited resources of men and materials this Directorate has staged an exhibition unde the advice of the first Project Manager provided by the UNSF, on the basis of the facts and information collected from various sources and is now working on the following programmes:

1. Collection of basic information and maps for establishing a Data Bank.

2. Conducting research to formulate a strategy for the preparation of an overall physical development plan for the province.

3. Preparation of Master Plans for he existing and potential urban areas and industrial complexes in the province.

4. Preparation of interim plans o' the municipal areas pending finalisation of Master Plans to enable Municipal Committees to control developments under the Building Construction Act. 1952 and subsequent amendments thereof.

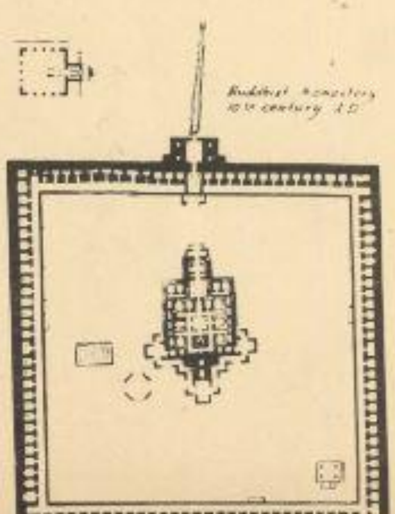
5. Preparation of a Comprehensive Town and Country Planning Act for the province.

SOME EARLY FORMS OF PLANNING CONCEPTS IN EAST PAKISTAN

PLAN OF PAHARPUR MONASTERY

Buddhist Monastery
8th century A.D.

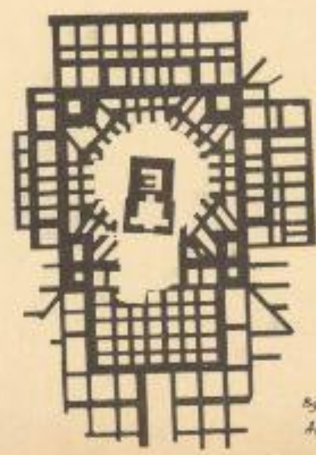
MAINAMATI COMILLA



Buddhist Monastery
10th century A.D.

EXCAVATIONS AT GOKUL.
DISTRICT BOGRA

Hindu Temple remains 5th to 12th century A.D.



By courtesy :
Archaeology Deptt.
GOVT. OF PAKISTAN

PLAN OF CITADEL SHOWING STRUCTURAL REMAINS. MAHASTHANGARH BOGRA.

Hindu civilisation
5th to 2nd century A.D.

PHYSICAL AND CULTURAL LANDSCAPE OF EAST PAKISTAN

Physical and Cultural Landscape of East Pakistan

GENERAL BACKGROUND

East Pakistan is a river built alluvial plain per excellence. 90 per cent. of the country is formed of river built alluvium, 6 per cent. covered by the rivers and 4 per cent. by young folded hill ranges. Maximum height in one place is 3,000 ft. above sea level being in the tertiary hill ranges in the eastern side of the Province.

The country is landlocked in three sides while the south is open to the world through the Bay of Bengal. The eastern side of the country is bounded by the Indian territory and Union of Burma. Average east-west length is 220 miles and north-south 250 miles.

The country lies between 88°10' to 92°40' E. longitude and 20°40' to 26°40' N. Latitude and comprises an area of 55,126 square miles.

Being in the true tropical area and having optimum condition for heavy rains East Pakistan is a land of true humid tropical monsoon climate. The Province being a monotonous plainland whatever is the temperature in different seasons of the year, sub-regional variations are not pronounced.

Difference of rainfall rather than of temperature is of primary significance because the rain governs life and movement and it in turn is governed by the alternations of the monsoon.

Of the three mighty rivers of Indo-Pakistan Sub-continent two mighty rivers, namely, the Ganges and the Brahmaputra towards the end of their journey to the Bay of Bengal with their tributaries and distributaries have formed approximately 70 per cent. of the land of East Pakistan. The rest of the eastern portion of East Pakistan, has been formed in two ways; the northern half is formed by the Meghna and its tributaries while the southern half by the tertiary hill ranges and the streams namely the Gumti, the Feni, the Karnafuli, the Sangu and the Mathamuhari. The land of East Pakistan is characterised by Multiple delta formations.

A. **Padma-Brahmaputra interfluves:**

The land between the Padma and the Brahmaputra was formed of alluvium deposited by them and their tributaries. About two hundred years back present coune of Jumna was opened by techtonic force and bulk of water originally flowing through the Brahmaputra is now flowing through Jumna and a small fraction of water passes through the Brahmaputra which is in a dying stage. This region is divided into two parts.

A (i)—**Padma-Jumna interfluves:**

The western portion is bounded by the Padma and the Jumna. The tributaries of these rivers are largely fed by ice and snow melt water of the Himalayas. In the heart of their interfluves lie the Barind area which forms a marked negative tract for population. Density of population varies from 250 to 750 persons per square mile. Rest of the area has a density varying from 750 to 1,500 persons per square mile.

A (ii) **Jumna-Brahmaputra Doab:**

The eastern portion bounded by the Jumna, the old Brahmaputra and the Padma has a number of rivers largely the distributaries of the former two rivers. In the heart of this area lies the Madhupur jungle which is also a negative tract for population. Density of population varies from 250 to 750 persons per square mile in this tract while the rest of the area has a density varying from 1000 to 4000 persons per square mile increasing towards south.

B. **Delta proper:**

Land bounded between the Padma and the Bay of Bengal is the delta proper. The Padma and its distributaries have formed and is still forming the land seawards through the process of gradual accretion of land. This delta prope may be divided into two regions.

B_1—The region of dead and dying rivers:

It comprises Kushtia, Jessore and northern half of Khulna districts, bounded on the east by the Madhumati river. Here off-takes of the old distrabutaries have been silted up and rivers themselves flow on old levees in the rainy season when it becomes navigable. The rivers have so much meandering courses that frequently they have formed ox-bow lakes. Even in flood the country in general is not inundated. The interfluves are wide and are ill-drained. Density of population ranges from 500 to 1,000 persons per square mile. Towards the southern portion of this region the meandering rivers are more alive where the density of population ranges from 750 to 1250 persons per square mile.

B_2—The region of active rivers:

It consists of the Sundarbans and the land between Madhumati, Padma-Jumna combined water course and the Meghna. The area comprises the southern Khulna, Faridpur and Bakerganj districts. The great mangrove forest (Sundarbans) of Khulna district lying in this area reaches 60–80 miles inland from the sea and stretches for about 100 miles from west to east.

The Padma, Meghna and the Brahmaputra still bring down vast quantities of silt and are continually building the land towards the south of this region which is clearly seen even from air. The density of population ranges from 1,000 to 2,000 persons per square mile except the Sundarbans where habitation is nil.

The delta proper has excellent waterways. Most of the settlements can be reached by waterways except in the region of dead and dying rivers.

C. The Eastern Portion:

The area east of Brahmaputra and Padma may be divided into three parts (Administratively comprising the whole of Chittagong Division).

C_1—Meghna-Surma Valley:

This area forms a great embayment o' low land comprising the eastern half of Mymensingh district, amost the whole of Sylhet district and the northern half of Comilla district. The lower tracts are flooded to a depth of 10 o 12 feet and homesteads are built on raised earth platforms. During the flood season generally the agricultural land remains under water and the movement has to be done by boat except ts those places connected by trunk roads. Density of population varies from 500 to 1,250 persons per square mile.

C_2—Comilla-Noakhali Plains:

The eastern half is formed of detritus brought from the tertiary hills by the streams flowing from them. The western half is formed of Padma-Brahmaputra-Meghna alluvial deposits. The land on either bank of lower Meghna is very similar to that of the active delta across the estuary. Density of population varies from 1,500 to 2,500 persons per square mile.

C_3—The Chittagong and Chittagong Hill Tracts Districts:

This is not deltaic in formation. This is formed of north-south elongated tertiary hill ranges guarded by tropical rain forest, gradually decreasing in height from the east to the west till it merges into the Bay of Bengal. In fact it has a narrow coastal plain, backed by low tertiary hill ranges and are built by the independent streams: the inportant ones are the Feni, the Karnafuli, the Sangu and the Matamuhari and has littoral deposits also along the coast. The most important is the Karnafuli at the mouth of which stands the port of Chittagong. The eastern half of the area is composed of Chittagong Hill Practs where density per square mile s less than 100 persons while the western half has a density of population ranging from 1,000 to 2,000.

ECONOMIC BACKGROUND

Agriculture:

Agriculture is the dominant activity of East Pakistan. This is due to abundant supply of water, very fertile alluvial soil and a climate that permits cropping in all months of the year. Though about 79 per cent. of the labour force is employed in agriculture yet 56·9 per cent. of the gross domestic product is obtained from it.

Rice is the principal crop and accounts for 74 per cent. of the cultivable land. According to 1960 Agricultural Census, little over 21 million acres were given to rice. Among the cash crops most important is Jute. It accounts for 50 per cent. of the foreign exchange earnings of Pakistan. Other important crops are Rape and Mustard, Sugarcane, Tobacco and Tea. Area under cultivation is 65 per cent.

Fisheries:

About 1·3 million tons of fish both from fresh and sea water are caught every year. It accounts for 9 per cent. of the domestic product and 3 per cent. of all export.

Forests:

The Province has only 9,569 square miles of forest area or 17 per cent. of the land under forests which is far below the percentage required for meeting the demand of the people with forest products. This scanty forested area of the Province has offered opportunities for establishment of paper mills, newsprint factory, rayor mills and saw mills. Forests can scarcely meet the demand of the country's timber requirements.

Minerals:

Most of the Province being formed of new alluvial deposits with smaller area being of younger rock formations have little minerals. The only important one is natural gas in Sylhet and Comilla districts and next in importance is limestone in Sylhet and Bogra districts. Peat has been found in Faridpur 'beel' area but moisture content is very high and recently better quality coal have been discovered in Bogra area. Bogra coal has been found to have extensive reserve at a depth of about 3000'. EPIDC is going to extract coal from Bogra area near Jamalganj Railway station. It is estimated that exploitation of Bogra coal @ 10,000 tons per day will last for about 100 years. This coal is of high quality bituminous and its exploitation is likely to revolutionise the industrial development of the country.

Industry:

Inter-relationship of industry and agricuture is very close in the province because most of the domestic raw materials for processing are from the agricultural fields and forests. Industry has expanded rapidly since 1957. 66 per cent. of the gross domestic product of the Province comes from extractive industries, 10 per cent. from manufacturing and 24 per cent. from service industries.

POPULATION

The total area of East Pakistan is 55,126 square miles of which 3,305 square miles or 6 per cent. of the total area is covered by the rivers. Within this area the population of East Pakistan in 1st February 1961 (according to 1961 Census) was 50·8 million persons excluding non-Pakistanis of which 26·3 million was male and 24·5 million female.

Growth of population from 1901—1961:

In 30 years from 1901 to 1931 population of the Province increased by 23·2 per cent. whereas during the next 30 years, from 1931 to 1961, population increased by 42·4 per cent. Within this latter period most spectacular ncreases was from 1951 to 1961 which shows a figure as high as 21·2 per cent. This increase is attributed to very rapidly declining mortality *plus* influx of immigrants.

Density:

East Pakistan had a population density of 922 persons per square mile in 1961 while excluding river areas the Province had a density of 979 persons. The great mass of the population live in a pre-industrial environment.

Although average density of population is 922 persons per square mile it varies from 76 persons in Chittagong Hill Tracts to more than 4,000 in some rural areas of Dacca district. Such rural concentration over large areas are approached only in China and Java.

Population Projection:

According to the projection of Harvard Group Advisors it is expected that population figure will go up to 105·9 million by 1985. It has doubled in 80 years from 1881—1961 but will double again in the next 25 years. Although the number of population in urban centres increased at twice the rate of the general population growth from 1901 to 1961, yet only 5·2 per cent. or 2·6 million were classed as urban. Despite considerable industrial development the Province is yet to reach the "take off stage" in regard to industrial development. According to the projection of Harvard Group Advisors the population growth of urban centres is expected to be ten times by 1985. It shows that by 1985, 27·5 million or 25 per cent. of the total population will be urban.

Category of urban population in East Pakistan (1961 Census).

Population.	Number of urban centres.	Per cent. from total urban population.
Above 100,000	4	46
Between 70,000 to 50,000 ...	5	6·5
Between 50,000 to 40,000 ...	3	6·5
Between 40,000 to 30,000 ...	8	14
Between 30,000 to 20,000 ...	11	12
Between 20,000 to 10,000 ...	16	11
Below 10,000	31	4
Total ...	78	...

Relation of Industry and Communication:

If the distribution of industries are analytically observed it will be seen that the major industrial establishments are on the banks of the rivers. Major industrial devlopments are on the Sitalakhya, Buriganga and Meghna river banks in the Dacca district, Karnaphuli river in the Chitagong district and Rupsa-Bhairab river in Khulna district. All the heavy industries and most of the medium industrial establishments have developed along those rivers.

All of them lie within the three metropolitan regions of the Province, namely, Dacca, Chittagong and Khulna. If railways and roads are taken into consideration while analysing location of those establishments in the above metropolitan regions, one can observe distinct axis of development which are partly dependent on rivers and partly on railways and roads. In Dacca it stretches from Narsingdi to Narayanganj and from Narayanganj to Demra. In Chittagong it is from Fauzderhat to the mouth of Karnaphuli, from Chittagong to Kaptai and from Chittagong to Hathhazari. In Khulna it is from Khalispur to Daulatpur. Development along these belts are very rapid. More than 80 per cent. of the industrial investments and industrial labourers are in these regions.

On the bank of the Meghna river Bhairab Bazar-Ashuganj, Narshingdi and Chandpur are three very important places. All of these three places being well connected by perennial rivers and railways to the metropolitan region of Dacca and Chittagong has immense potentialities for development. The main problem with them is lack of sufficient high land for industries. The river banks are very low and need huge earth filling for land development. Other industrial establishments are distributed unevenly to the other areas of the Province and are located either just on the river banks or little distance away from the rivers. Their main means of transportation of goods is by railway rather than rivers.

Bogra, Kushtia, Noapara although located on the bank of rivers yet the main means of communication and transport is by railways and roads. All of these three centres have sufficiently built up land for industries and has potentialities for development. Already Cotton mills exist there.

Sugar mills have an interesting location. All of them lie in the heart of the sugarcane producing areas which are comparatively dry regions. Sugarcane is cut in the dry season when rivers get silted up. Sugarcane requires quick transportation to the mills to keep the sucrose content high. They are located without keeping relationship with rivers but near the railway line. Of course, there has been exceptions in one or two cases. Fenchuganj fertilizer factory is an exception being located very near to the natural gas field.

If better quality coal of Bogra area is exploited preliminary work of which is being done by EPIDC the surrounding regions may get an impetus for industrial development based on coal.

Physical Development Problems:

From the basic facts discussed under general background of the country, specially the physical and cultural aspects of different geographical regions one may infer in broad outline the physical development problems in the following manner:

In dealing with the problems of physical development three aspects become prominent, each of which to be viewed on regional basis :

1. Availability of buildable land and cost of development.
2. Transport and Communication system.
3. Availability of power.

1. Availability of buildable land and cost of development:

To raise land above normal flood level:

(a) by dredging of the rivers,

(b) by digging canals,

(c) by excavation of ponds, or

(d) alternatively, developing the area by polder system.

Availability of buildable land differs from one region to another. Consequently methods to be applied for raising the land above flood level will differ and the cost for such development will also have to be worked out and their feasibility for each region or sub-region to be found out

Land development *by dredging* is most important in the lowlying areas or the floodplain of rivers. This method of filling the land is more likely to be applied in the northern parts of the active delta regions of the Province where R.L. is not more than 25'. In these regions rivers are alive and active and every year huge quantity of silt is deposited in the bed of the rivers and make them shallow for movement of large inland river transport vessels.

In the southern portion of the activ delta region or the coastal area *polder system* may be more important because it will act as a protection from inundation of the cultivated land and homesteads by saline water.

In the intermediate stream deposit plus *digging* of canals for raising of land may be important. It nay serve the purpose of shortening the length of the meandering river courses and at the same time making them navigable for transport and communication.

In the regions of dead and dying rivers, in the undulating lateritic soil regions, and in the piedmont regions of North Bengal where water table is very low, excavation of tanks and large artificial lakes may be important than canals.

2. Transport and Communication System:

The Province has 3,319 miles of perennial and 1,629 miles of seasonal waterways. In the Road Sector it has 1,983 miles of metalled and 57,000 miles of unmetalled oads and it has also 1,713 miles of Railways. From the facts above it shows that although the country is a riverine one, road and railway communication systems play important role. This is for saving of time and distance.

Dry season prevails for almost seven months of the year and the remaining five months comprises the flood season of which three months may be taken as effective for transportation by waterways. During the dry season in over 70 per cent. of the land of East Pakistan the main means of communication and transport is by roads and railways while in the flood season about 60 per cent. of the settlements may be approached by waterways through country boats and motor launches. Of course, the percentage in each category will differ from geographical region to region and season to season.

Integration of roads, railways and waterways must be looked into for saving time and for effectiveness of the communication system for overall development of the country. Physical build up of the country demands intergration of these three systems very badly. What is wanted perhaps is the thorough investigation of the transport peculiarities of each geographical region and to propose the suitable and the cheapest method of transportation by any of them and/or by integration of them.

3. Power Availability:

Electric power requirement up to 1986 has been thoroughly investigated into and plans have been prepared by EPWAPDA. Power grid system and the major power generating stations have been fixed by them to feed the industries and urban centres.

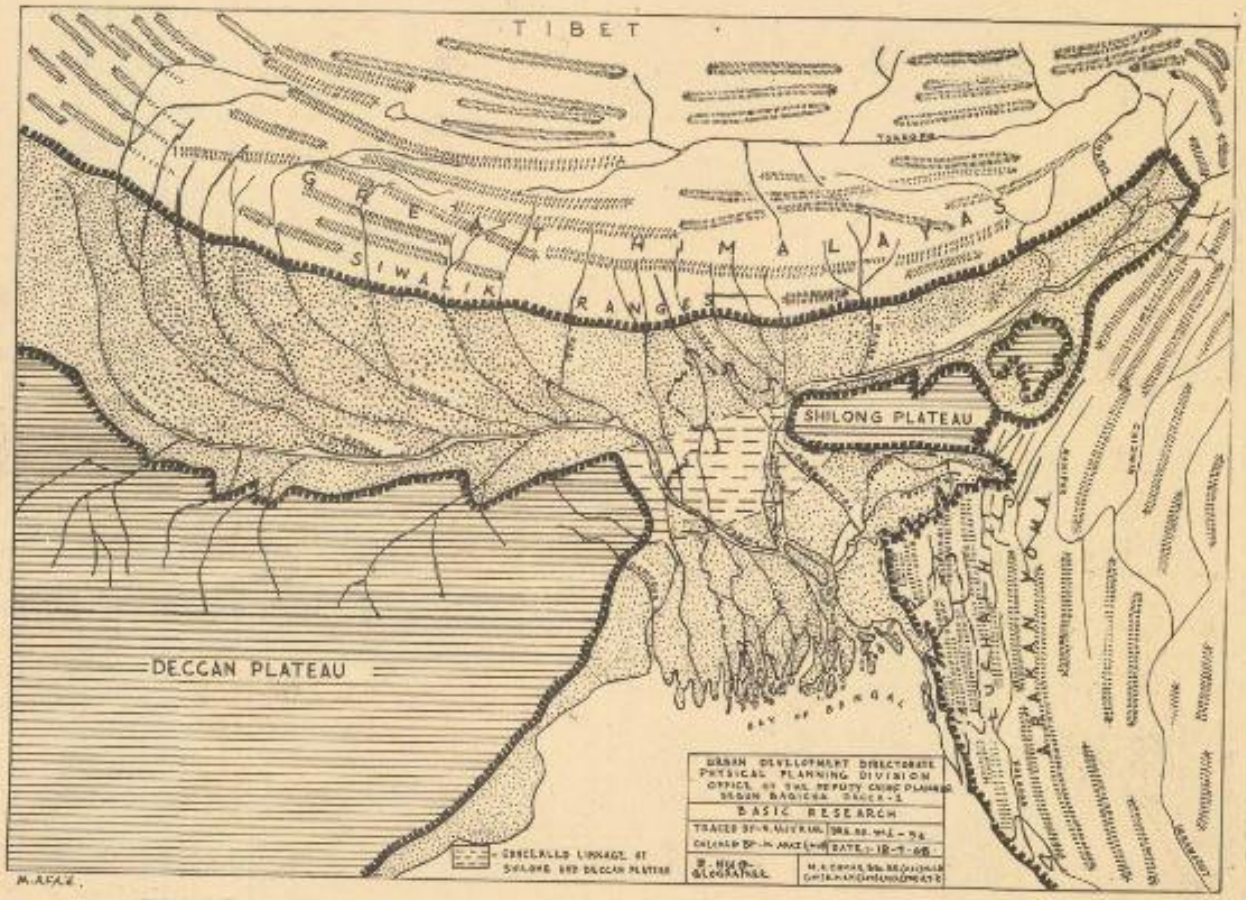
At present electricity is being generated from one Hydro-electric power plant at Kaptai and the rest from Diesel and imported coal. Coal of Bogra area and Nuclear power plant will help greatly to accelerate the pace of industrial development and electric power generating capacity of the Province.

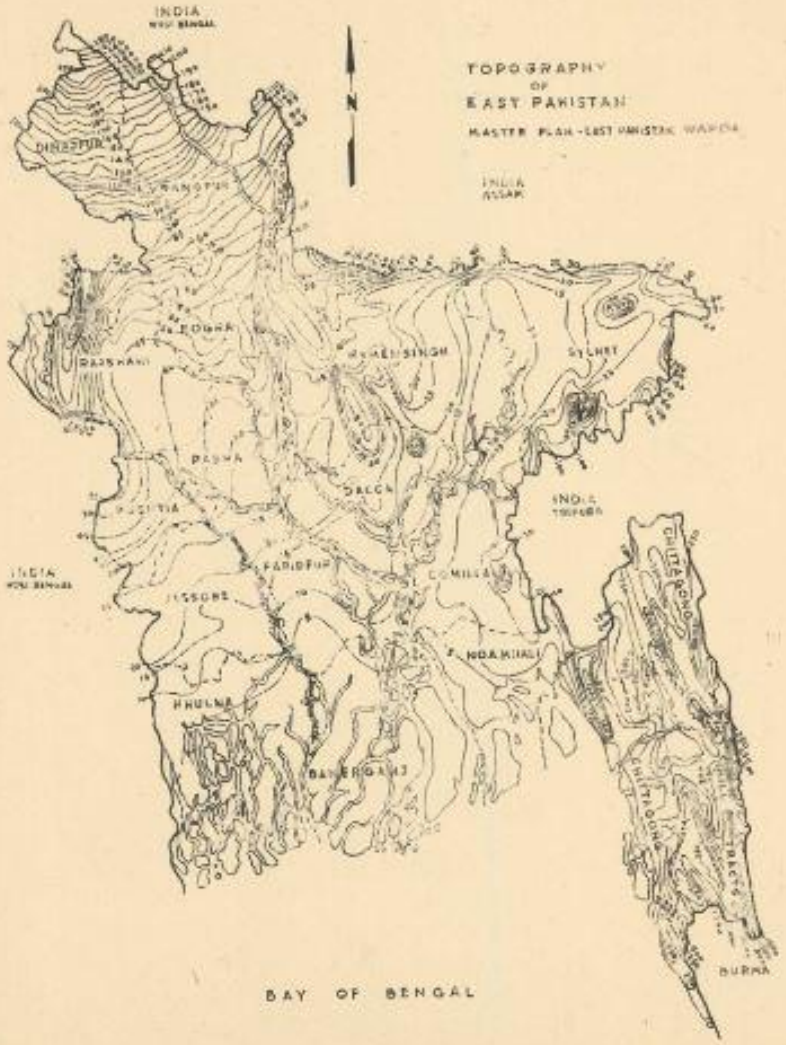
Location, Type and Size of Urban Centres and Rural Settlement :

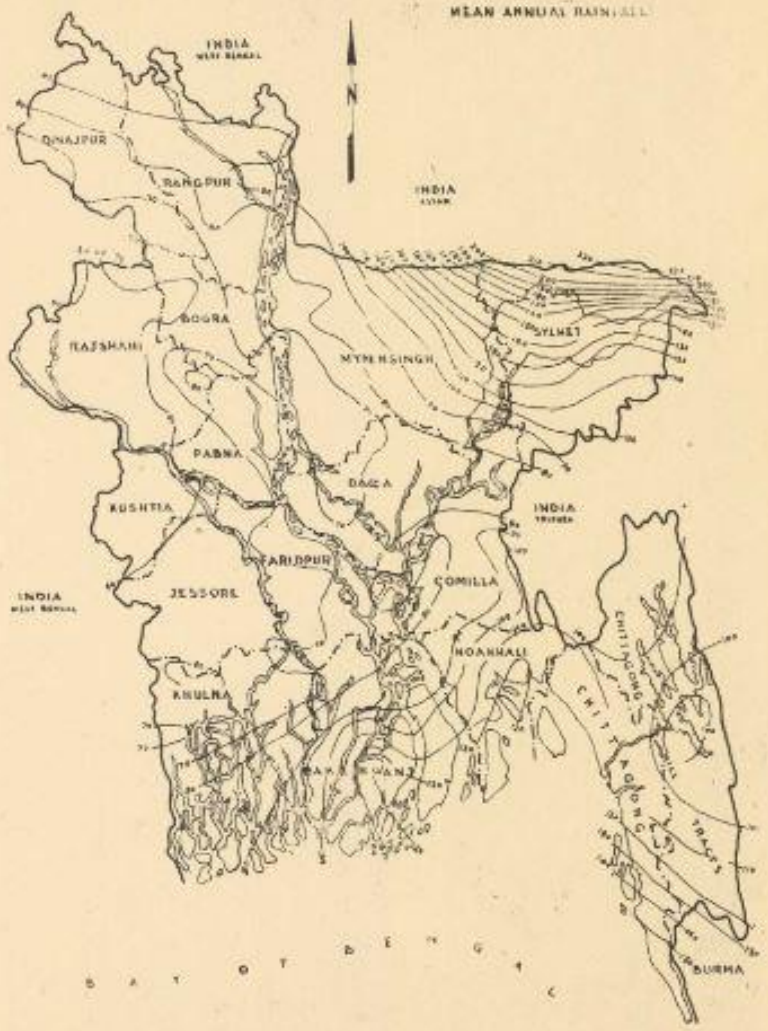
The determination of urban pattern and size of urban centres is a matter of integration of economic and industrial policy of the Government and also the limiting physical actors influencing the extent of urban growth. Research is essential to determine not only the optimum size of the various category of urban areas but also the location of the new centres. Further it is necessary to investigate the possibility of extending the urban facilities to the rural settlements to reduce the socio-economic and physical development gap between the urban centres and rural regions.

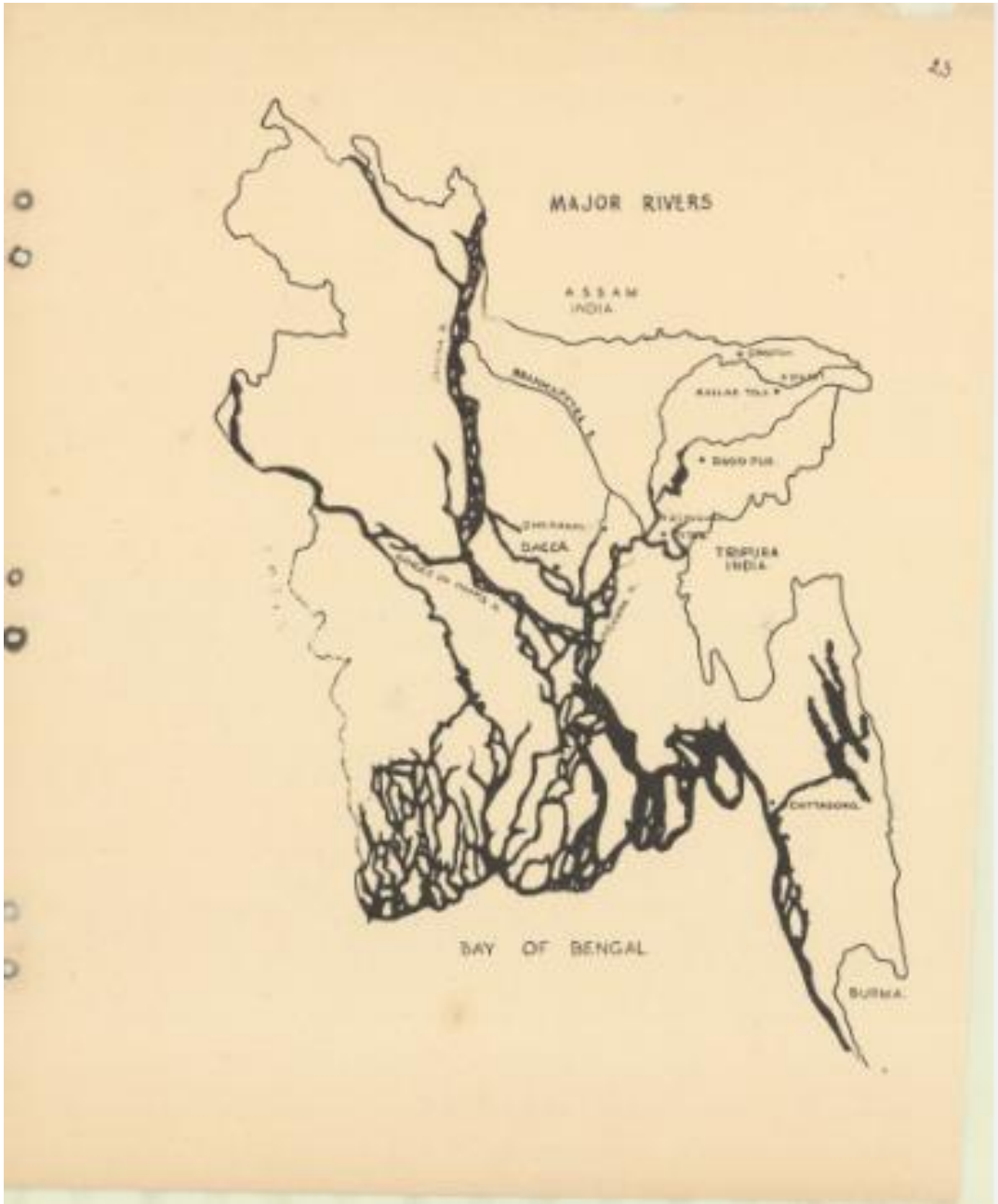
In connection with the location of new urban centres it is worthwhile to mention here that apart from the three main industrial zones in the Province namely, Tongi-Dacca-Narayanganj, Greater Chittagong and Khulna-Daulatpur, there is a possibility of developing a few other secondary industrial centres namely, Comilla-Brahmanbaria-Bhairab Bazar, Nasinghdi, Rajshahi, Bogra and Sylhet, etc. In fact few of them namely, Bhairab Bazar, Bogra and Brahmanbaria have become already potential industrial base due to the availability of power and raw materials. In addition an industrial belt is taking shape from Ghorasal to Demra along the course of river Lakhya. The availability of coal at Bogra and the availability of Titas gas in Sylhet region may try to influence the growth of industries in these two regions. If the nuclear power station is established at Kooppur, Ishurdi then another industrial base is likely to grow in the northern region of the Province.

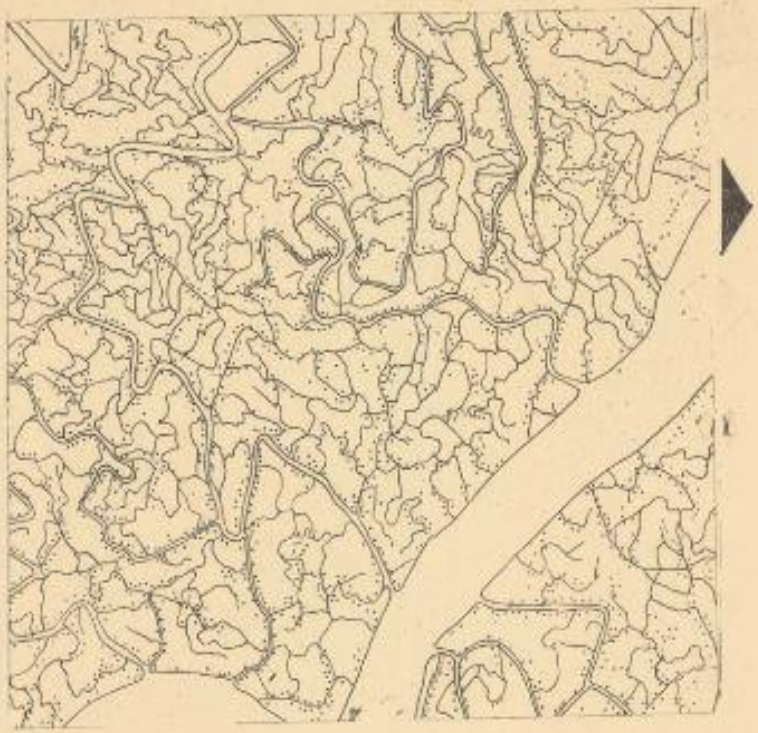
In the light of these new developments, the locational problem for the new cities may have to be reviewed and a proper feasibility study of the entire situation after the careful analysis of the factors involved and physical conditions influencing the development is to be done.


TIBET
GREAT HIMALAYAS
SIWALIK RANGES
SHILONG PLATEAU
DECCAN PLATEAU
BAY OF BENGAL
BASIC RESEARCH
- CONCEALED LINKAGE OF SHILONG AND DECCAN PLATEAU
M. SCALE.



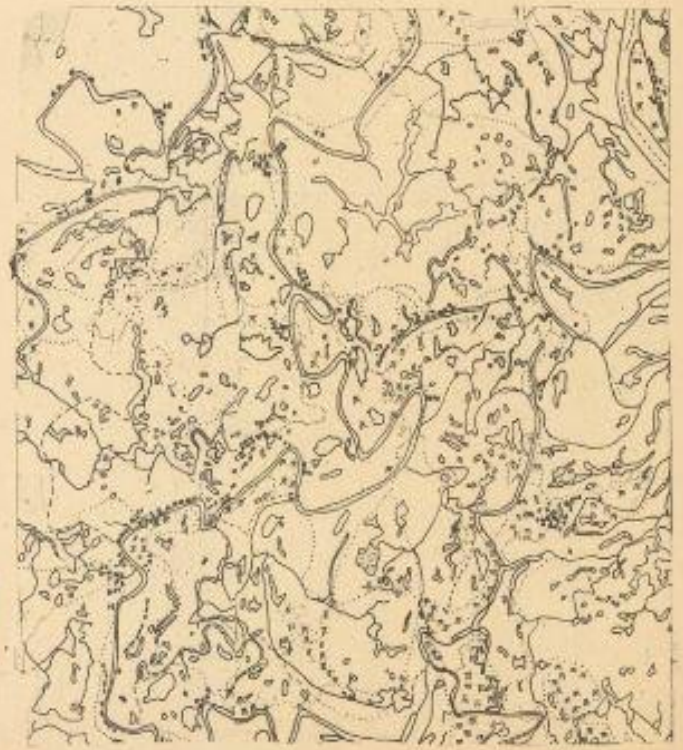






REGION OF ACTIVE RIVER – THE SOUTHERN PART OF THE PROVINCE

- SETTLEMENTS ARE MOSTLY ON THE BANKS OF RIVERS
- DOMINENT MEANS OF COMMUNICATION IS BY WATER-WAYS ON THE PERRENIAL TIDAL RIVERS.
- TIDE DETERMINES THE DIRECTION OF MOVEMENT BY THE TRADITIONAL RIVER CRAFTS.



LOW LYING REGIONS OF THE PROVINCE – THE MAJOR PART OF SYLHET AND PART OF MYMENSING DISTRICT.

- SETTLEMENT LIES OVER ARTIFICIALLY RAISED LAND.
- RIVERS, BILS AND HAORS ARE THE CHARACTERISTICS OF THE REGION.
- DOMINENT MEANS OF COMMUNICATION IS BY COUNTRY BOATS.

REGION OF DEAD AND DYING RIVER - KUSHTIA, JESSORE DISTRICTS AND NORTHERN PART OF KHULNA.

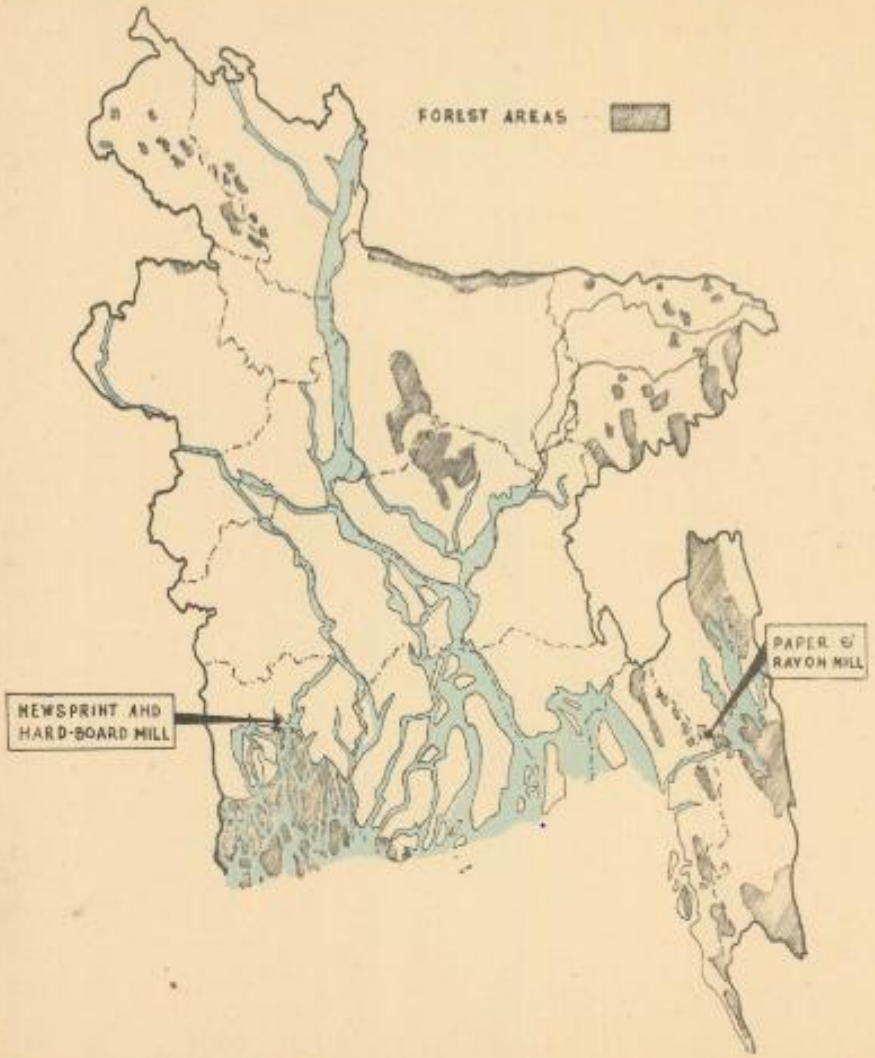
- MOSTLY SETTLEMENTS ARE ALONG THE ROADS.
- MOST OF THE RIVERS SHOW DISCONTINOUS CHANNELS IN THE DRY SEASON
- BEELS ARE CHARACTARISTIC FEATURES OF THE REGIONS
- COMMUNICATION IS MAINLY BY LAND ROUTES.

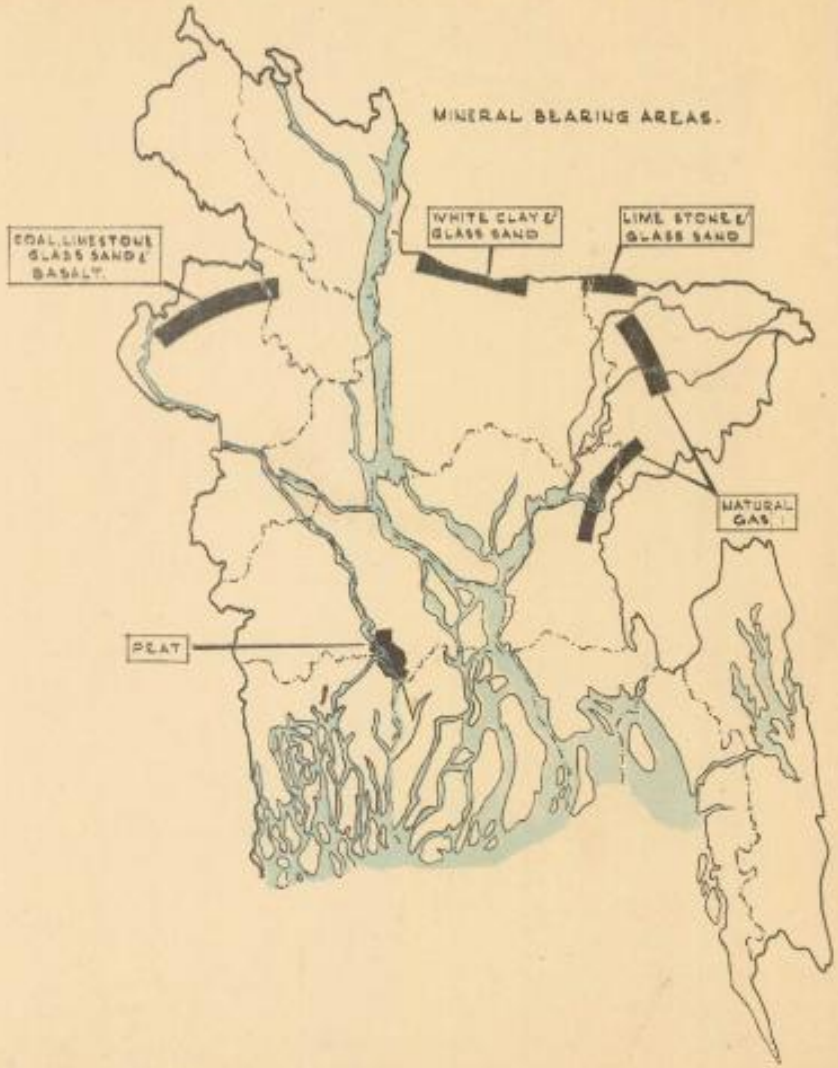
COSTAL REGION OF CHITTAGONG.

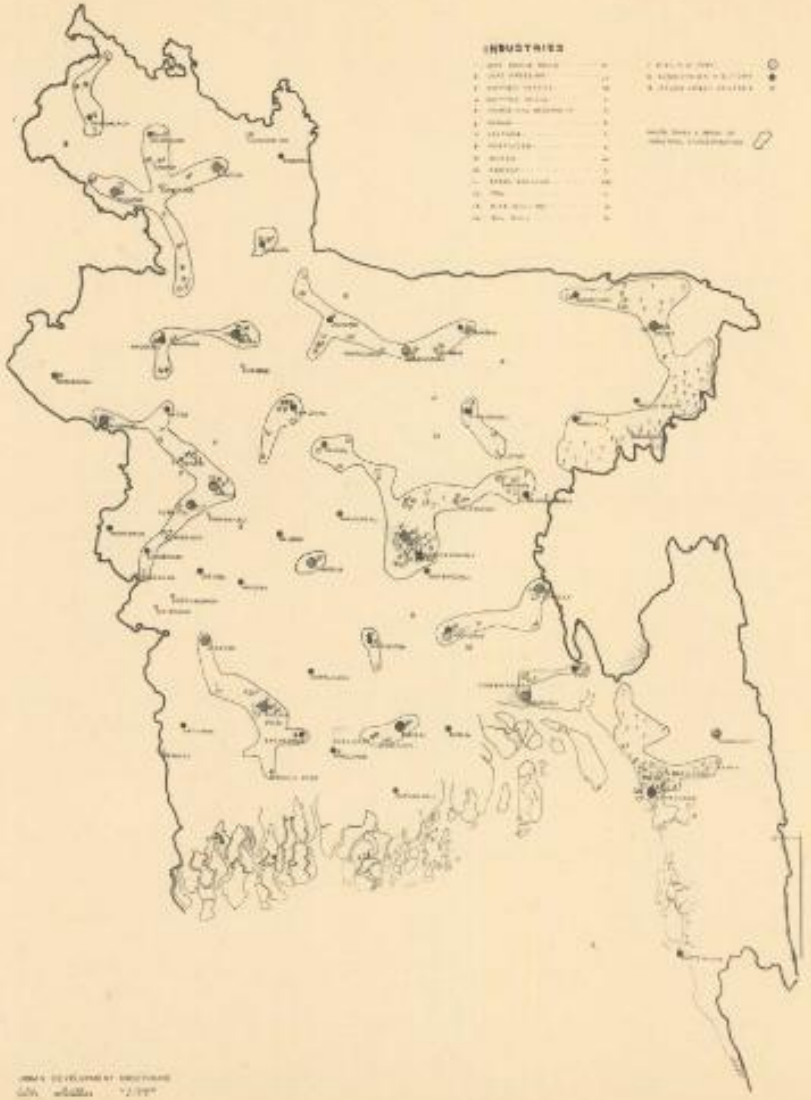
- SETTLEMENT PATTERN IS ALONG THE ROADS AND ON THE BANKS OF THE NARROW HILLY STREAMS.
- ONLY MEANS OF COMMUNICATION IS BY LAND ROUTES.

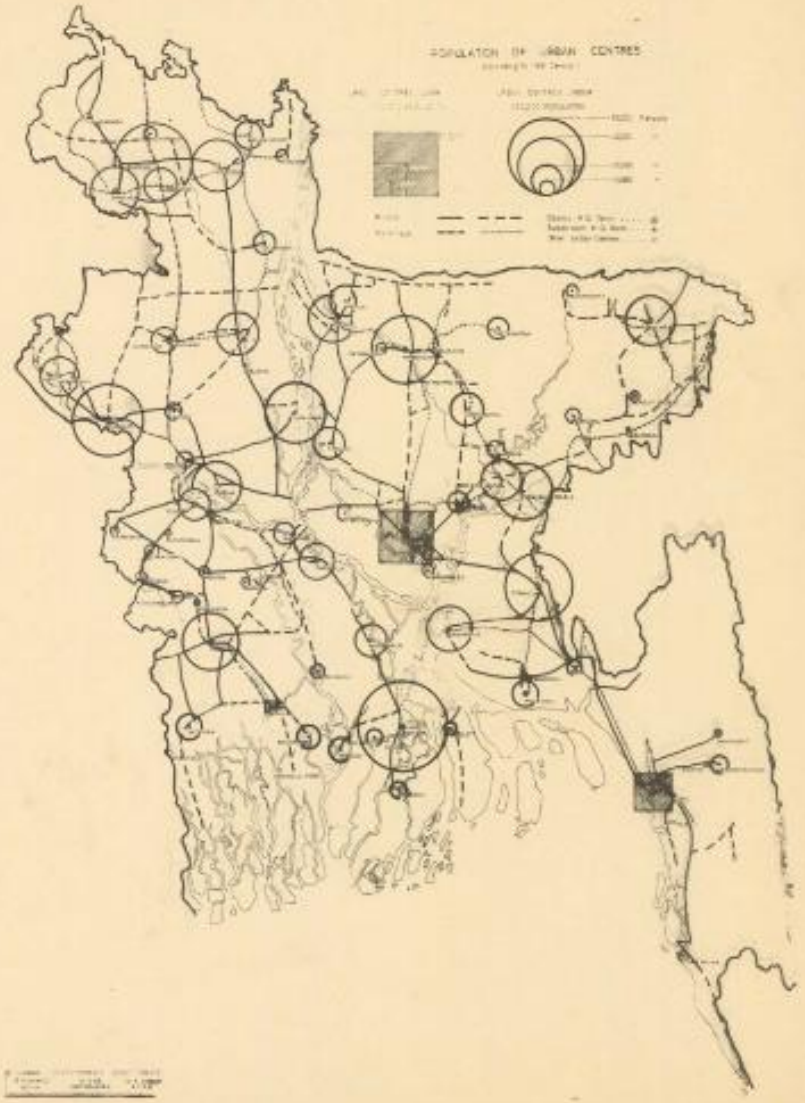
REGION OF JAMNA - PADMA INTERFLUVES.

- SETTLEMENT IS MAINLY BY THE SIDE OF THE ROADS AND NARROW STREAMS.
- DOMINENT MEANS OF COMMUNICATION IS BY LAND-ROUTES
- MOST OF THE RIVERS ARE NIRROW-INTERFLUVES ARE WIDE-CHANNELSOFMOST OF THE SMALLER STREAMS REMAINS DRY FOR MORE THAN SEVEN MONTHS.









OUR URBAN AREAS

INCREASE OF RURAL AND URBAN POPULATION OF EAST PAKISTAN
1901—1961

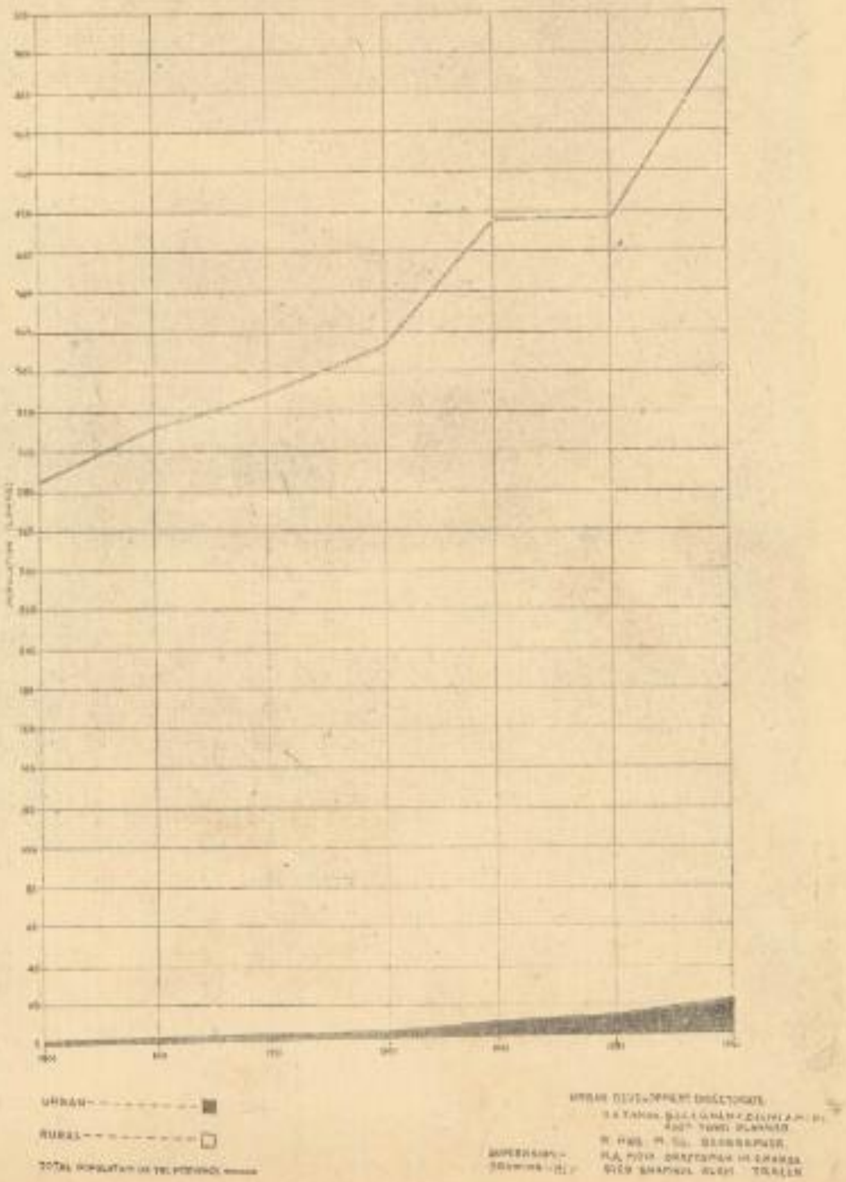
Decades	Numerical Increase (000)			Percentage Increase.		
	Total	Rural	Urban	Total	Rural	Urban
1901—1911	26,27	25,22	1,05	9·08	8·94	14·96
1911—1921	16,99	16,28	71	5·38	5·29	8·80
1921—1931	23,50	21,52	1,98	7·07	6·65	22·55
1931—1941	63,93	59,32	4,61	17·96	17·18	42·84
1941—1951	—65	—3,48	2,83	0·15	0·86	18·41
1951—1961	89,08	80,87	8,21	21·24	20·16	45·11

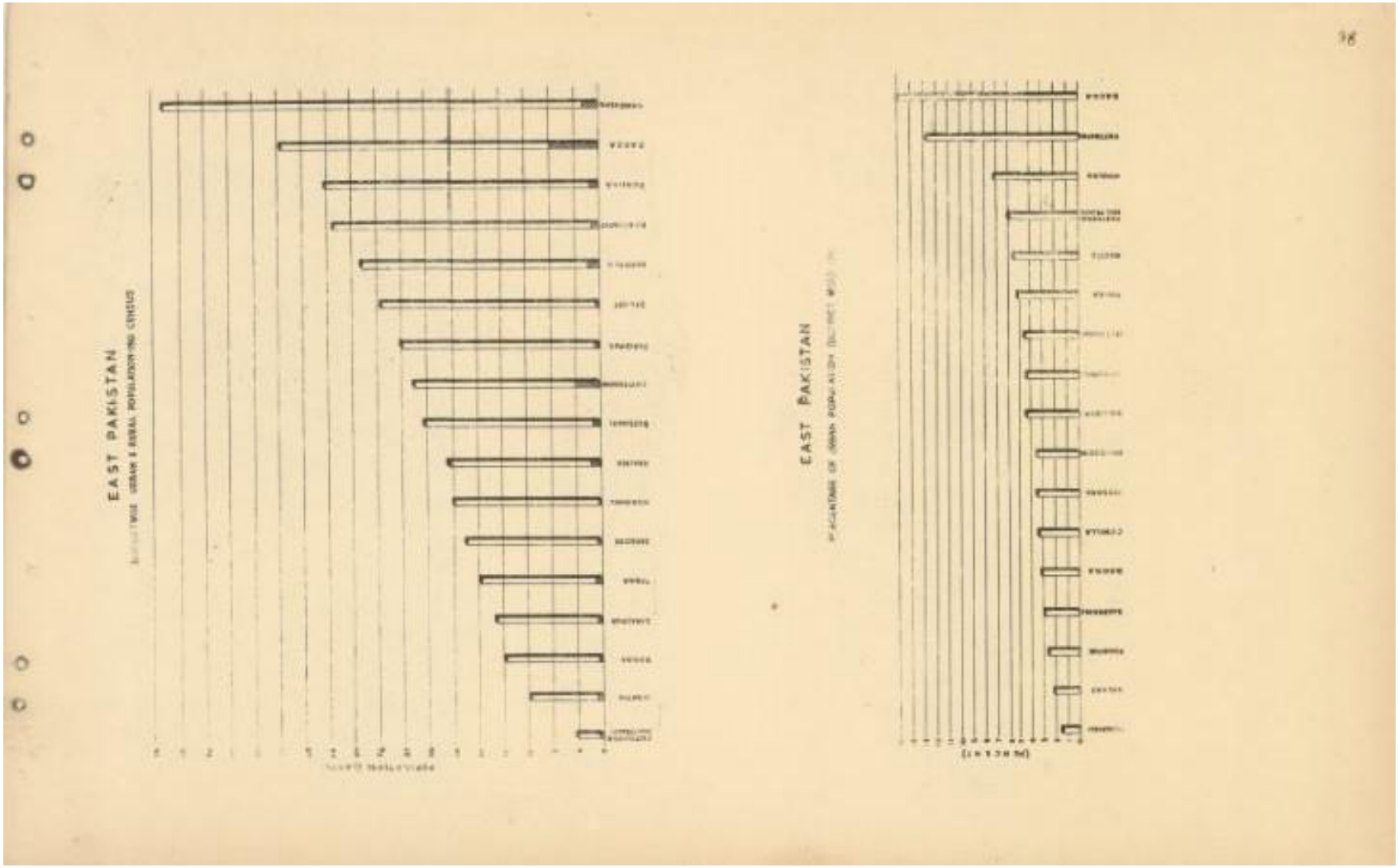
Source:—Census of Pakistan, Volume—2, East Pakistan
(Figures For 1951 and 1961 Exclude Non-Pakistani)

EAST PAKISTAN

URBAN & RURAL POPULATION

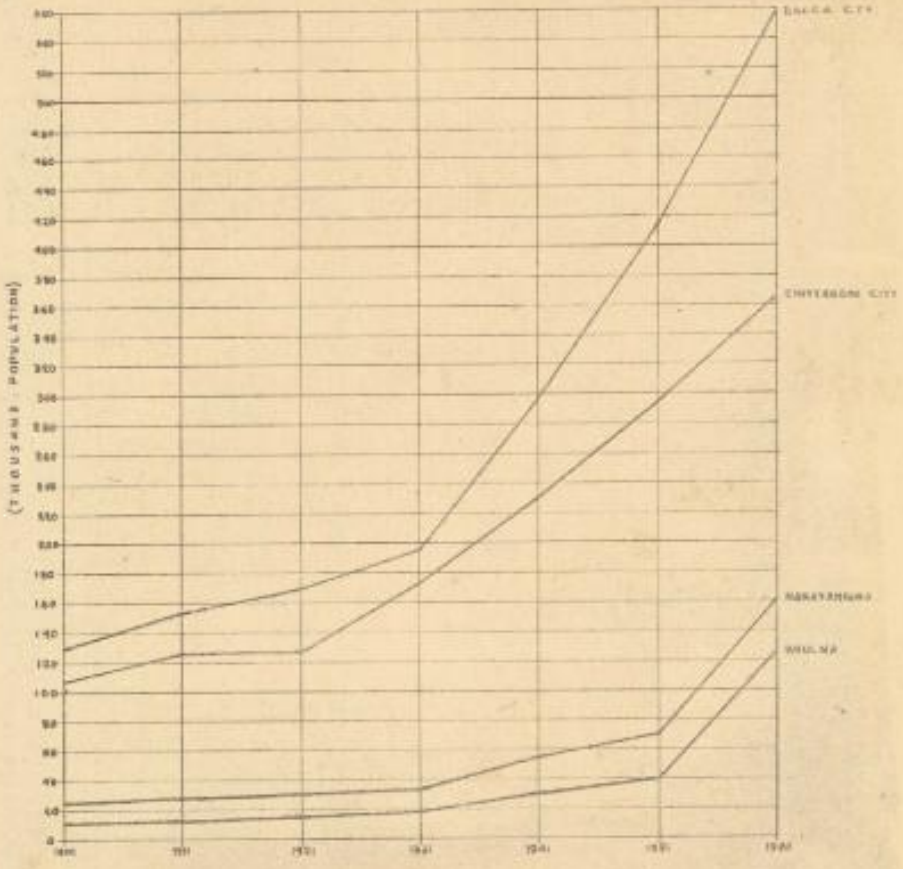
(1901-1961)





EAST PAKISTAN

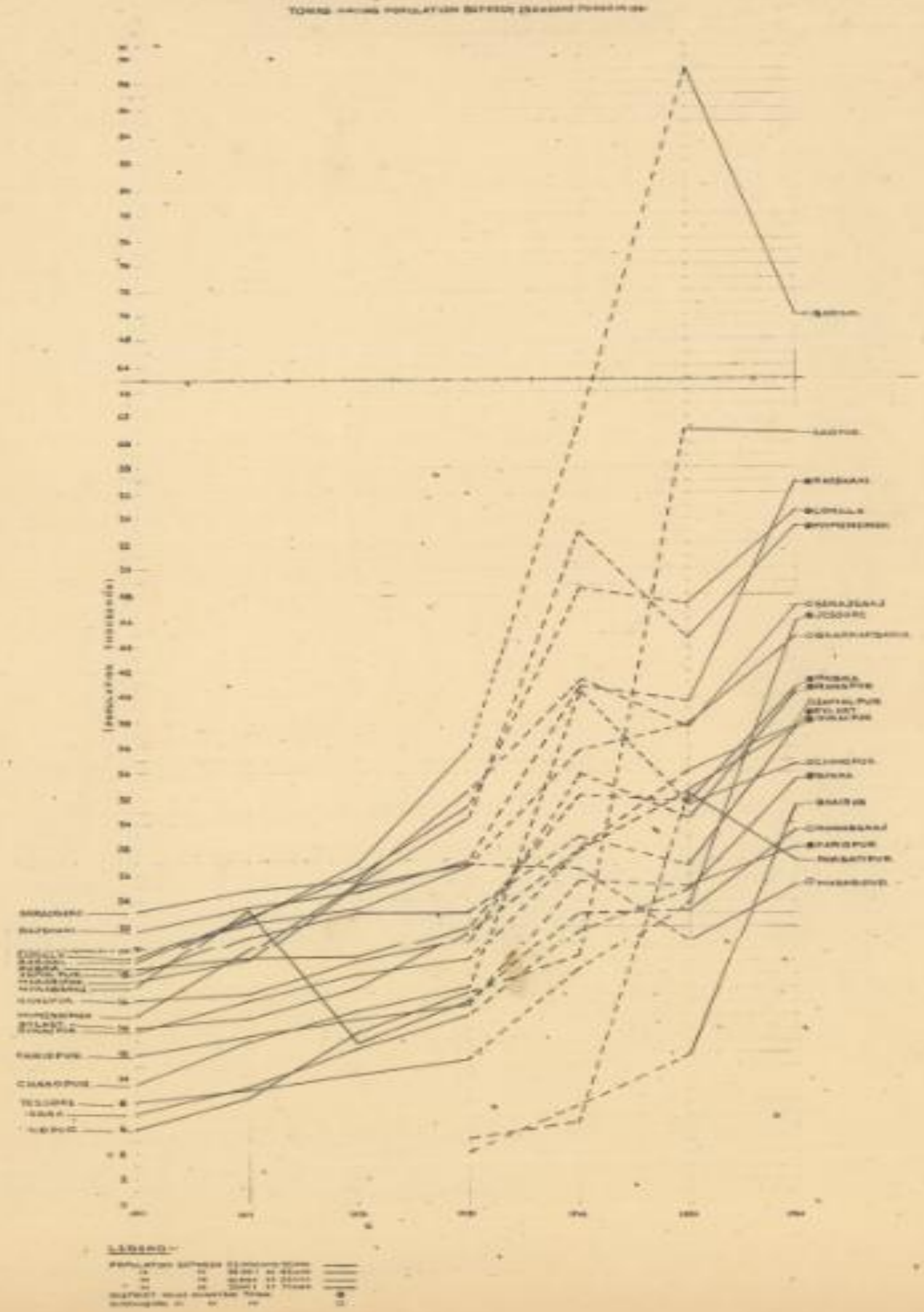
CHANGES IN TOWN POPULATION FROM 1901 – 1961

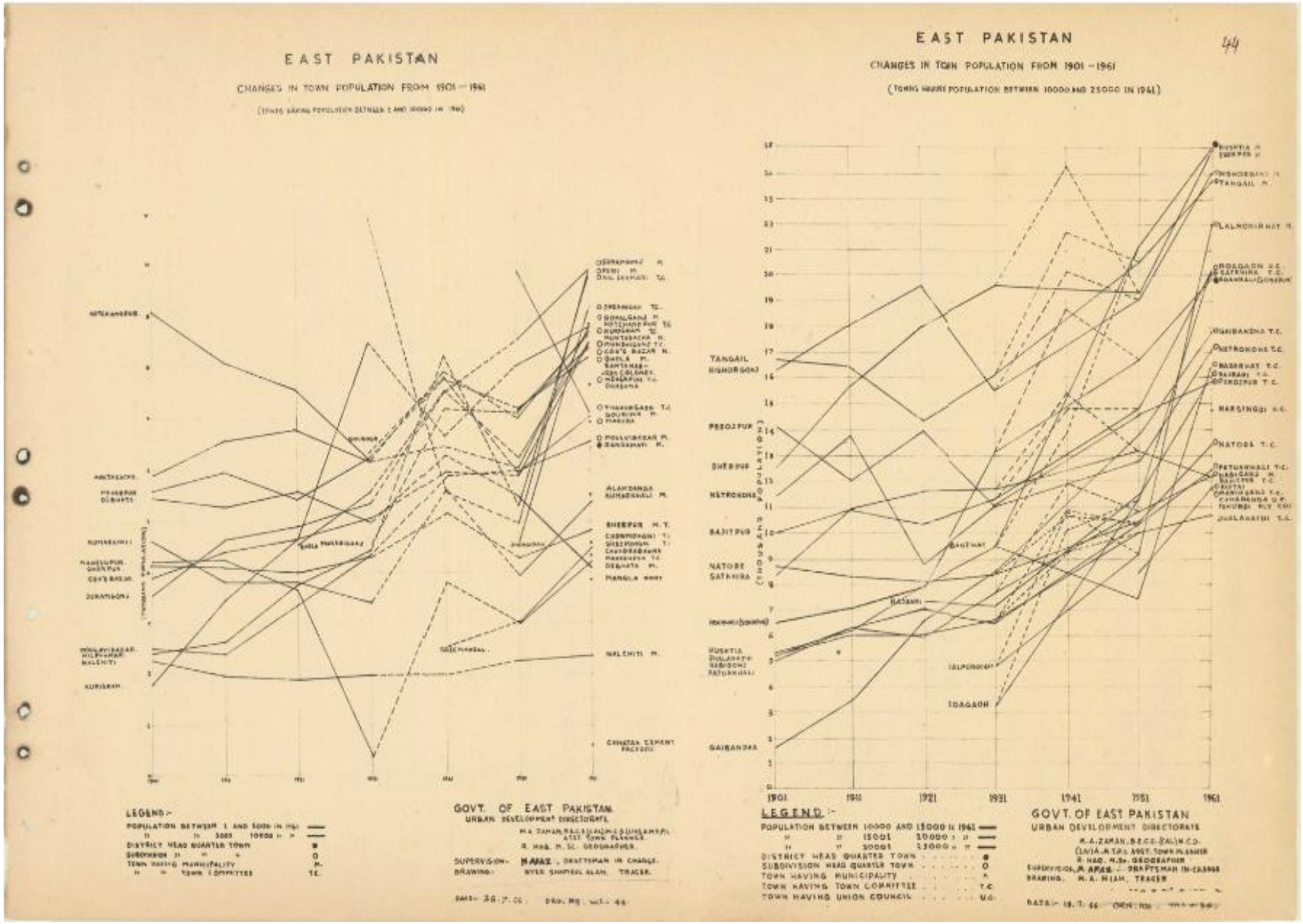


GOVT. OF EAST PAKISTAN
URBAN DEVELOPMENT DIRECTORATE

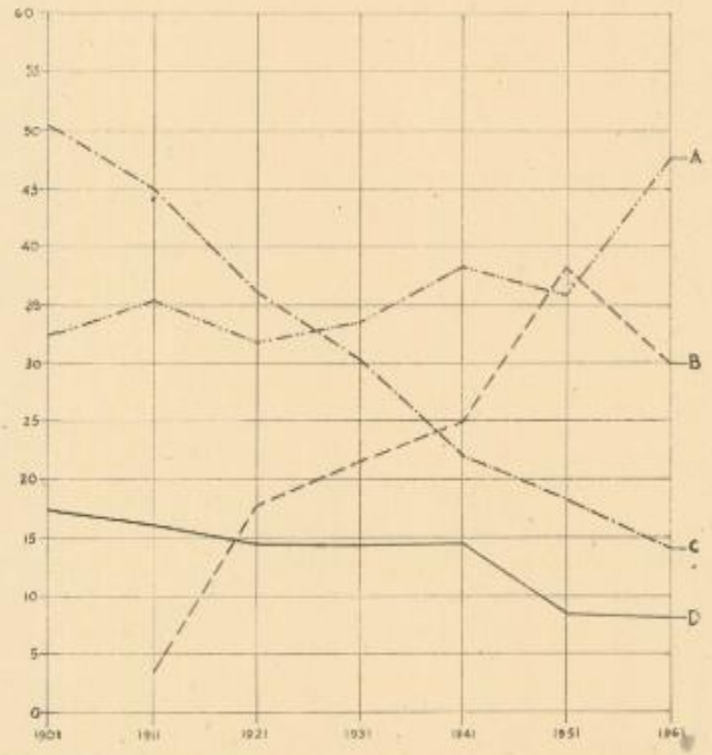
EAST PAKISTAN

CHANGES IN TOWN POPULATION FROM 1901 – 1961





PERCENTAGE OF
URBAN POPULATION ACCORDING TO CATEGORY OF URBAN CENTRES
1901 — 1961



D — —PERCENTAGE OF TOTAL POPULATION IN LESS THAN 10000 URBAN POPULATION CENTRES
C — - - " " " " " BETWEEN 10000 & 25000 " "
B — — " " " " " 25000 & 100000 " "
A — - — " " " " OVER 100000 " "

RESEARCH FOR THE FORMULATION OF A STRATEGY

Some thinking on an approach towards formulation of a Strategy for Physical Planning and Urban Development in East Pakistan

AFTAF MOHD. KHAN,

Dy. Chief Planner, Urban Development Directorate.

The people living in East Pakistan have an age-old tradition for adapting to the very specific physical environment and climatic conditions prevalent in this part of the World. Consequently a specific human settlement system has been created through evolution. This settlement is experiencing two major problems :

(1) Tremendous population pressure on land due to the present demographic explosion in an already saturated condition.

(2) Scarcity of land for meeting the ever increasing demand for food and also further land demands for establishing the bases for new industrial and service activities required for development is already very acute. The Government of East Pakistan have been making huge investments in these developments to create new job opportunities in agriculture as well as in industrial and service sectors. This is essential to satisfy the present day needs of the existing population and also for the additional fifty million persons, requiring new settlements and activities during the next 20 years. East Pakistan Urban Development Programme is designed for location and planning of sites for these new developments and their integration within a balanced Regional Development of the Province.

The Urban Development while preparing its work programme considered it necessary to conduct a thorough analysis on a Scientific basis of the existing conditions and to define through fundamental findings the initial action for starting the planning and development on a rational basis. The existing settlement pattern of the Province and its actual population distribution pattern has been studied and the following assessments have been made regarding the development capability of our existing settlement pattern :

(*a*) In the rural areas though there is a lack of a well-organized system of nuclei catering the needs for vast agglomeration of population (evenly distributed in East Pakistan), yet this ettlement system can be considered technically capable for progressive improvement towards the moden development, retaining the acquired values and traditions of this system, as far as practicable.

(*b*) The existing modern development famework as provided by the previous developmen plans as well as committed by the perspective plar has been studied and analysed in its total perspectiv and it has been found that an overall concept of the major Regional Development Framework is poitively committed for the Province, geographically lefining the zones fitted for urban, industrial and sevice activities.

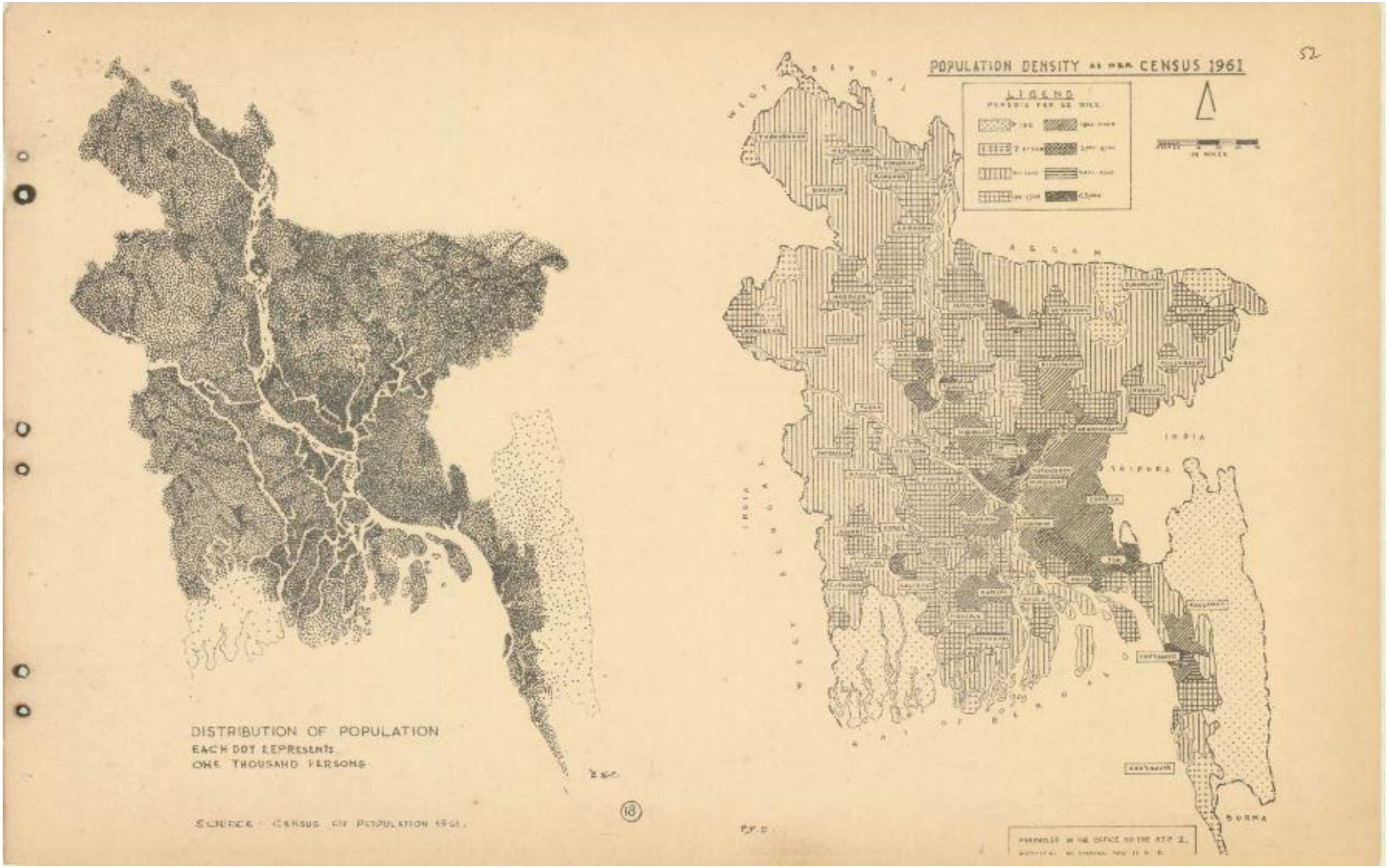
(*c*) Sequence of Urban Development expansion throughout the Province and its limitation, up to the end of perspective plan period, has been tudied and it is clear that availability of power anc its geographical distribution is a determinent limitng factor which

strictly defines zones, capable of actual development at a particular time sequence. Initially the production of power is very limited, therefore, only ongoing development can be taken care of, while the new development will only be possible in later years when the power production will increase, and till 1985, when the power will be available throughout the Province, practically the entire Province will be available for new development and activities.

Therefore, geographical locations and sequence of development are somehow committed to power production and availability at site. The above assessment also leads to a concept of progressively expanding "Feasibility Zones." Beyond these Zones to conceive any major development based on the programme of the present power production seems to be hypothetical and therefore—

(*i*) Our Urban Development Programme and sequence of Regional Development Programme can possibly be organized on the basis of these 'Feasibility Zones."

(*ii*) The Urban Development initially vill have to be limited to the existing few feasibility zones and that it will gradually expand to the entire Povince along with the expanding "Feasibility Zones."



our population density is one of the highest in the world.

geographic distribution of densities of population in east pakistan as found out through the IBM computer indicates a large portion of our land is under high population pressure.

agriculture alone will not be able to sustain such a pressure of population.

it was again found out through computer that the spatial growth of our population density will continue at a much accelerated rate.

most of our land will gradually come under a heavy population pressure by 1971.

population control, diversification of our economic base and dispersion of secondary and tertiary activities may be the probable answers for this enormous problem

REC

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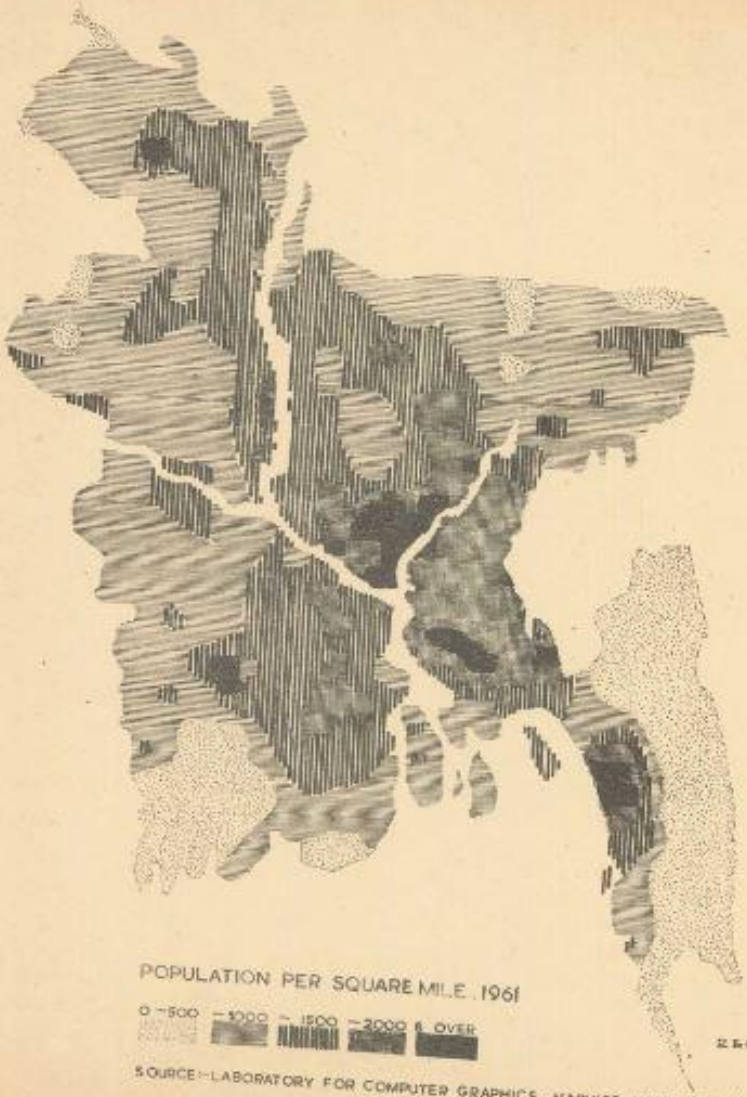


POPULATION PER SQUARE MILE, 1961

0-500 | -1000 | -1500 | -2000 | & OVER

SOURCE: LABORATORY FOR COMPUTER GRAPHICS, HARVARD UNIVERSITY

PROJECTION OF
POPULATION PER SQUARE MILE, 1971

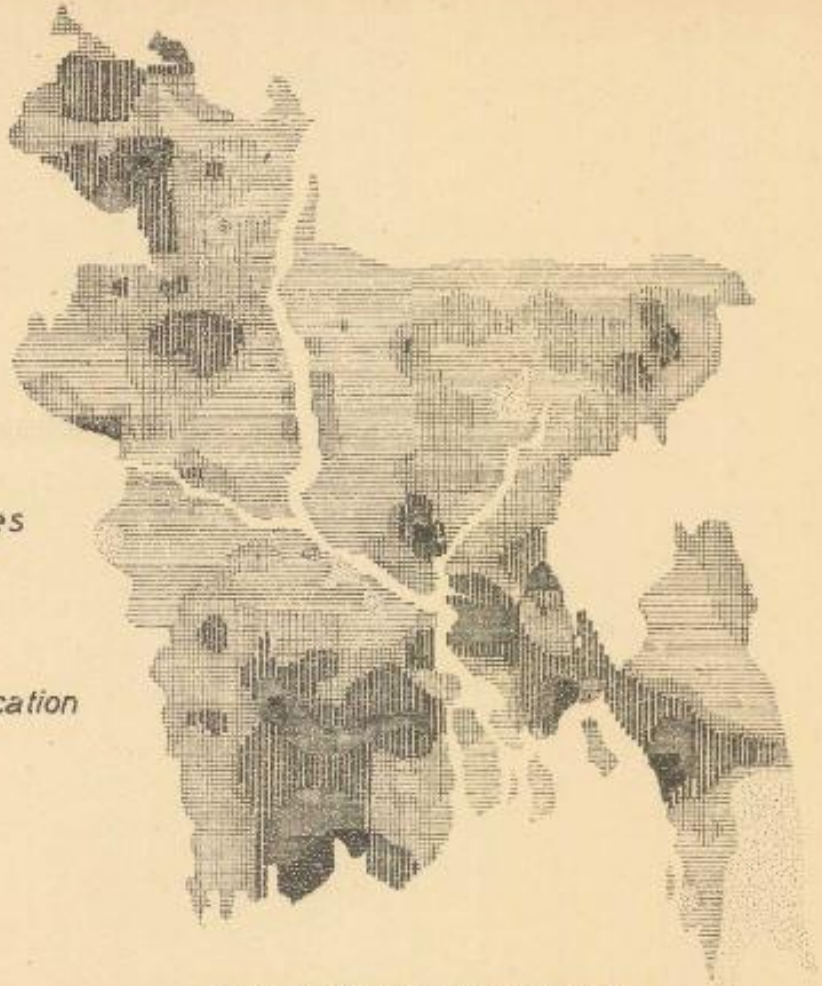
0-500 | -1000 | -1500 | -2000 | & OVER

SOURCE LABORATORY FOR COMPUTER GRAPHICS, HARVARD UNIVERSITY

with industrialisation east pakistan is going to face a sudden technological change — in a society having a small percentage of literacy.

therefore, centers of activities with proper amenities and services, at the lowest level of settlement, are all the more necessary for bringing about socio-economic adjustment with the new technology.

thus, technical education coupled with adult education has to be provided in smaller settlements, well distributed throughout the province.



RCC+ 2163B

pakistan planning commission estimates 104 million population for east pakistan by 1985.

if all the development projects related to agriculture including those of WAPDA, are successfully implemented at best 50 million people can be supported directly by agriculture.

therefore, the tremendous increase of our urban population and other non-agriculture based population in coming years will be unprecedented in our history.

in order to avoid a large scale migration of our rural population we must provide secondary and tertiary employment opportunities for our growing non-agricultural population at their village level or at some selected centres which will help in arresting the population migration to large urban centres in pursuit of jobs.

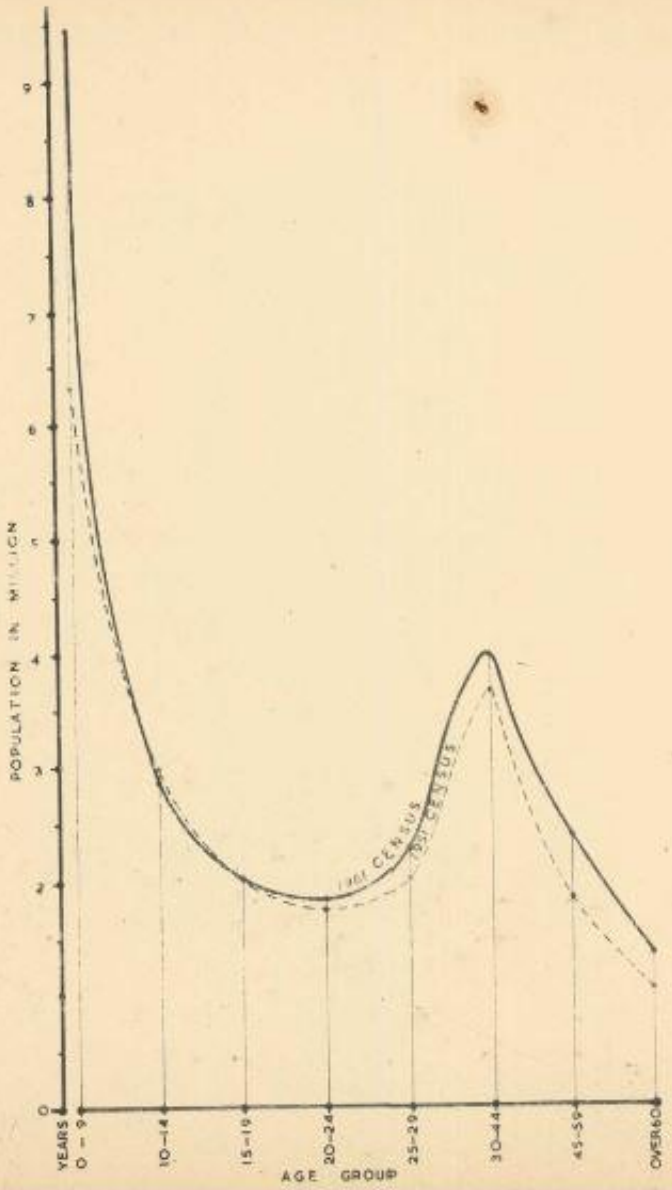
etc

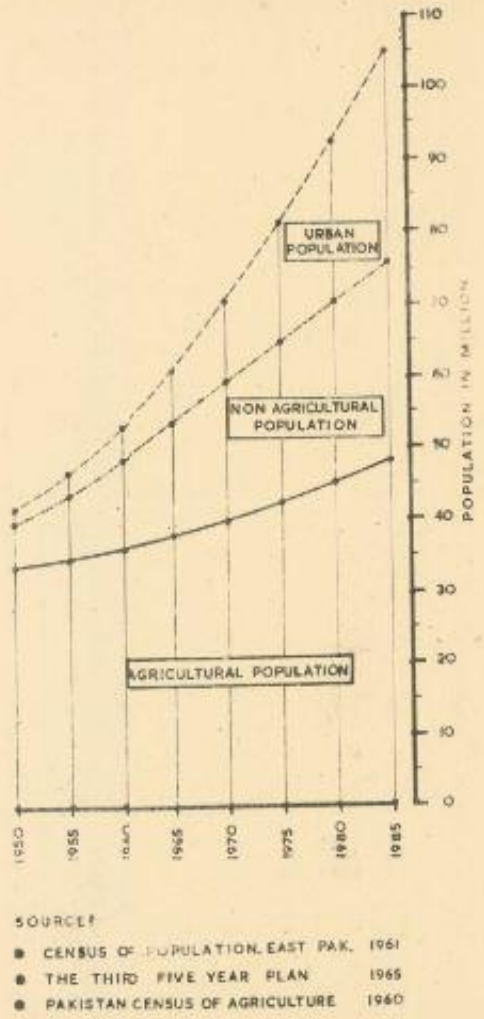
population structure shows an alarming increase in the younger age groups.

whatever may be the reason for their growth, in times to come, they will be posing an enormous problem for the country.

in 15-20 years time when they will reach working age groups, they have to be provided with employment, housing etc. which in magnitude will be twice as high as of today.

etc



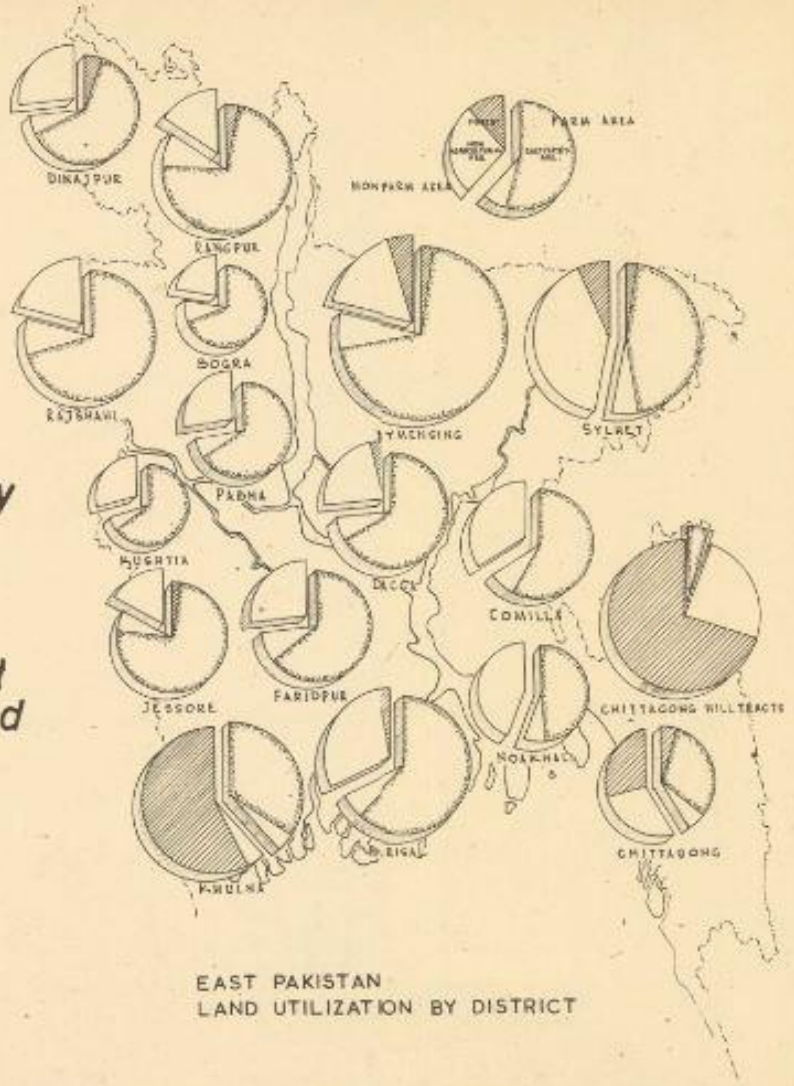


SOURCE:

- CENSUS OF POPULATION, EAST PAK. 1961
- THE THIRD FIVE YEAR PLAN 1965
- PAKISTAN CENSUS OF AGRICULTURE 1960

predominantly agrarian
our land has been utilised extensively
very little scope for geographic
expansion of agriculture.

therefore, along with the development
of intensive cultivation, secondary and
tertiary activities have to be created
to provide employment to our
growing population.



EAST PAKISTAN
LAND UTILIZATION BY DISTRICT

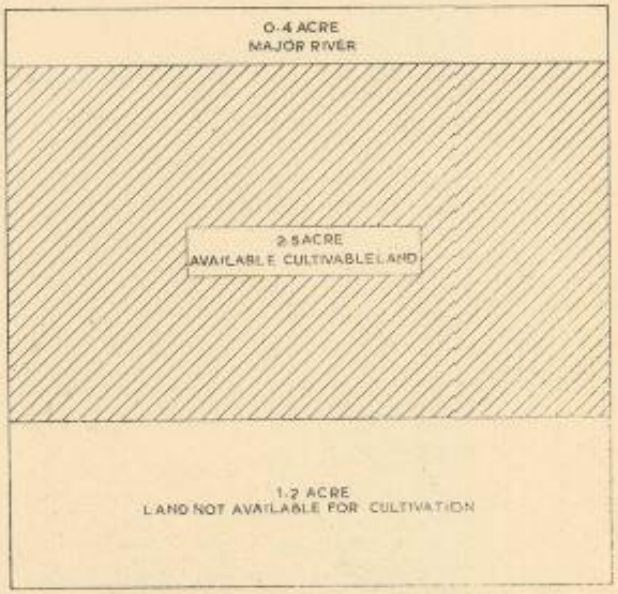
Source : CENSUS OF AGRICULTURE

R&C – 3/612

SHRINKING LAND/MAN RATIO

by 1980 near four fold decrease of our per family cultivable land will be experienced if the present rural–urban population balance continues.

AVAILABLE LAND PER FAMILY OF SIX PERSONS · · · · · 1961

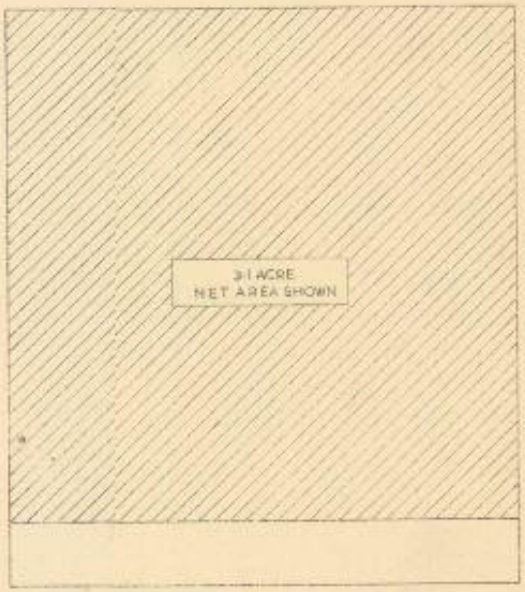


EAST PAKISTAN TOTAL AREA 55 000 SQ. MILE
POPULATION 1961 50·8 MILLION
PER CAPITA LAND 0·69 ACRE
PER FAMILY LAND 4·10 ACRES

AVAILABLE LAND PER FAMILY OF SIX PERSONS · · · · · 1980

EAST PAKISTAN TOTAL AREA 55 000 SQ MILE
POPULATION 1980 ESTIMATED 93 MILLION
PER CAPITA LAND 038 ACRE
PER FAMILY LAND 2·30 ACRES

SIZE OF AN AVERAGE FARM · · · · 1960



EAST PAKISTN TOTAL AREA 55 000 SQ MILE
TOTAL FARM AREA 34 000 SQ MILE
CULTIVATED AREA 29 000 SQ MILE
AVERAGE FARM SIZE 3·3 ACRES
SHARE OF CULTIVATED AREA FARM 3·1 ACRES

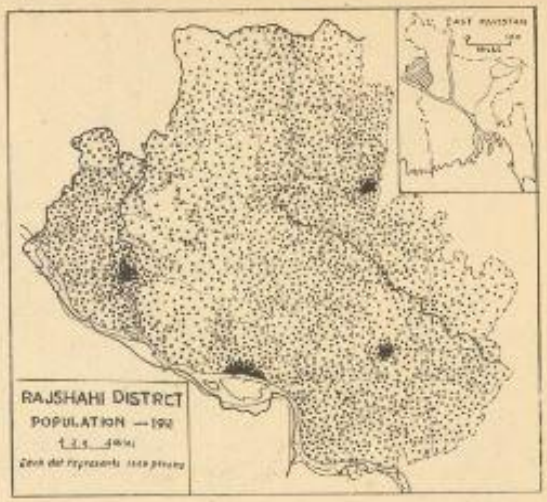
REC

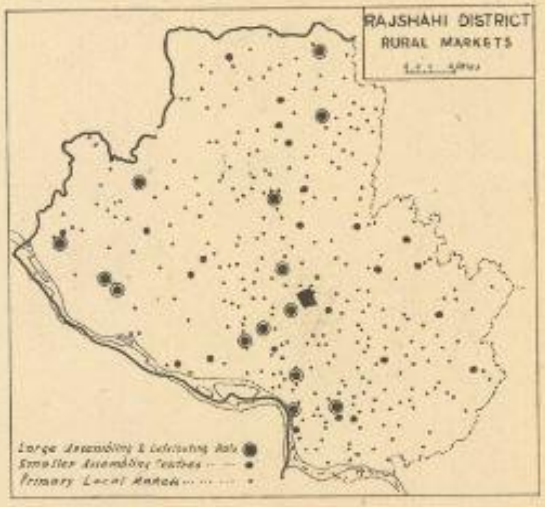
our scattered settlements lack in organised centres for activities and amenities

the unique system of 'HATS' seems to offer us the possibility of providing organised centres for activities and amenities. these 'HATS' are not places for living but for providing services.

this accepted principle encourages us to make it possible to select potential centres for providing activities and amenities only— people will come for employment and amenities. and will continue living in their own home in the surrounding areas.

this will in fact take activities and amenities right to the door-step of the masses





SOURCE - A. H. PEEL : THE RURAL MARKETS OF RAJSHAHI DISTRICT ORIENTAL GEOGRAPHER - JULY, 1963.

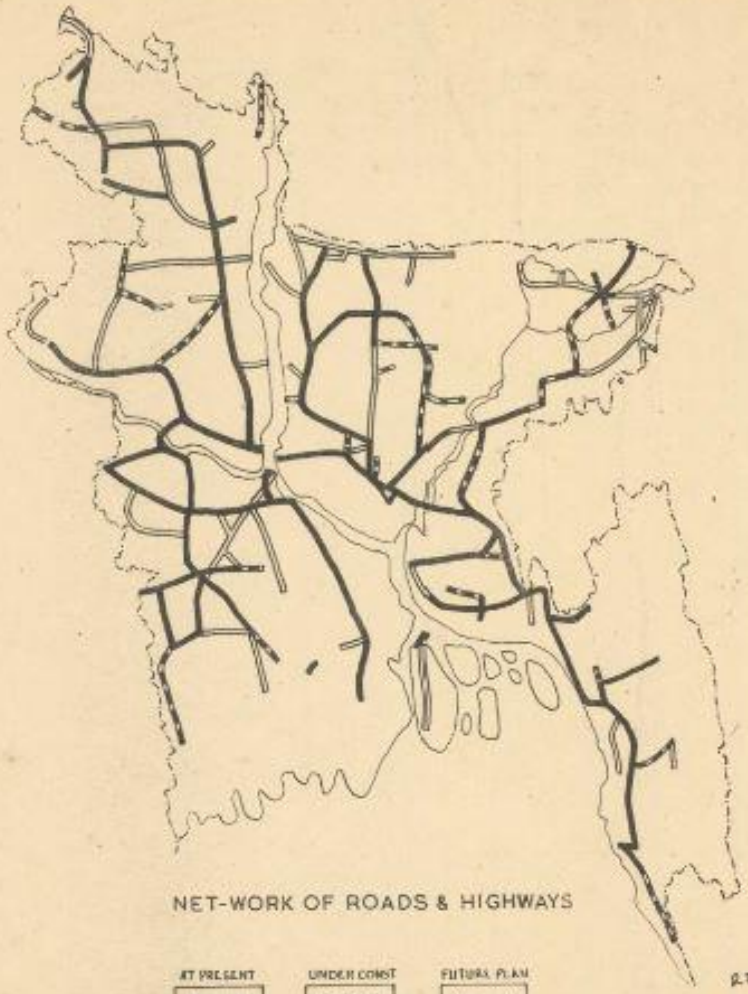
20

1:C-2/622

the existing net-work of railways and that committed during the next two plan periods has taken up a definite form on the surface of east pakistan.

the road net-work — existing and committed, also follow more or less the same geographic location as that of railways.

power grid also follows the same geographic location as that of railways and roadways net-work of our province.

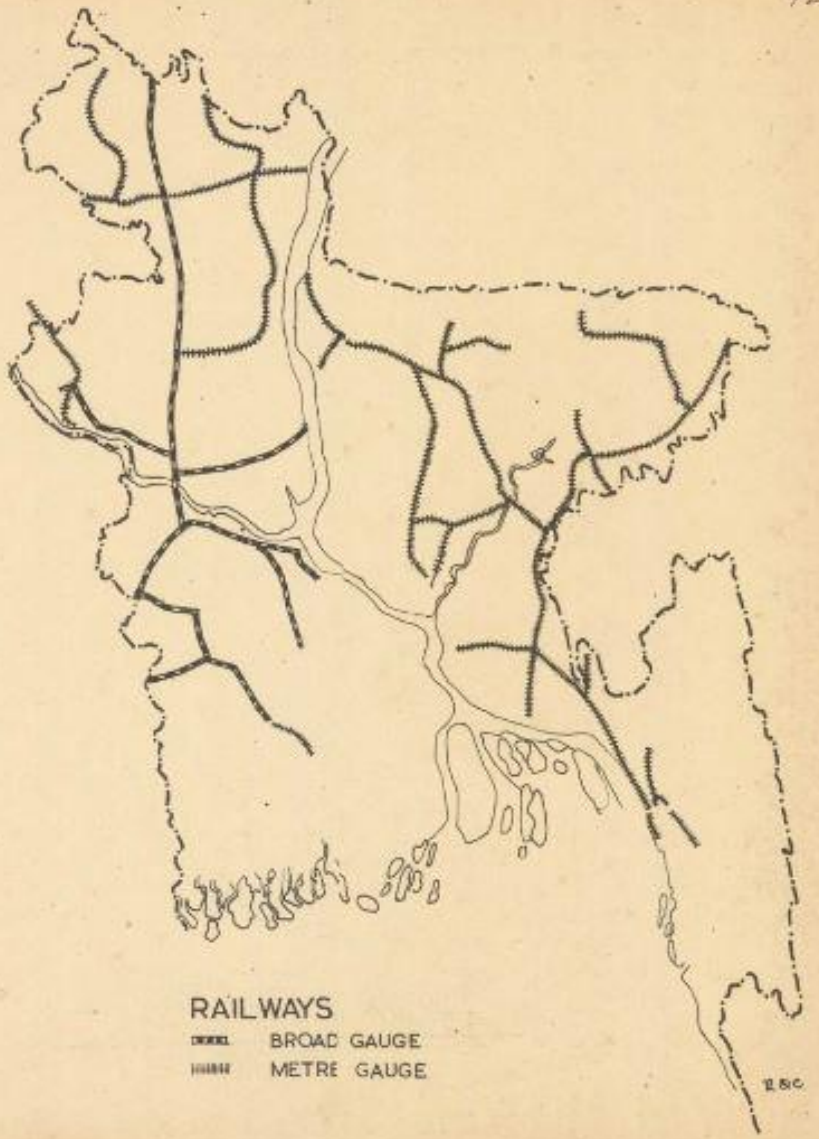


NET-WORK OF ROADS & HIGHWAYS

AT PRESENT | UNDER CONST | FUTURE PLAN

SOURCE :- DIRECTORATE OF ROADS & HIGHWAYS.

R&C



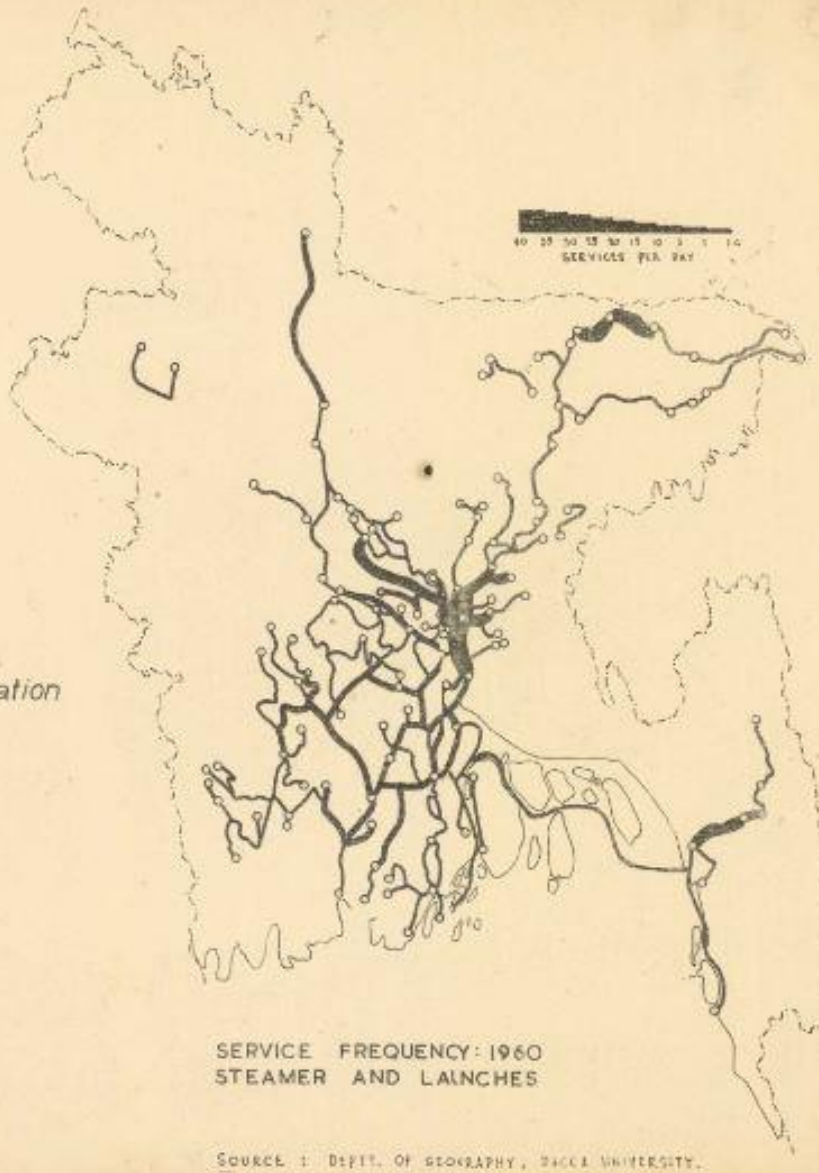
RAILWAYS

BROAD GAUGE

METRE GAUGE

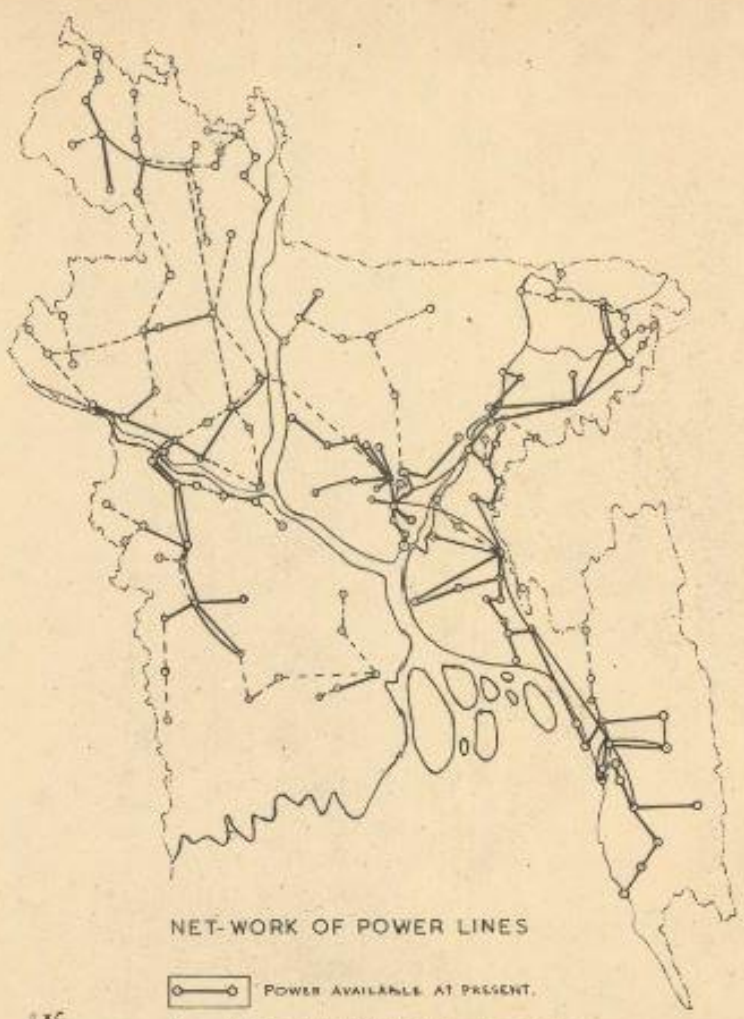
R&C

our unique inland waterways system provides opportunities for cheapest transportation, has to be thoughtfully developed to facilitate the industrialisation and urbanization process in our province.



SERVICE FREQUENCY: 1960
STEAMER AND LAUNCHES

SOURCE : DEPTT. OF GEOGRAPHY, DACCA UNIVERSITY.



NET-WORK OF POWER LINES

POWER AVAILABLE AT PRESENT.

POWER AVAILABILITY IN FUTURE

SOURCE :- E.P. WAPDA.

POWER AVAILABILITY
GEOGRAPHIC DISTRIBUTION

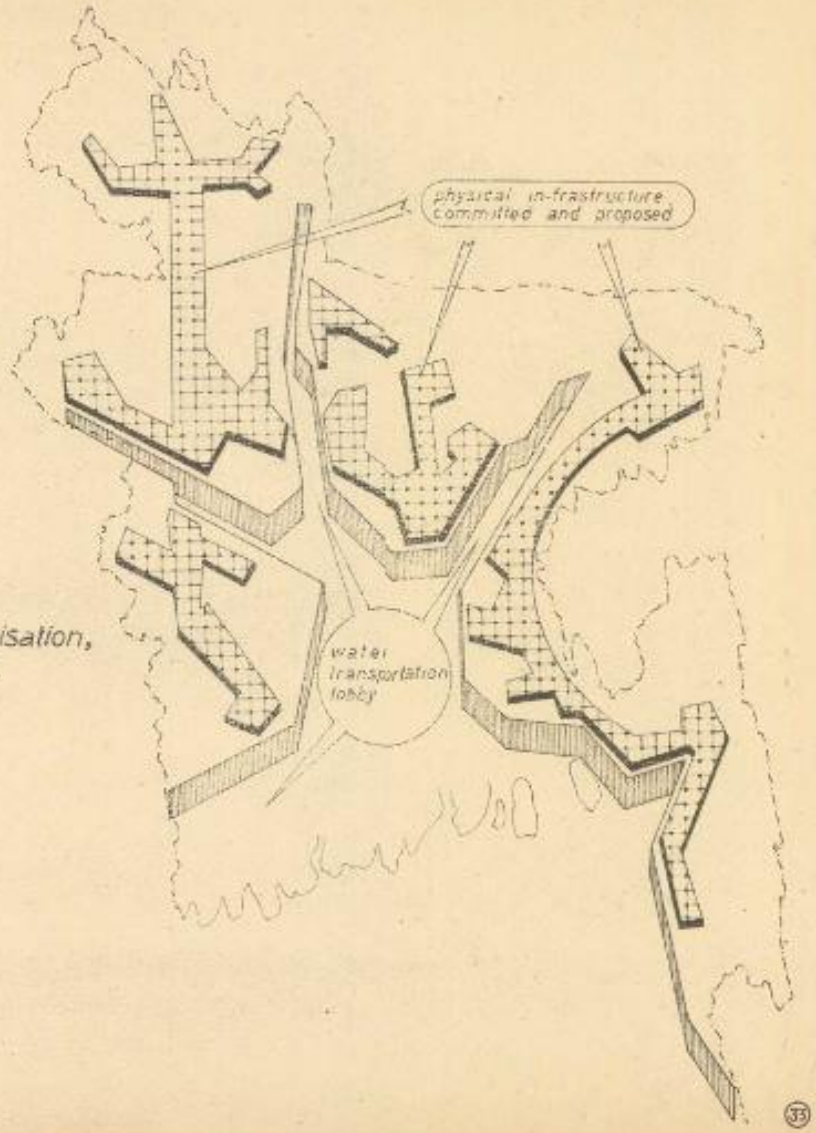
AT PRESENT | BY 1972 | BY 1985

SOURCE- MASTER PLAN E.P WAPDA.

per synthesis of the inland waterways, railways, roadways, and the power availability grid, we find that "PHYSICAL DEVELOPMENT STRUCTURE" of our province is basically committed.

a definite geographic shape of "H", fitted for physical development, emerges on the face of this province, linked by an enormous water lobby in the centre and having three water antennas going into the hinterland.

location of future centres of urbanisation and industrialisation, will logically fall within this development framework.



SURVEY AND PLANNING OF RURAL HOUSING

Village Planning

—A TECHNIQUE TO URBANIZE RURAL, EAST PAKISTAN

A. K. SALEHUDDIN AHMED,

Senior Planner, Urban Development Directorate.

Culture is a collective name for all what we use, material and spiritual, and all the distinctive achievements of human groups. And, civilization is the resultant of cultural development giving form to a people of what they are at a particular time and space. "In fact, the original meaning of the word 'civilization' is urbanization. In earlier civilizations Mesopotamia, Egyptian, Cretan, Greek, Roman—as their cities rose in power and influence, so did the corresponding civilizations ; as their cities declined, so did the civilization decline"—Prof. R. M. MacIver and C. H. Page. This equation of urbanization with civilization as deduced by cultural development follows a course of history of more than seven thousand years when "Eridu" in Mesopotamia is claimed to have been built as the most ancient city on earth.

It is obvious that the origin of all basic cultural traits of the organised human groups, generally, have their origin in the rural societies. But the fact which draws the immediate attention of any scholar in urban studies is that the proud preserve of history is the urban and not rural society as the form of civilization. This is simply because, the first terminus of the aggregate society is rural which through a historical journey of cultural development is marching ceaselessly towards the final terminus of the urban society. What is noticeable is that in a more organized, advanced and technology-based society the distance between the first and final terminus of the aggregate society gets shortened speedily. In other words, the more the development of culture is broad-based over land and people the less is the distance between the two termini of the human society as a historical entity. The necessary corollary of this axiom is the elimination of the factor of distance when a total urban culture will be achieved—a culture which is homogeneous and without room for any lag. Therefore, the aim of civilization is to resolve the contradistinctions between rural and urban societies. To-day, as Prof. MacIver say, "One of the broadest and most revealing of all social contrasts is that exhibited in the differences of rural and urban life."

In short,

Total Urban Culture

=(Urbanization-Civilization-Cultural Development)

—Rural Society.

or, TUC=(U—C—CD)—RS.

or, Civilization—Rural Society=Total Urban Culture.

Or, C—RS=TUC.

Therefore, it is the stagnated and archaic rural society which is screening our views to have a perspective of the final goal we want to achieve through our efforts in cultural development to which a Government for the people stands committed.

As discussed in the foregoing, the progressive development of culture broad-based over land and people wil enhance the process to reach our ultimate goal. Now the conponents of culture are of two kinds—material and spiritual. For the purpose of our present discourse it is the material component of culture and its development that we are more directly concerned with. What consist of this material component are enumerated by Dr. Fairchild in his "Dictionary of Sociology" as "Building, Tools, Machines, Communication Devices and Art Objects", in other words, all what science and technology can offer. For our present purpose, these are the cultural traits that have either to be introduced or developed over a broad-based land and people, which in the case of East Pakistan, is mostly Rural. "Cultural amenities," as defined here, is intended to bear the same meaning throughout this discourse.

By going back to the root of our logic that there should be bread-based development of culture which is synonymous with civilization and urbanization the theorem is established that our entire rural society has to be urbanized to achieve our national goal of civilization. This will have to be effected throughout the total rural areas of East Pakistan in order to bridge up the lag and to eliminate the contrasts between rural and urban communities.

What is all meant by urbanizing rural East Pakistan is to carry on development of the cultural traits like, "Building, Tools, Machines, Communication Devices and Art Objects"—all that science and technology can offer. This calls for the demand of a technique of physical planning of a special nature. For planning of human settlements the expression, "Town and Country Planning" is largely used. This is a combined expression for the technical entities like "Town Planning" and "Country (Village) Planning". I have had several occasions elsewhere to examine and analyse the difference between the techniques of Town planning and Village Planning generally, and with particular reference to the conditions in East Pakistan. Without repeating the same here again it can be maintained that it is this special technique of Village Planning which has to be applied in rural East Pakistan for cultural development.

In the following pages are included some case studies in support of the above contention. These studies have been collected from our works on Village Planning in East Pakistan.

Such works were conducted during the Second Plan period in several areas and included actual survey, analysis and research on our rural land and people. These are also examples how social, economic and physical factors have to be worked out very carefully as a series of base maps and fundamental studies for preparing the comprehensive and specific Village Plans and Designs.

The first problem before a Village Planner in East Pakistan is how to offer minimum cultural amenities to the maximum rural people. And, at the same time, the process of development has to be evolutionary and not revolutionary with the blessings of voluntary support and self-help of the villagers, as far as practiable.

Secondly, the minimum of acquisitive forces has to be brought in and the people should be retained not only within their existing social in-groups but also within the usual physical orbit of their main economic pursuits, viz., agricuture and should be retained on their own land, as far as posible, whenever the question of dislocation should at all arise

The present characteristics of our rural settlements will put any Village Planner at a fix. People build their homesteads on high land which belong to them and excavate tanks along with, in an indiscriminate manner. This building and excavation activities of the rural people do not necessarily follow any organized pattern from the planning point of view. If we open up the settlement map of rural East Pakistan it exposes the picture of a moth-eaten garment.

Now the task before a Village Planner i. to prepare a physical plan on the basis of which cultural development to offer civic amenities could be carried on throughout the vast tract of our rural areas for the people who are indiscriminately dispersed.

The approach which has been exemplified in the following case studies is the development of the posible civic amenites in a hierarchical pattern. The Village Plar in East Pakistan should be easily flowing like a silent river, and should follow to the maximum the traditional course of behaviour of our people.

Thus as a starting point, the first discovery should be those areas of the rural settlements which have acquired the pressure and attraction of the highest aggregation of families. This process of discovery should progress throughout the whole given rural area for which the Village Plan has to be prepared.

The next step is to organise all these setlement areas with the pressure and attraction of the highest aggregation of families in a hierarchical manner as has been depicted in the following case studies. This will naturally lead to th selection of sites and location of the possible civic amenities hierarchically the primary, secondary and the higher forms of amenities.

Almost all the nation-building agencies of the government and the functionaries of the Rural Works Programme, in some way or the other, are already in the field of operation to develop most of the amenities we are here talking about. The only absence is the co-ordination of this cultural development with the techniques of Village Planning.

There will certainly be some non-conformists among the rural people. But there is no need to coerce them. Because, by following the above process a guideline will be available to develop the "Building, Tools, Machines, Communication Devices and Art Objects" and all the minimum that science and technology can offer to the maximum of our rural people. If this process of development is carried out without any Police Power; by understanding the history, tradition and psychology of our rural society; with the sympathy, sincerity and honesty of the local leadership; and if worked out by the devoted, experienced and knowledgeable Village Planners who are conversant with the socio-economic and political genius of East Pakistan, the rural settlements can gradually be organized with the attraction for nucleated groupings around the location of major amenities.

Although mention has been made earlier to the various nation-building agencies of the Government and the Rural Works Programme the problem of financing the development for Village Planning cannot be altogether ruled out. But yet there are many redeeming factors to minimise the problem.

According to the following case studies, about 4 per cent. (four per cent.) of the income of each family is annually spent on the house alone, either for new constructions, maintenance or repairs. Based on the same studies it is also found that not less than ⅓ (one third) of the rural land can be released to further economic use, only if homesteads are considered, by developing a carefully prepared Village Plan for offering more functional utilities and beauty to the Village homes and without challenging the present trend of use in the homestead areas.

If these two items of 4 per cent. (four per cent.) of annual expenditure on houses alone and the newly released vast tract of rural land are taken over by the local planning and development authorities and are combined with the usual long-term loan-giving methods ; increased employment resulting from planning; as well as other available financing means, the development finances for Village Planning can be worked out with the canons of sound economics for the social well-being of the masses. What is more, if the whole superstructure is based on appropriate legal footing the achievements to be made are to tend towards flawlessness.

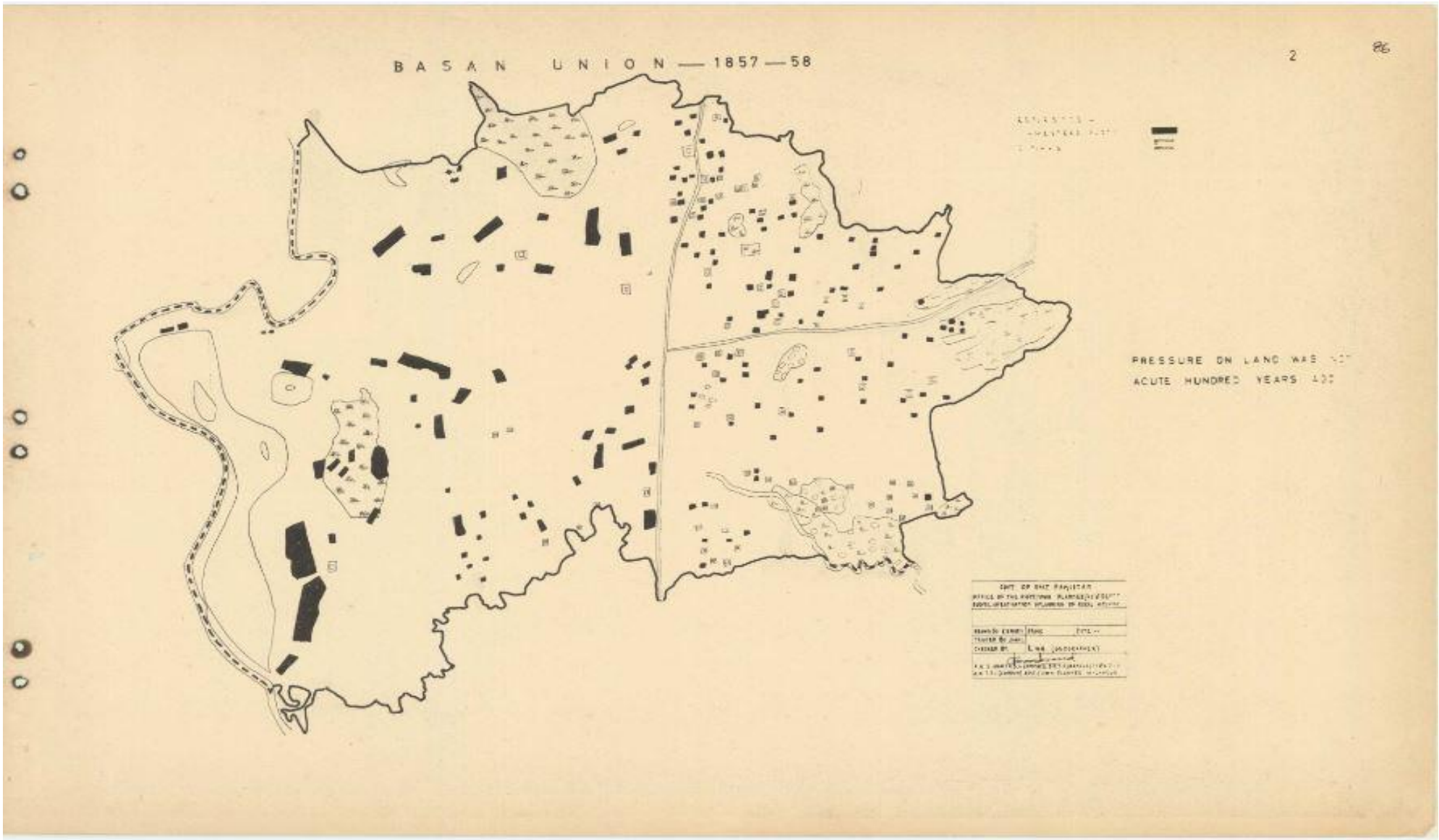
In the ultimate analysis "The question may logically be raised, 'Will the costs of Planning programmes be prohibitive ? The question cannot, of course, be answered categorically, since much depends on the character of the planned projects. But the correlative question may also be raised, "Will the cost of failure to plan be prohibitive ?'.....More difficult to estimate would be the enormous costs in human inefficiency, personality disorganisation and physical disablement..... The question therefore, resolves itself into the problem of matching the costs of planning against the costs of neglect. Most authorities would probably agree that, aside from the human values involved, social planning would *in the long run* be less expensive than planlessness, provided of course, that the programmes were adequately conceived and effectively carried out. Not all planning, despite the connotations of that magic word, is good planning.

....."To avoid the pitfalls of totalitarianism, either of the left or the right, the democracies may well begin at home by reconstructing local community life so as to afford the maximum well-being to the masses."

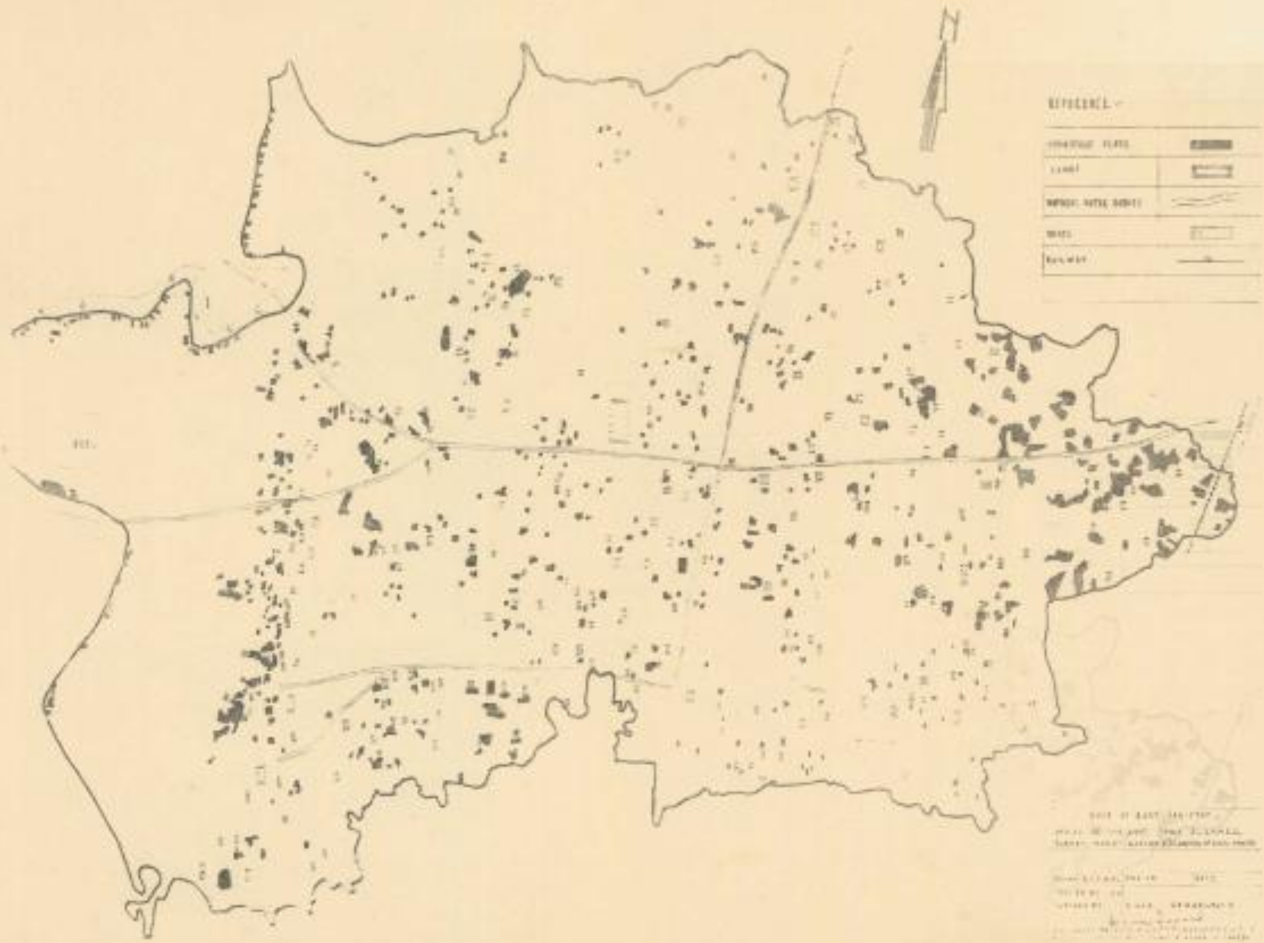
—Gist and Halbert : "Urban Society" (Page 500-501)

With the foregoing principles in view and by considering the limitations and conditions of an evolutionary process the techniques of Village Planning can be applied to urbanize the rural East Pakistan. No amount of intentons to build ivory towers, boulevards, and the amenities of highest precision and magnitude within the limited urban areas alone can match the need to urbanize simultaneously the entire rural East Pakistan to succeed in the cause of building a total civilization which is synonymous with urbanization.

On the above ideas some case studies were made under the Scheme of "Survey, Investigation and Planning of Rural Housing in East Pakistan" and the findings were presented in the form of plans, maps and diagrams, some of which have been incorporated in this brochure.

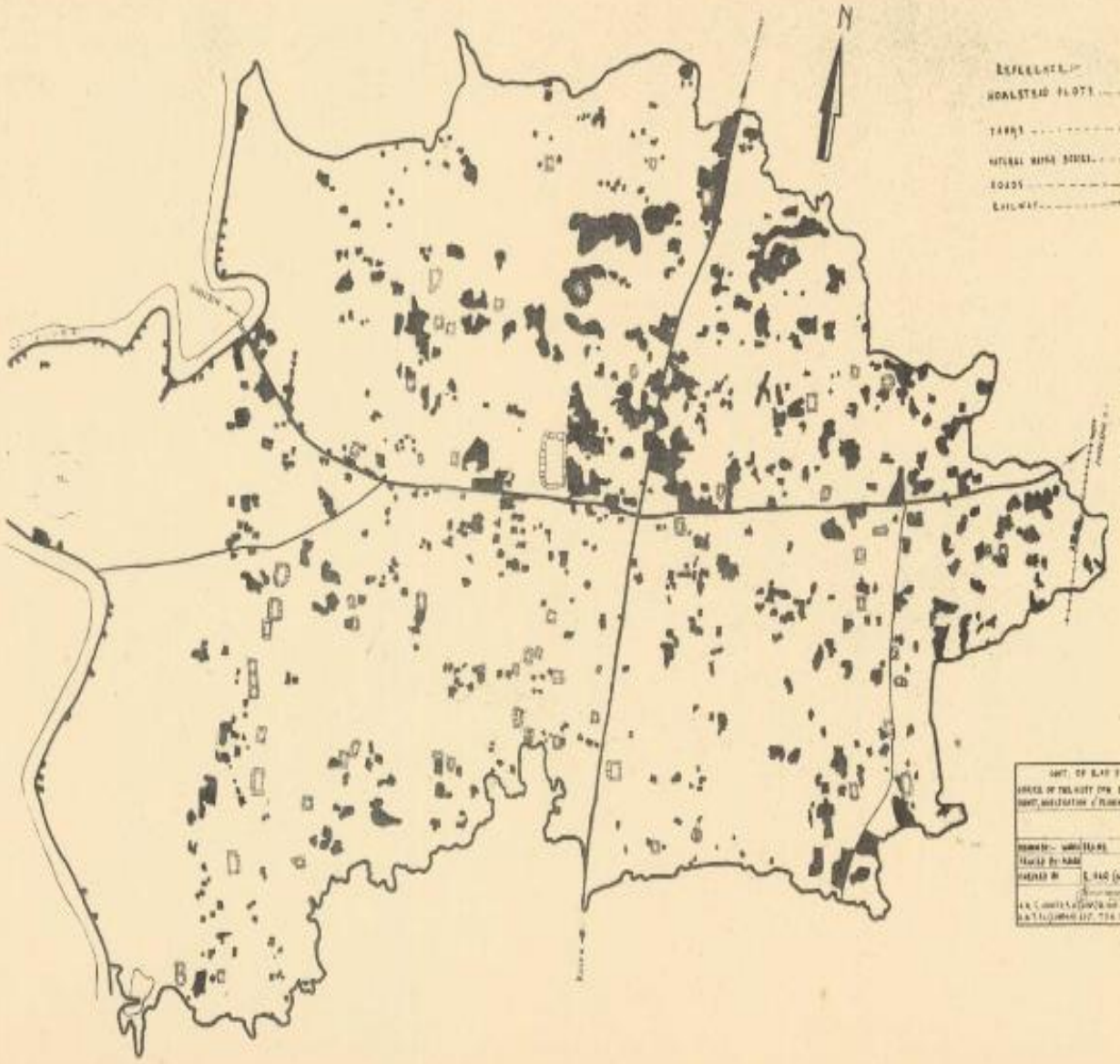


B A S A N U N I O N — 1912—15



WITHIN HALF A CENTURY THE LAND WAS EMBEDDED WITH HIGH PRESSURE LEADING TO ANARCHISM IN SETTLEMENT PATTERN WITH INDISCRIMINATE LOCATION OF HOUSES AND EXCAVATION OF TANKS

PASAN UNION — 1962

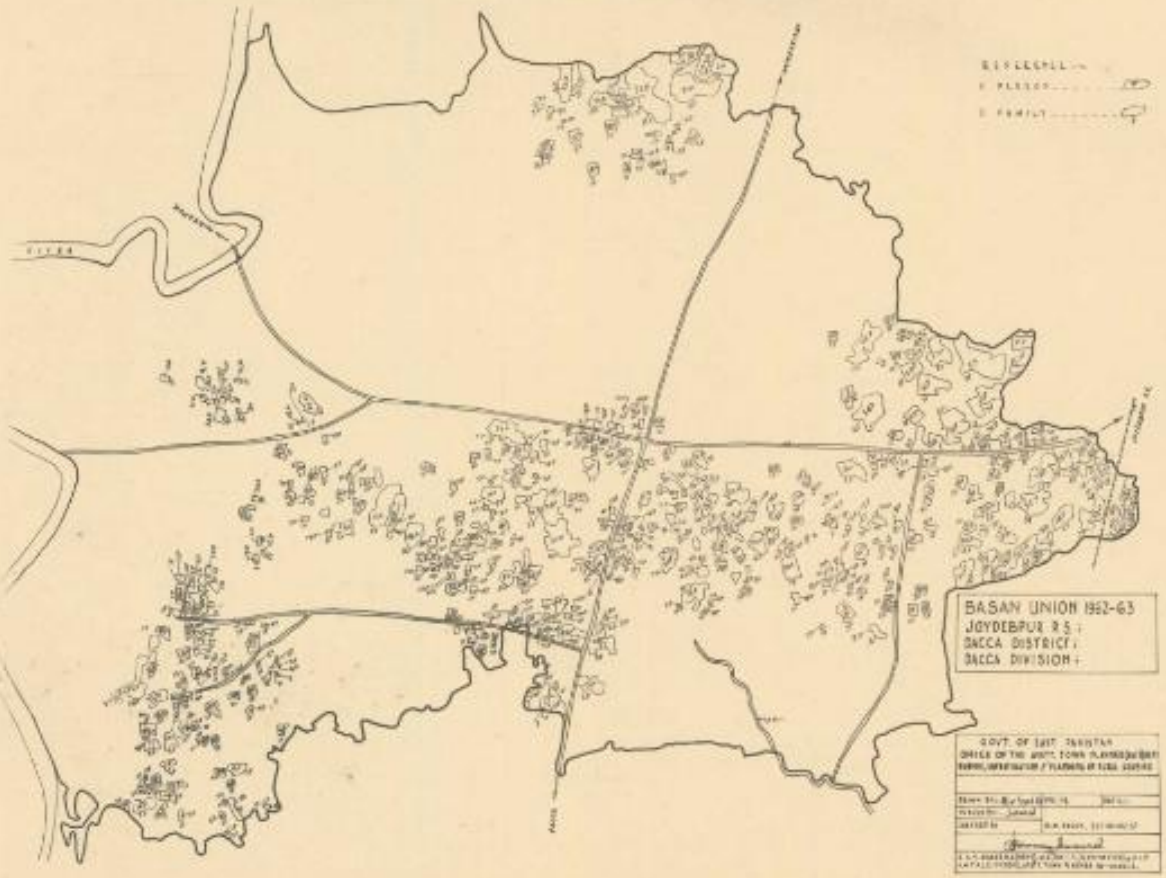


TODAY THE CANCER IS EATING UP THE WHOLE BODY— PLANNING OPERATION IS NEEDED AT ONCE OR THE PATIENT WILL DIE.

BASAN UNION — 1962

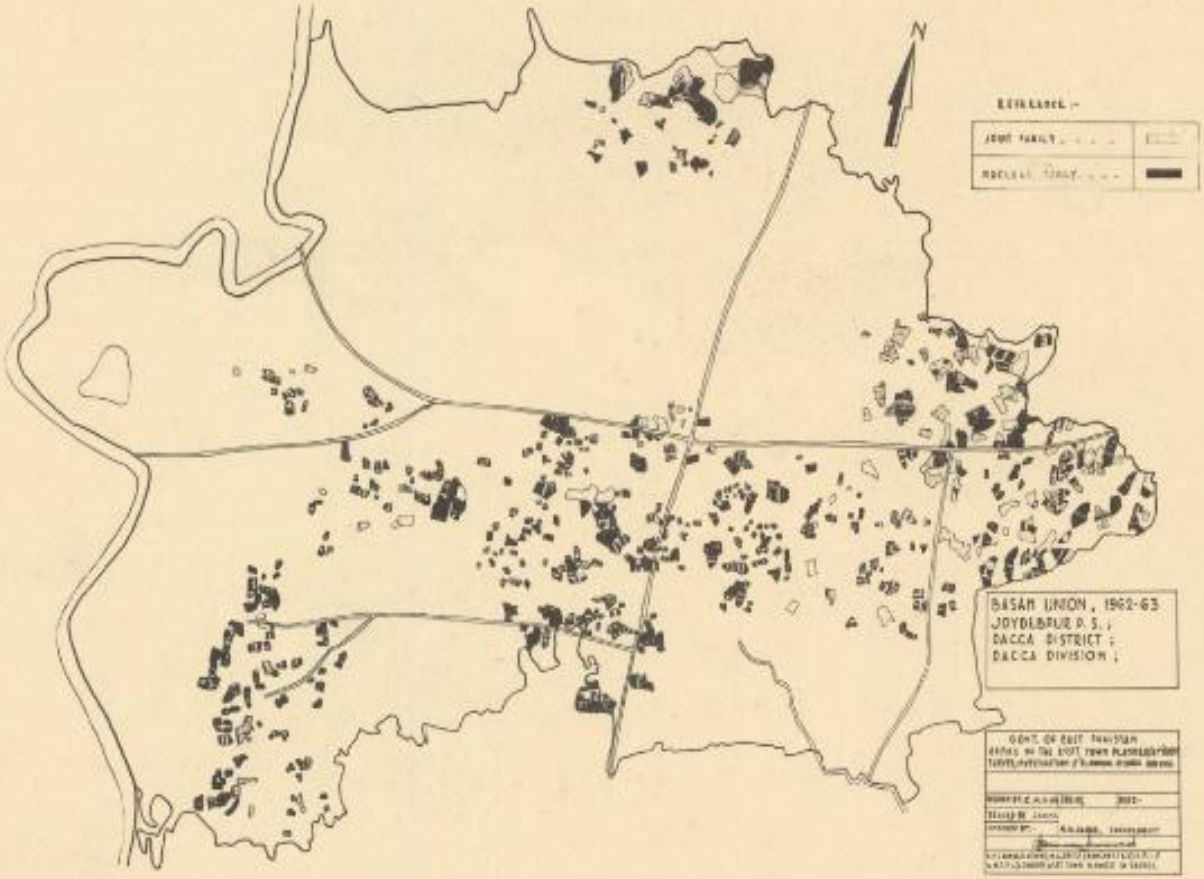
FAMILY-WISE DISTRIBUTION OF POPULATION (SAMPLE AREA)

5



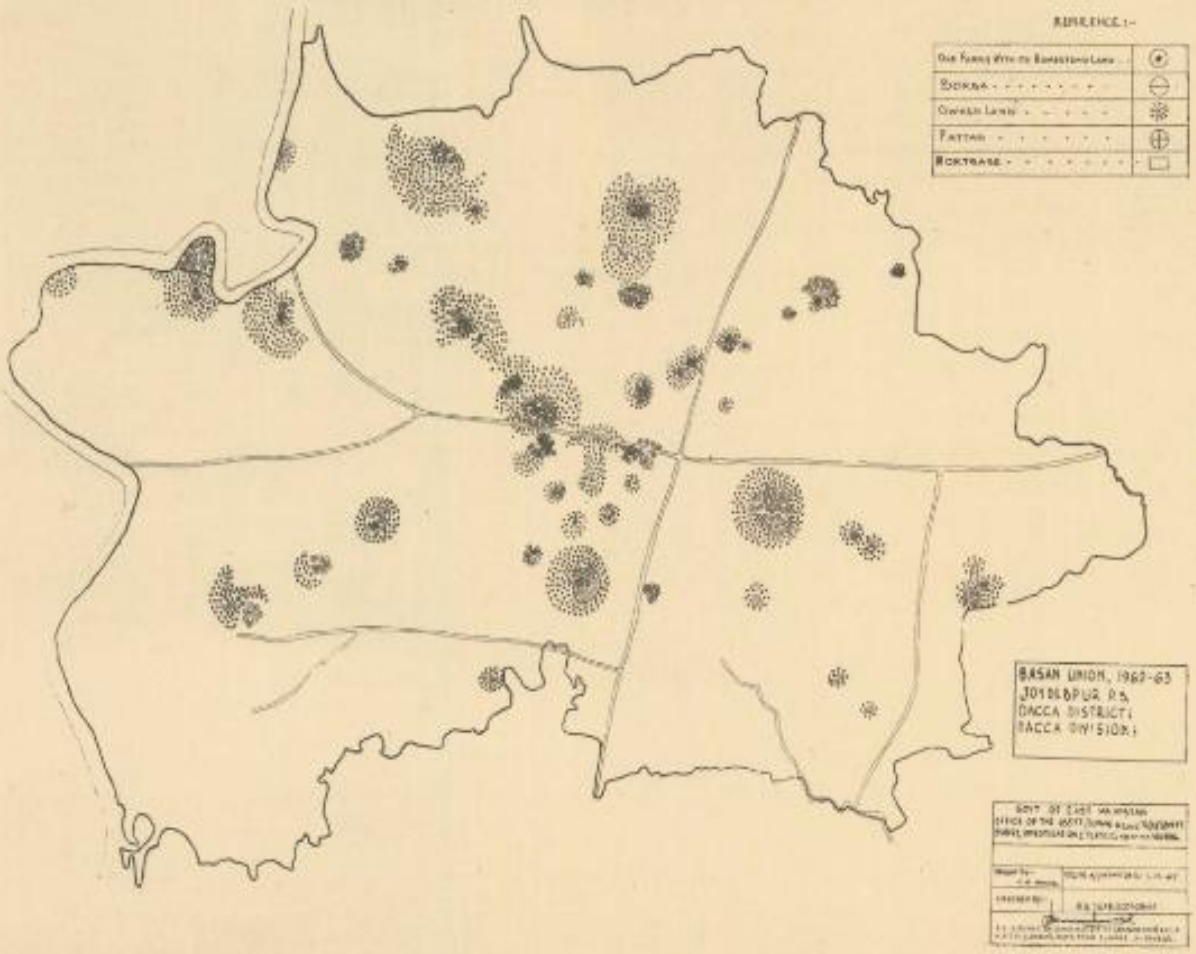
UNFIT FOR HUMAN HABITATION—IS THE CONDITION OF EVERY PLOT FOR HOMESTEAD USE FROM THE MINIMUM STANDARD OF CIVILIZATION.

TYPE OF FAMILY BASAN UNION (SAMPLE AREA)



HAPPY JOINT FAMILY IS NO MORE THE RULE. INCREASING NUCLEATED FAMILIES DEMAND ATTENTION OF THE VILLAGE PLANNERS.

LAND DISTRIBUTION IN BASAN UNION (Sample)

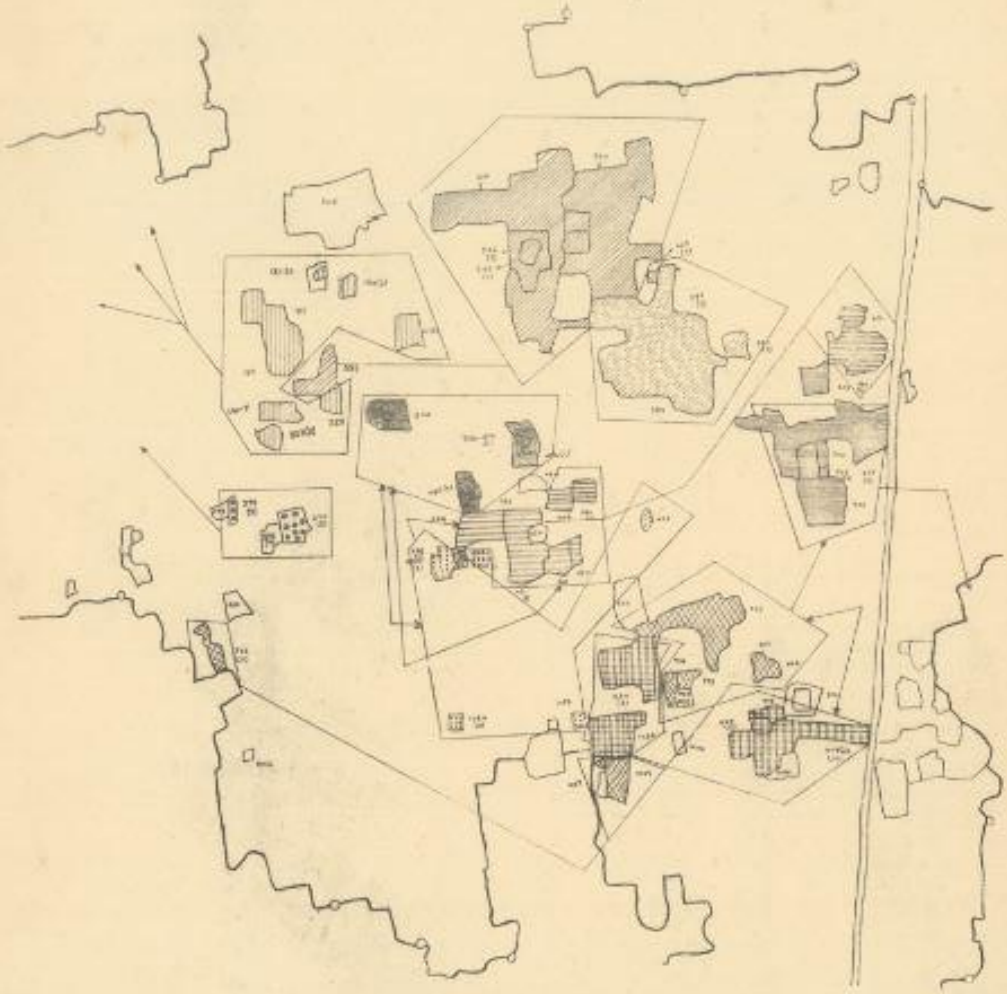


OWNER LAND HAS THE HIGHEST INCIDENCE — BUT HAS TO CONFRONT THE MINIMUM SUBSISTANCE LEVEL.

8

SOCIOMETRY

(MOUZA BHOGRA, BASAN UNION)



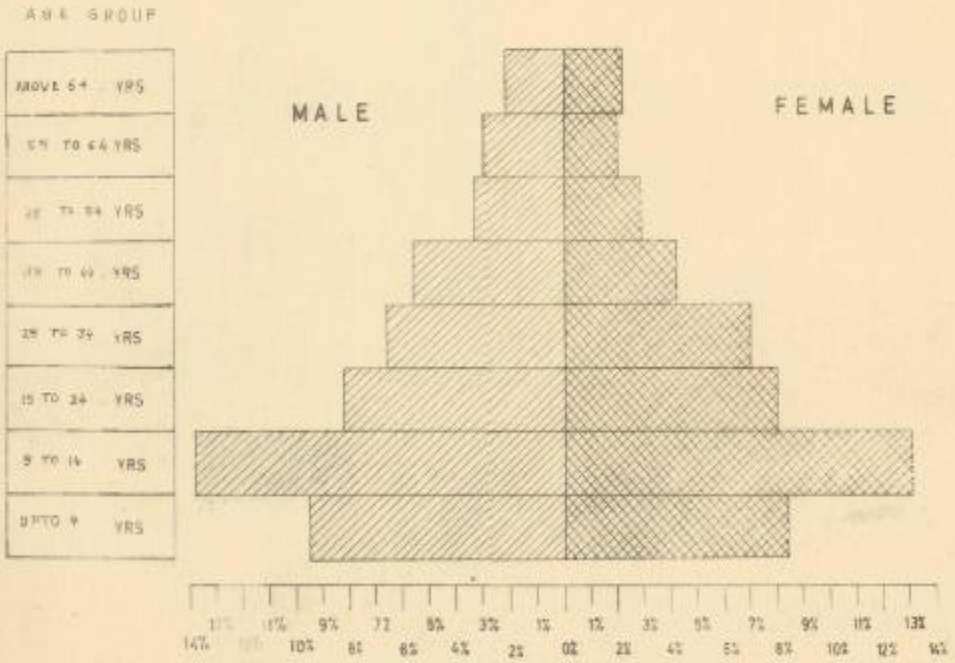
'SAMAJ' THE SOCIAL IN-GROUPS, IF NOT TREATED SCIENTIFICALLY SHALL NULLIFY ALL EFFORTS IN VILLAGE PLANNING AND DEVELOPMENT—THIS IS SO DIFFERENT FROM TOWN PLANNING.

REFERENCE :—

/00

9

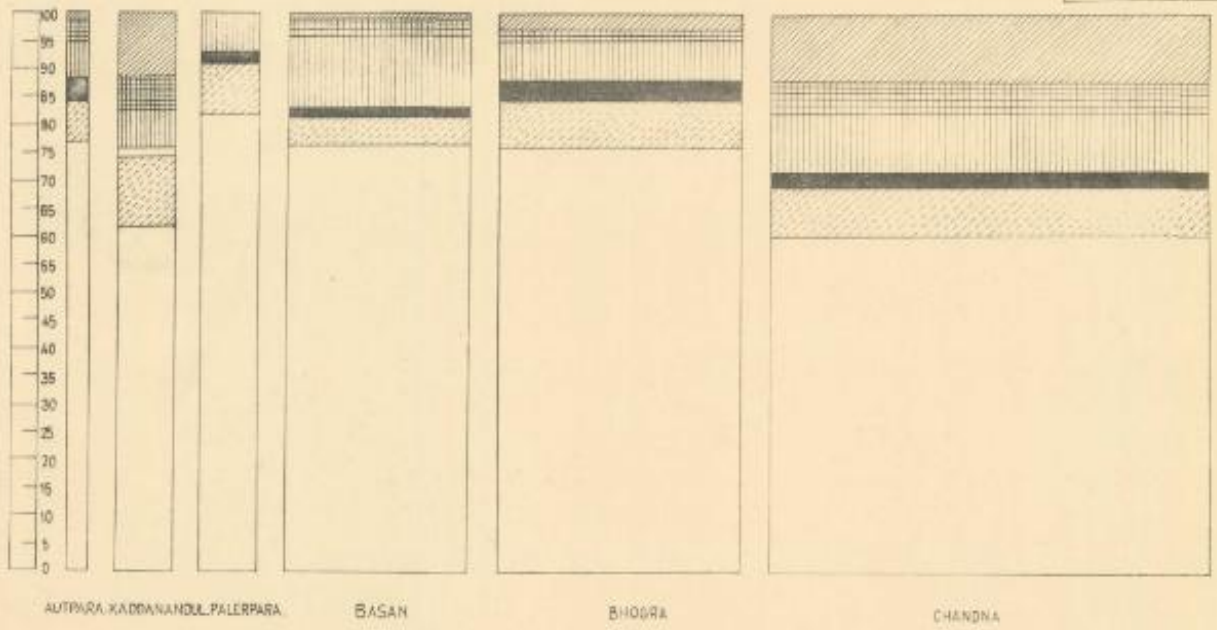
AGE PYRAMID — BASAN UNION
1962



REFERENCE :-
MALE
FEMALE

POPULATION — A BASIC STUDY FOR VILLAGE PLANNING
TO ASSESS THE MAN-POWER IN THE WORKING AGES
— SINCE LABOUR AND SELF-HELP IS THE BASIC
CAPITAL FOR VILLAGE DEVELOPMENT IN EAST PAKISTAN.

INCOME GENERATION SOURCES IN SIX MOUZAS OF BASAN — 1962

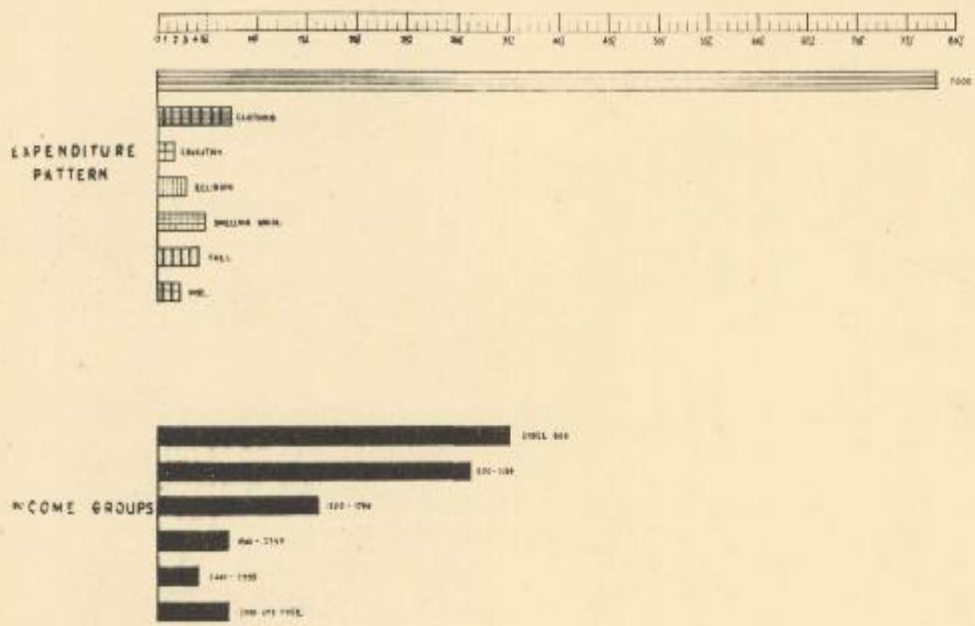


PRIVATELY OWNED LAND IS MAINLY
THERE IS THE DIMINISHING RETURN
PAUCITY IN THE PER CAPITA — THIS
CHALLENGE TO THE VILLAGE PLANNER

BASAN UNION – 1962

AGGREGATE MONEY INCOME GROUPS AND EXPENDITURE PATTERN

11



MY GOODNESS!

ABOUT – 80% – OF THE INCOME THEY SPEND ONLY TO EAT TO L.V.

BUT

THEY MOSTLY EARN LESS THAN SIX HUNDRED RUPEES PER YEARS

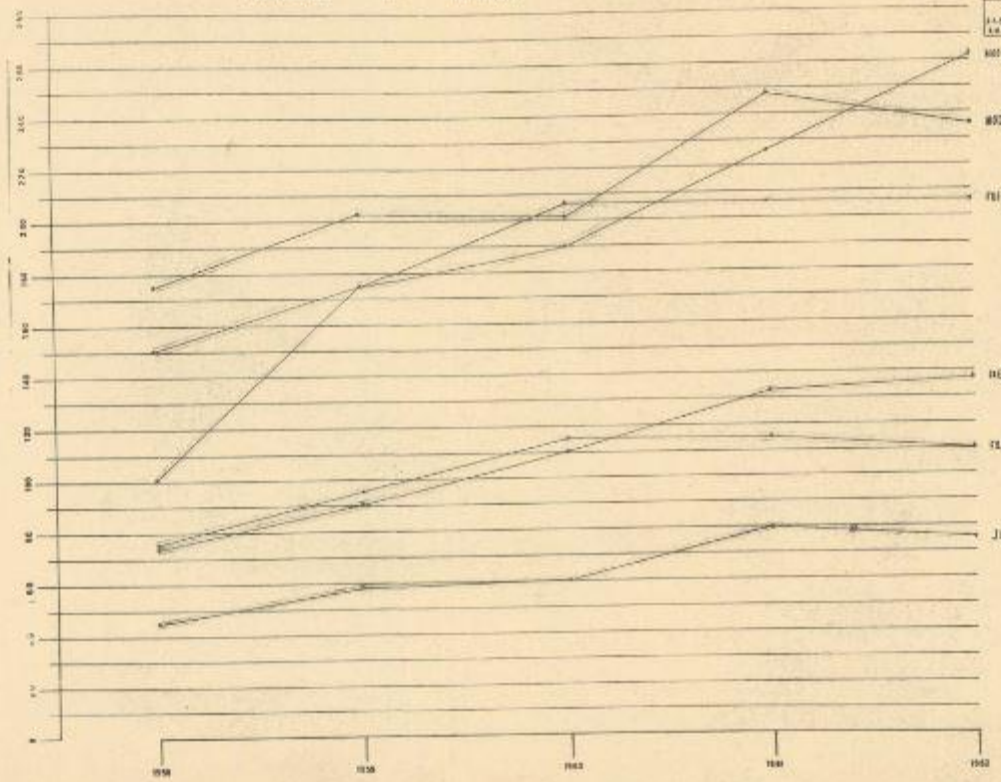
TO SURVIVE WITH THEIR FAMILIES.

IF

VILLAGE DEVELOPMENT IS A SELF-HELP PROGRAMME THIS

IS A BASIC FACTOR IN VILLAGE PLANNING.

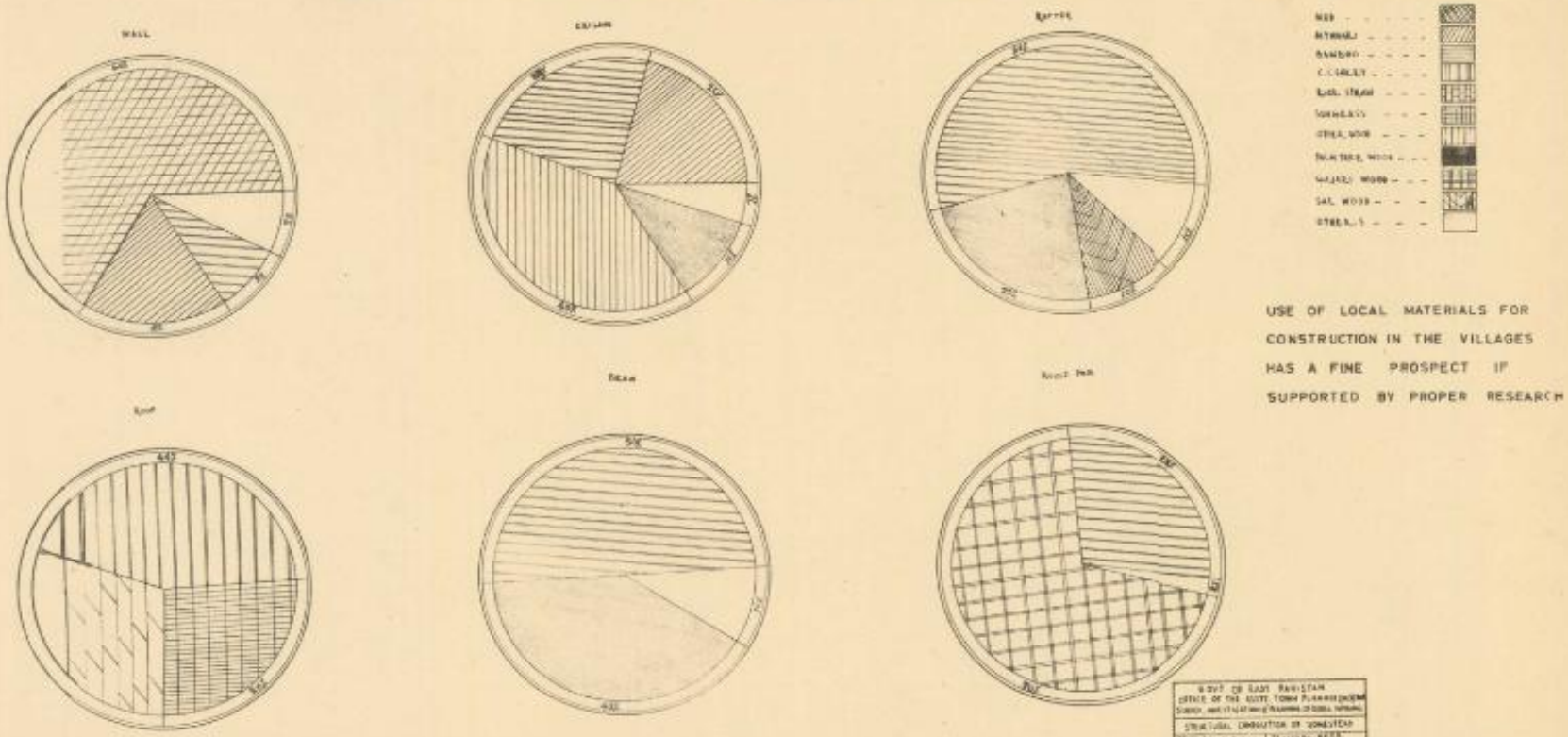
ENROLMENT TREND IN SCHOOLS OF BASAN UNION



12

- THE TREND FALLS WITH THE FALL IN A CROP OR WITH THE NATURAL CALAMITIES—BUT FAIRLY STEADY WHERE FEE IS FREE—THE SCHOOL IS DESERTED AS THE SCHOOL GOING AGE ADVANCES.

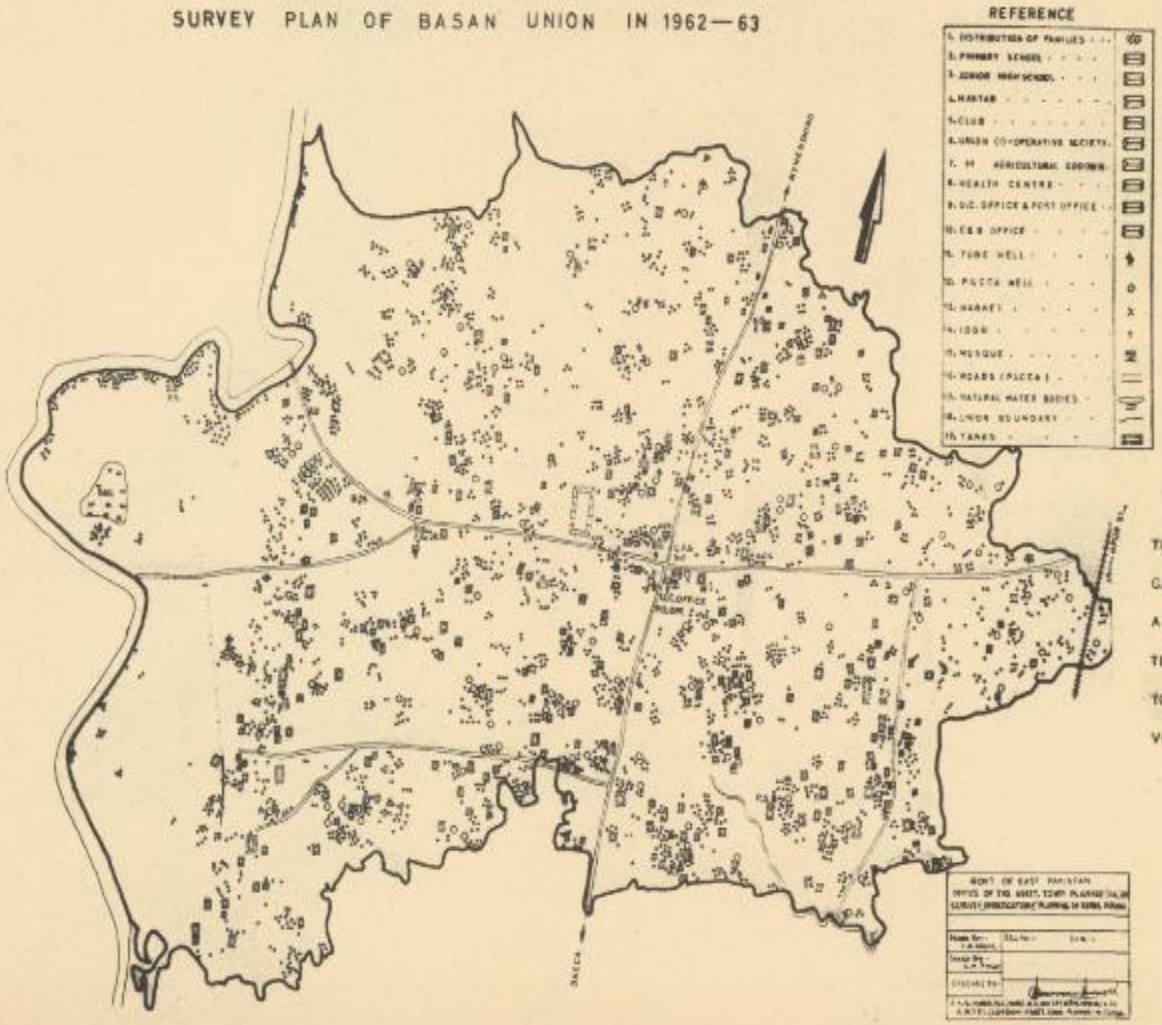
BASAN UNION — 1962
STRUCTURAL COMPOSITION OF HOMESTEAD (BED ROOM)



USE OF LOCAL MATERIALS FOR CONSTRUCTION IN THE VILLAGES HAS A FINE PROSPECT IF SUPPORTED BY PROPER RESEARCH

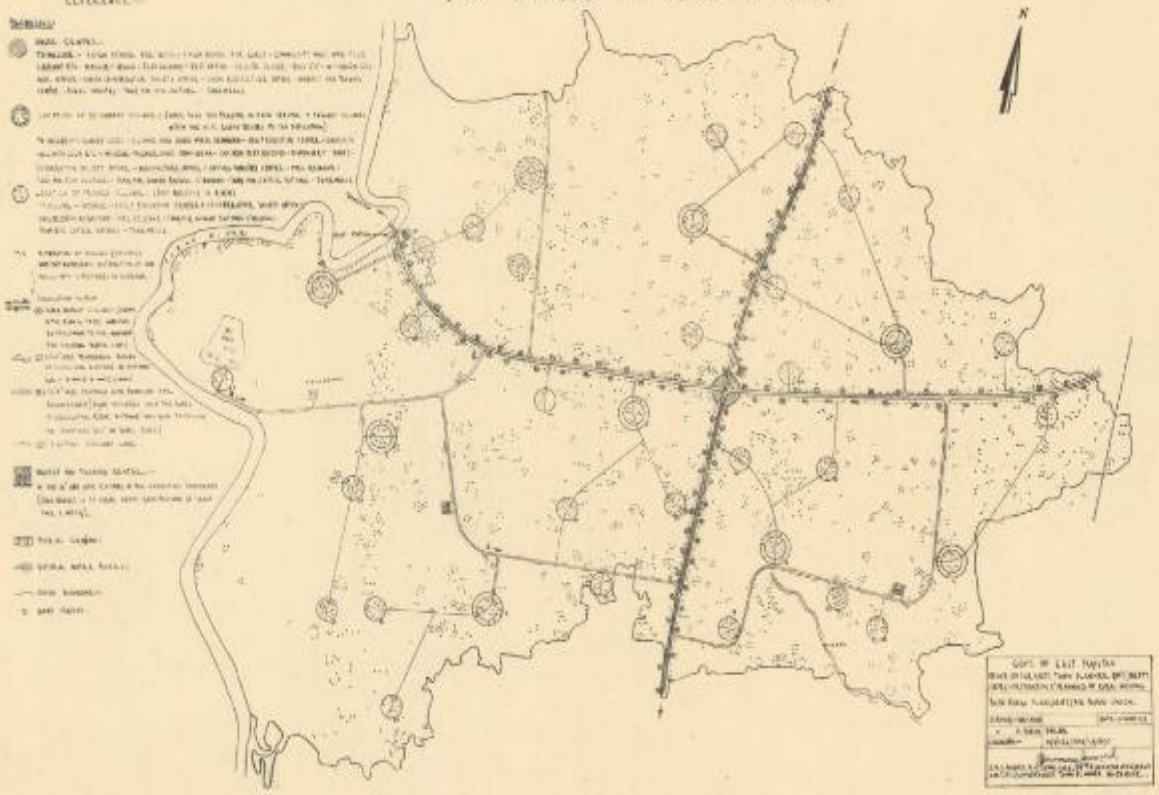
15

SURVEY PLAN OF BASAN UNION IN 1962—63



THE VILLAGE PLANNER AT A FIX—THE MOT
GARMENT TO BE SEWN OR TO BE REPLACE
A NEW ONE ?
THE EXPERTISE IN TAILORING WILL DETERI
TO SAVE THE SITUATION BY THE MECH
VILLAGE PLANNING

BASIC RURAL PLAN (DRAFT) FOR IMPROVED HOUSING IN BASAN UNION. JOYDEBPUR P.S DACCA DISTRICT: EAST PAKISTAN 1962-63. (AN APPROACH TO RURAL PLANNING)



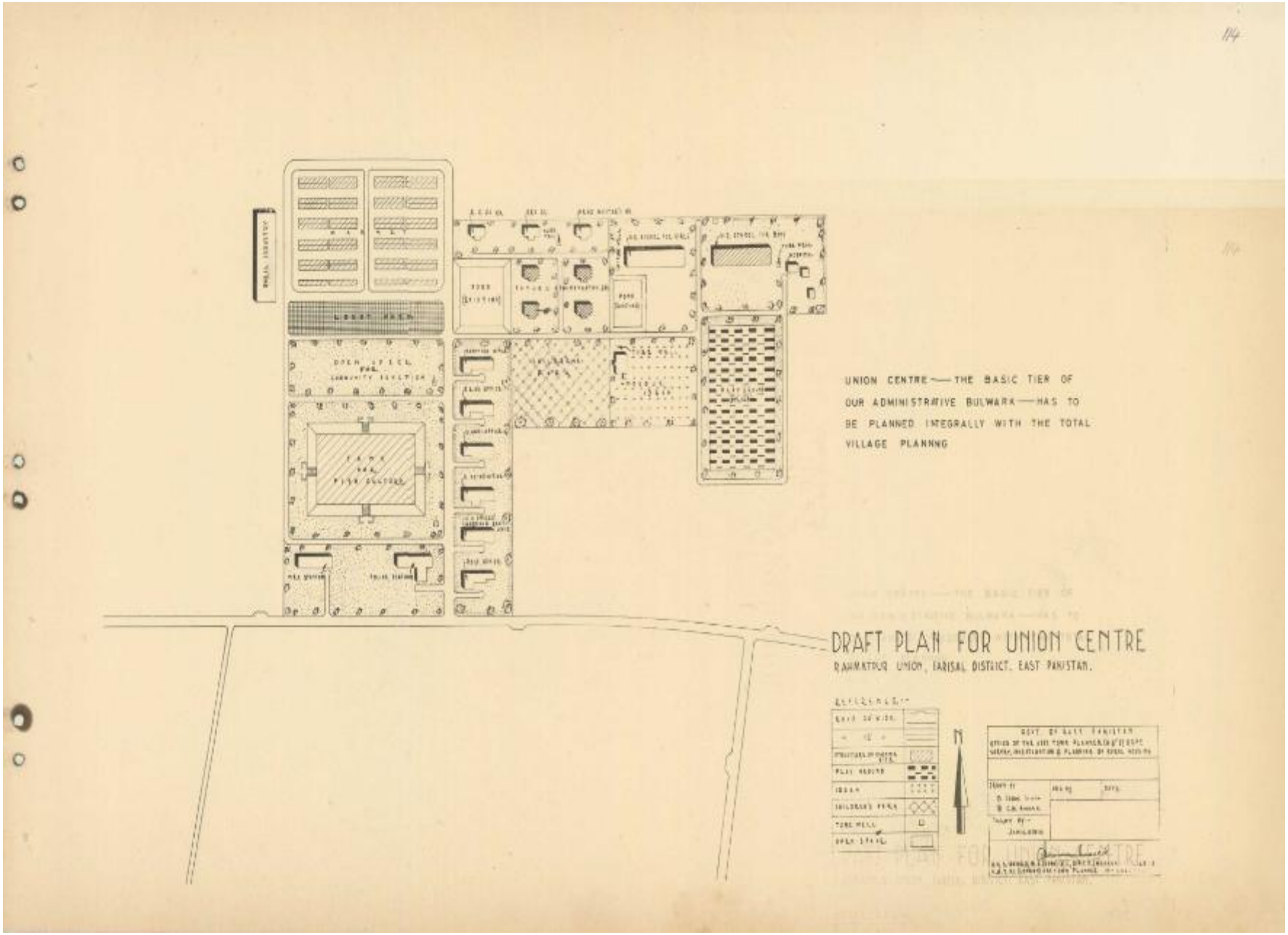
16

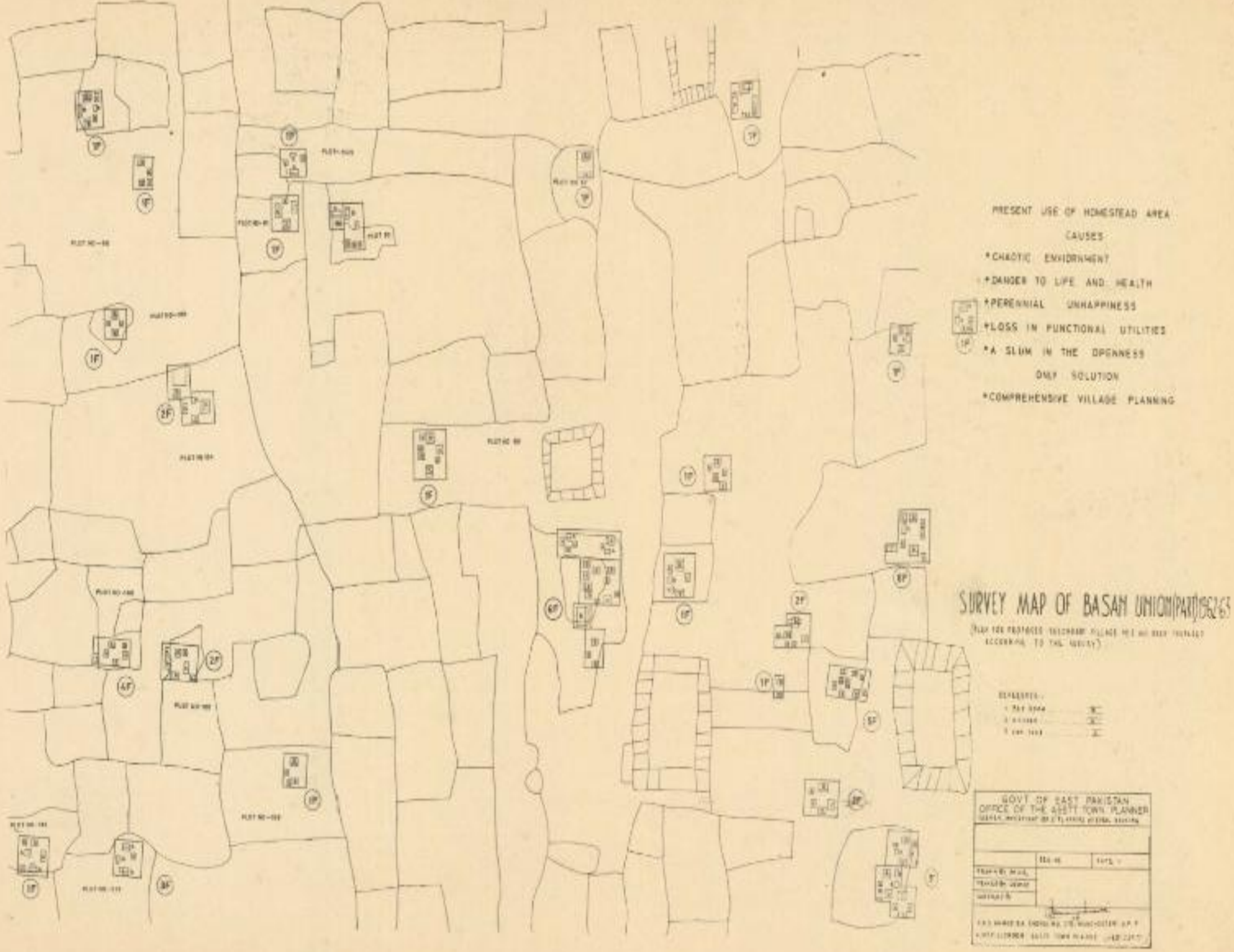
- NO DISLOCATION BY FORCE AND COERCION
- NO ACQUISITION IN LARGE SCALE
- NO PRINCIPLES FROM THE TEXT BOOKS OR FOREIGN LAND

BUT

- THE NATURAL TREND OF DEVELOPMENT
- VOLUNTARY WILL OF THE PEOPLE
- PRINCIPLES OF SELF-HELP
- DEDICATED LOCAL LEADERSHIP
- DEDICATED VILLAGE PLANNERS

SHALL CHARACTERISE THE VILLAGE PLANNING IN EAST PAKISTAN




PRESENT USE OF HOMESTEAD AREA
CAUSES
*CHAOTIC ENVIRONMENT
*DANGER TO LIFE AND HEALTH
*PERENNIAL UNHAPPINESS
*LOSS IN FUNCTIONAL UTILITIES
*A SLUM IN THE OPENNESS
ONLY SOLUTION
*COMPREHENSIVE VILLAGE PLANNING
SURVEY MAP OF BASAN UNION(PART)1962-63
GOVT OF EAST PAKISTAN
OFFICE OF THE ASSTT TOWN PLANNER

VILLAGE CENTRE

WARD-D

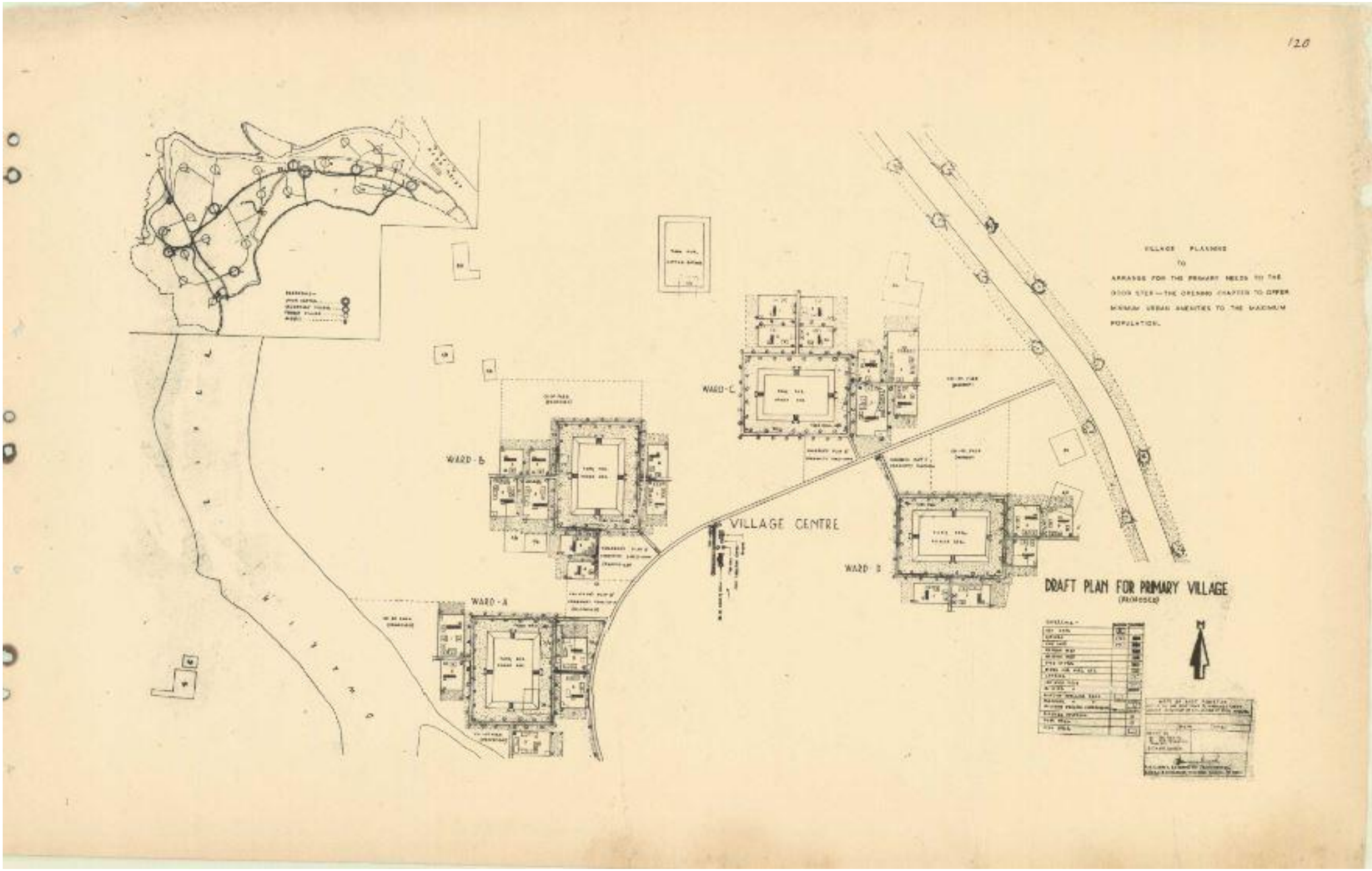
WARD-E

WARD-C

WARD-B

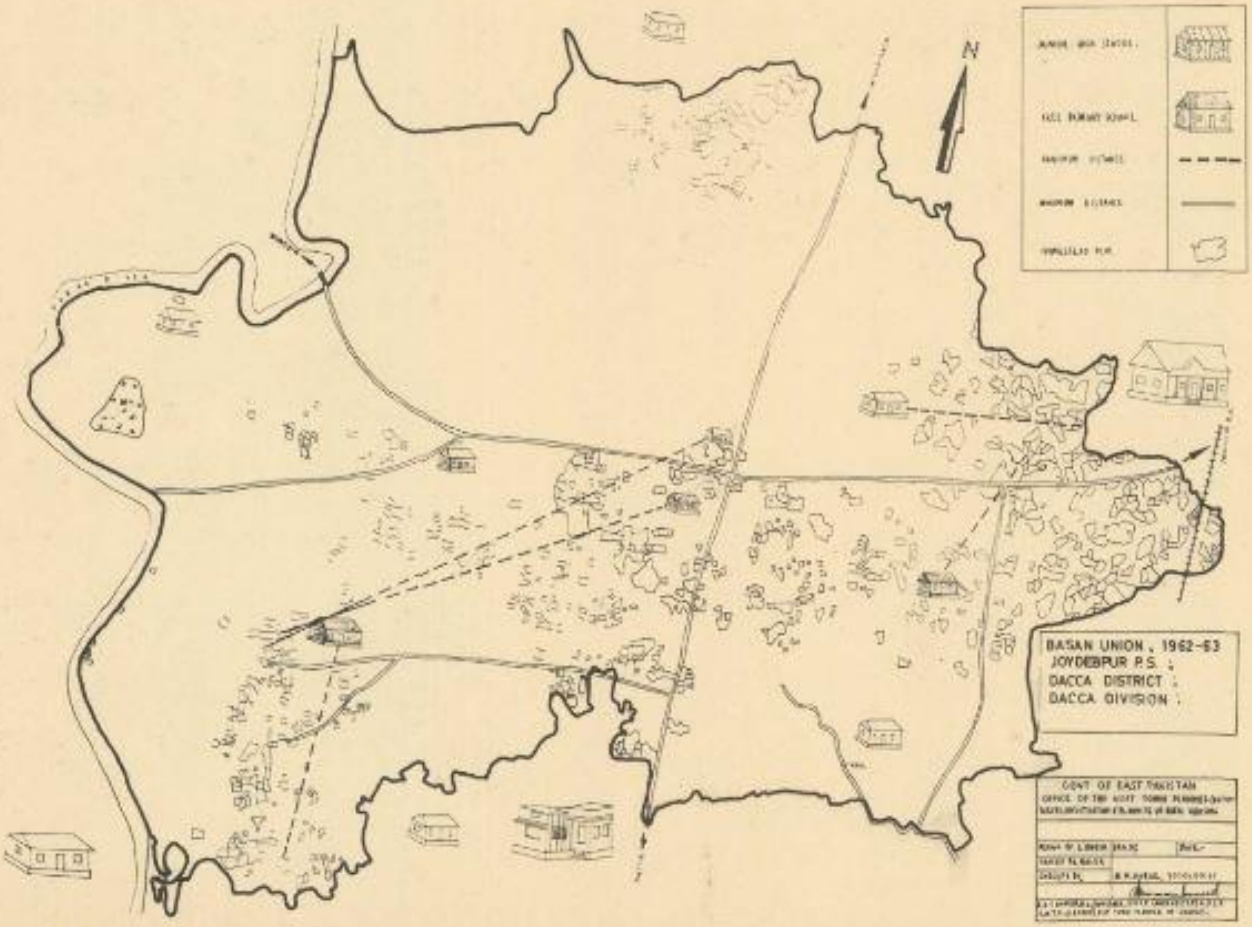
WARD-A

DRAFT PLAN FOR SECONDARY VILLAGE No 3



HOMESTEAD TO SCHOOL — A DISTANCE RELATIONSHIP

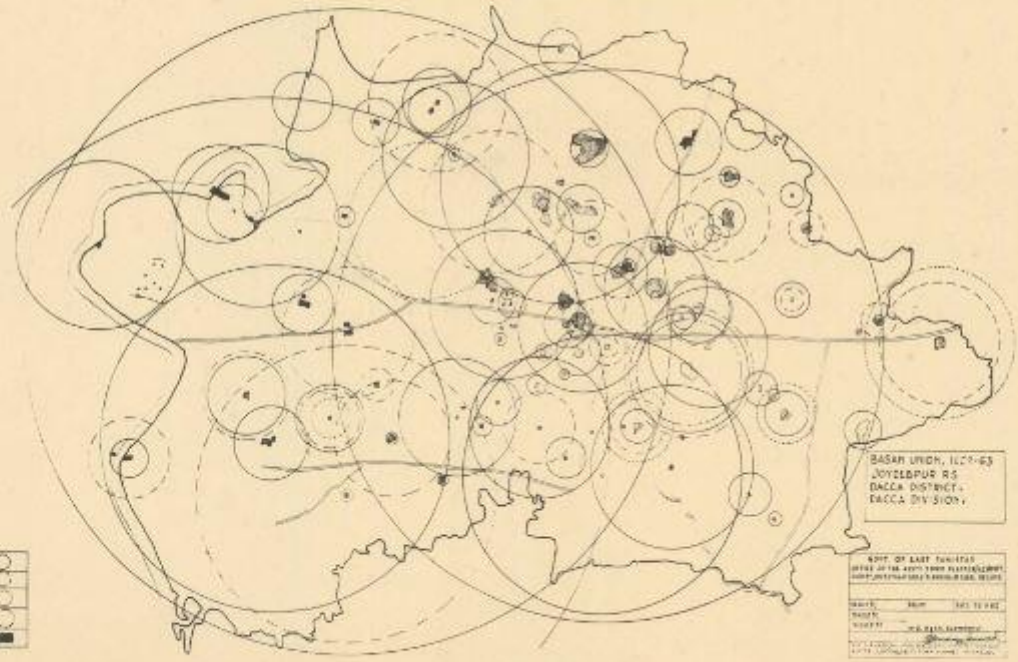
20



SOCIOMETRIC STUDY CONDITIONS ANY VILLAGE PLAN—THE INSTITUTION AT THE NEXT DOOR, OCCASIONALLY FOUND LESS ATTRACTIVE THAN ONE AT A FAR DUE TO BASIC SOCIAL REASONS —SUCH A PRIMARY RELATIONSHIP RARELY EXISTS IN A TOWN.

21

AVERAGE DISTANCE OF CULTIVABLE LAND FROM HOMESTEAD

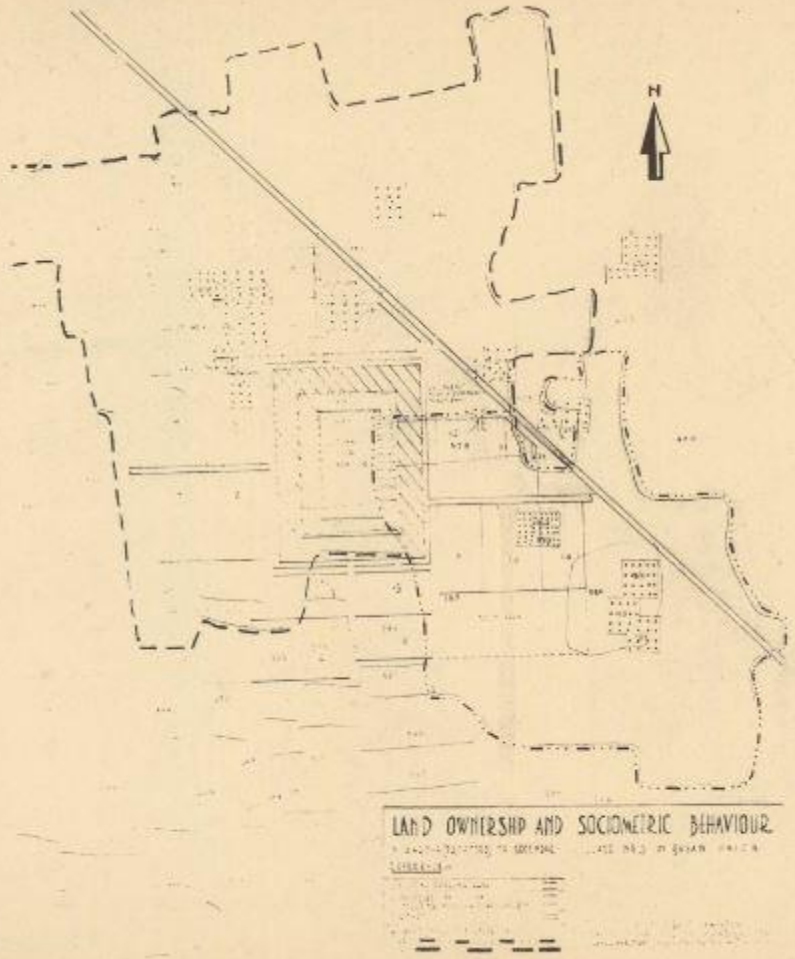


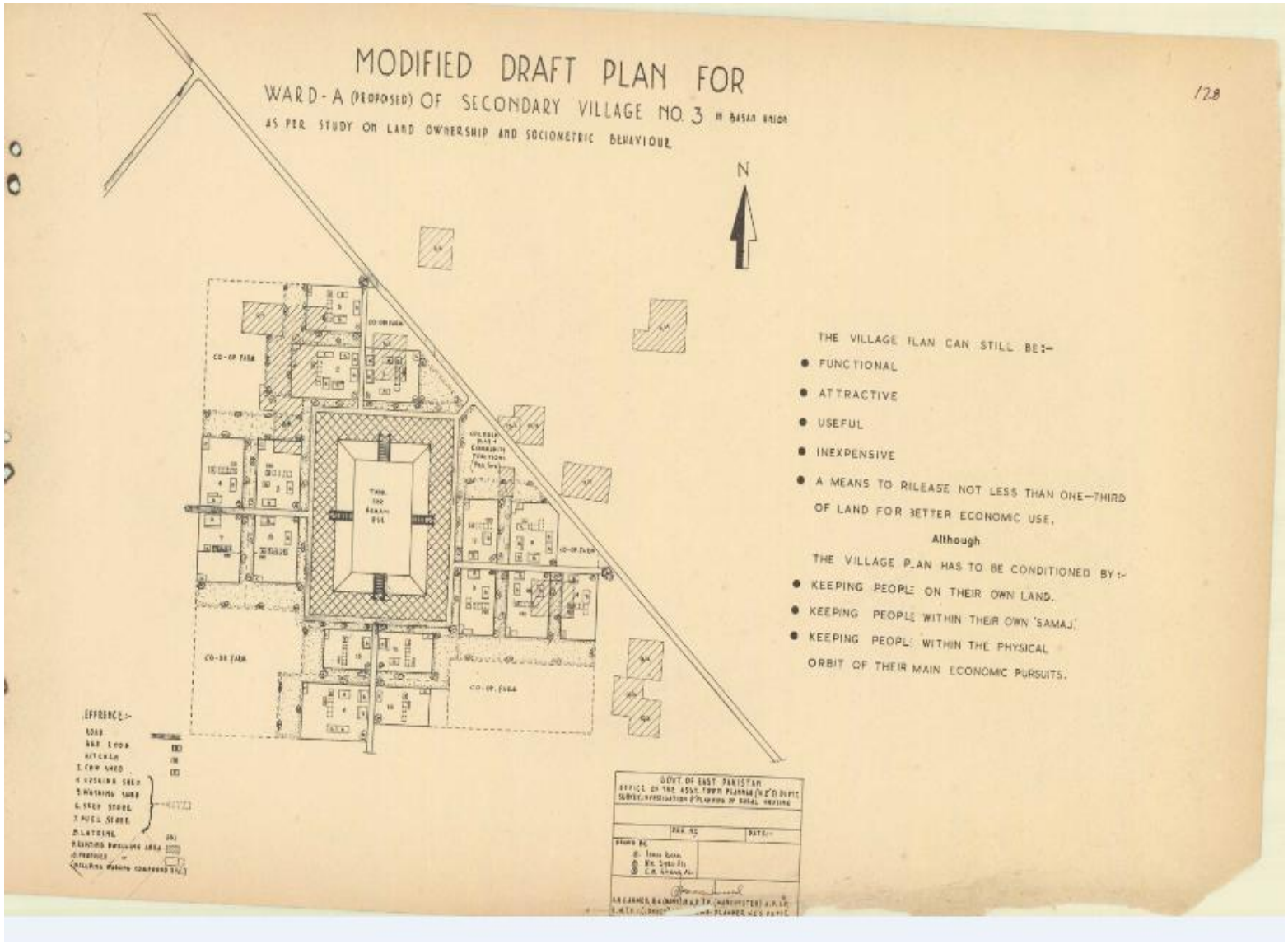
REFERENCE :-

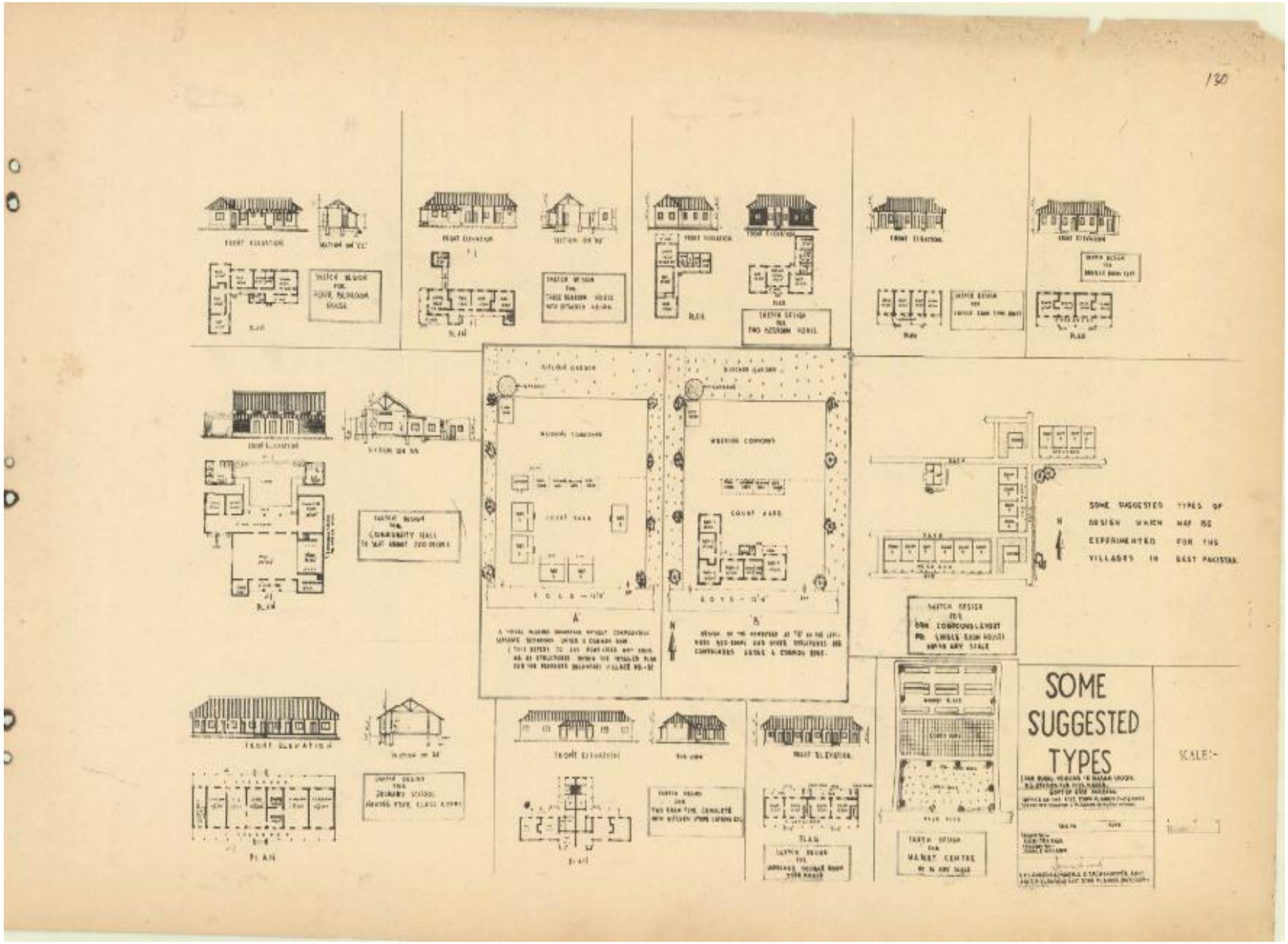
OWNED LAND	
BARGA	
PATTAH	
MORTGAGE	
HOMESTEAD PLOTS	

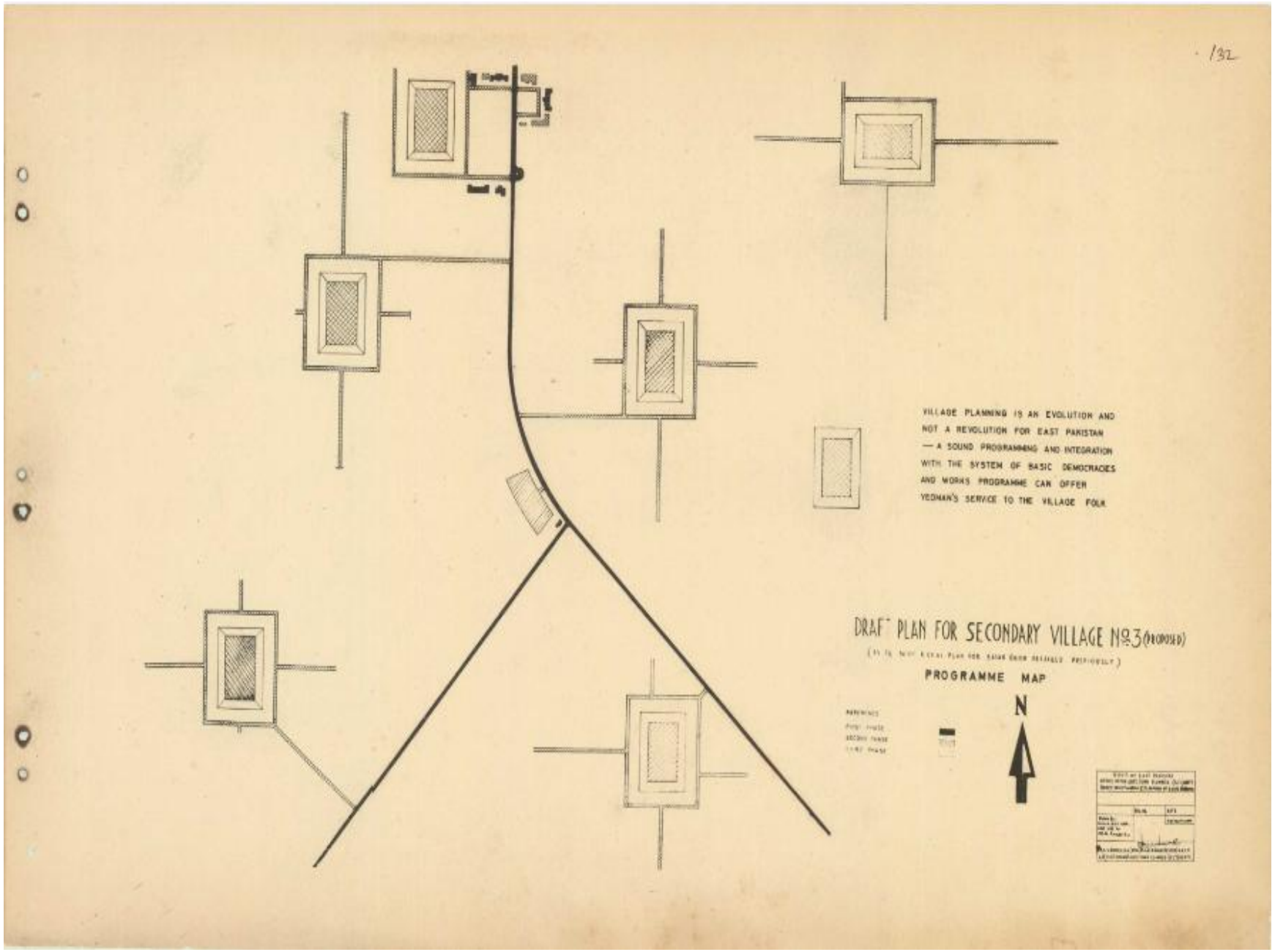
BASAR UNION, 1961-63
JOYDEBPUR P.S.
DACCA DISTRICT.
DACCA DIVISION.

DISTANCE OF LAND FOR AGRICULTURAL OCCUPATI
FROM THE HOMESTEAD IS 1761 FT IN AVERAGE HERE —
ONE OF THE LIMITING FACTORS BEFORE THE VILLAGE
PLANNERS — A PROBLEM DIFFERENT FROM TOWN
PLANNING.







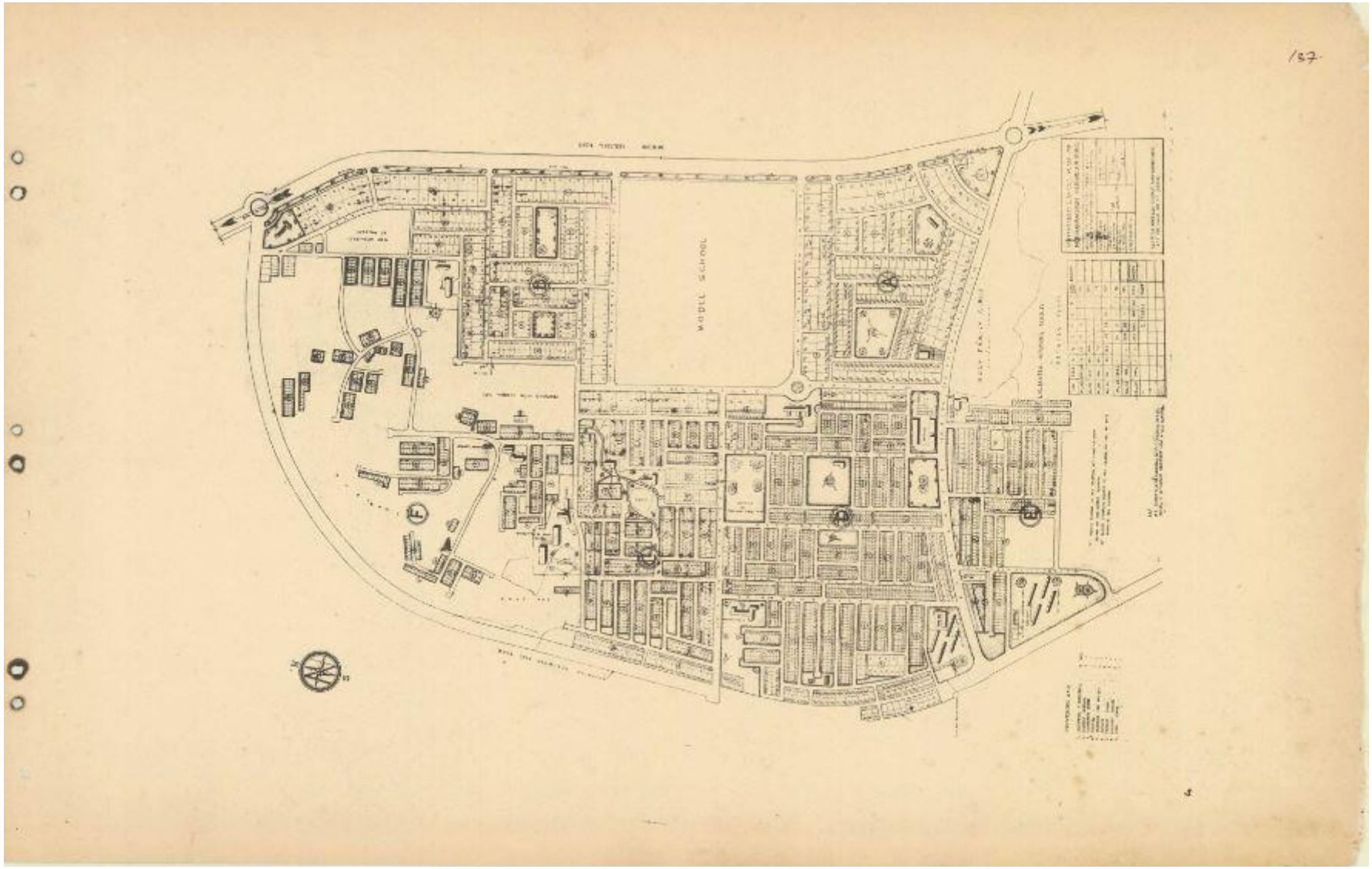


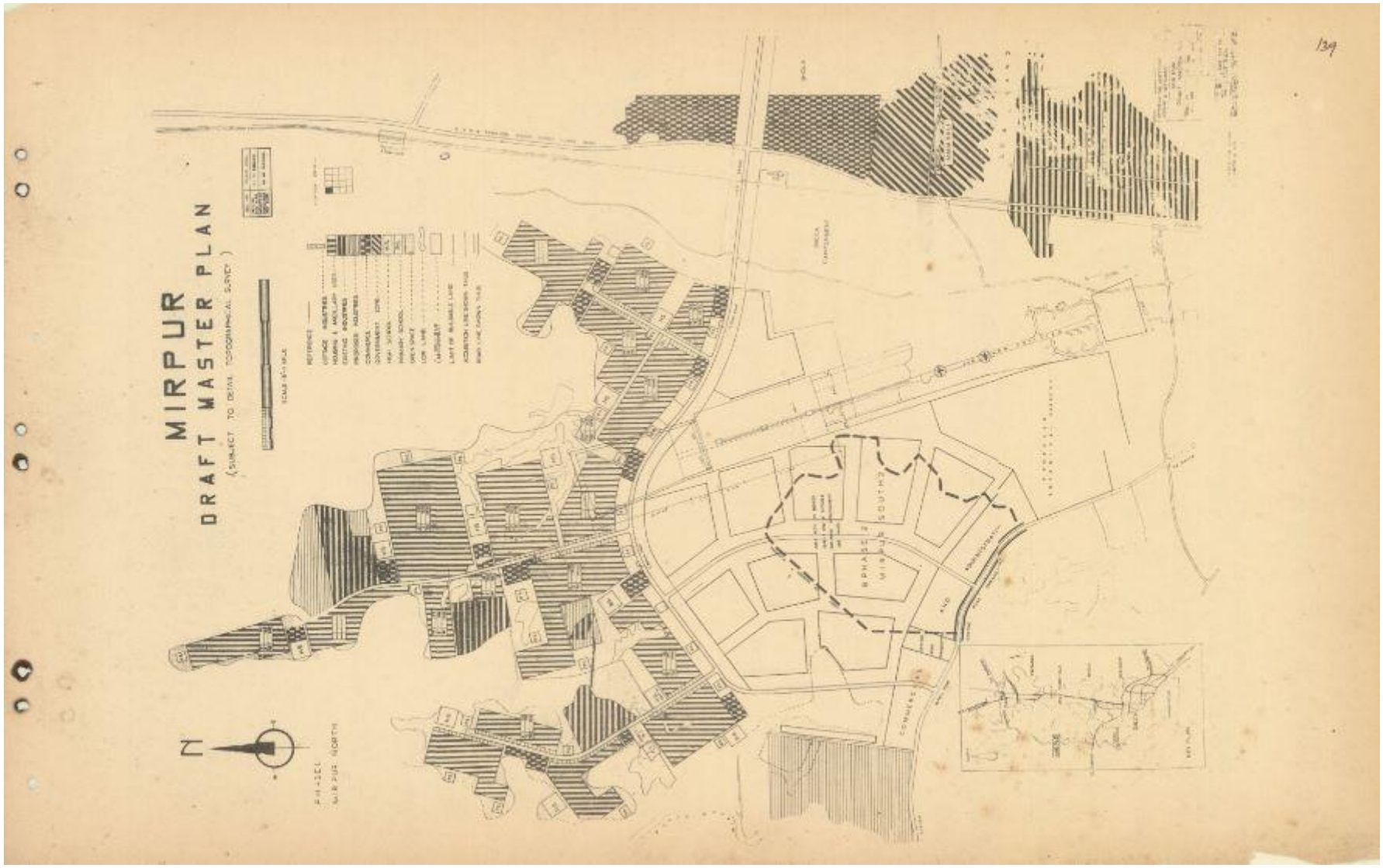
PLANNING FOR THE HOUSING ESTATES

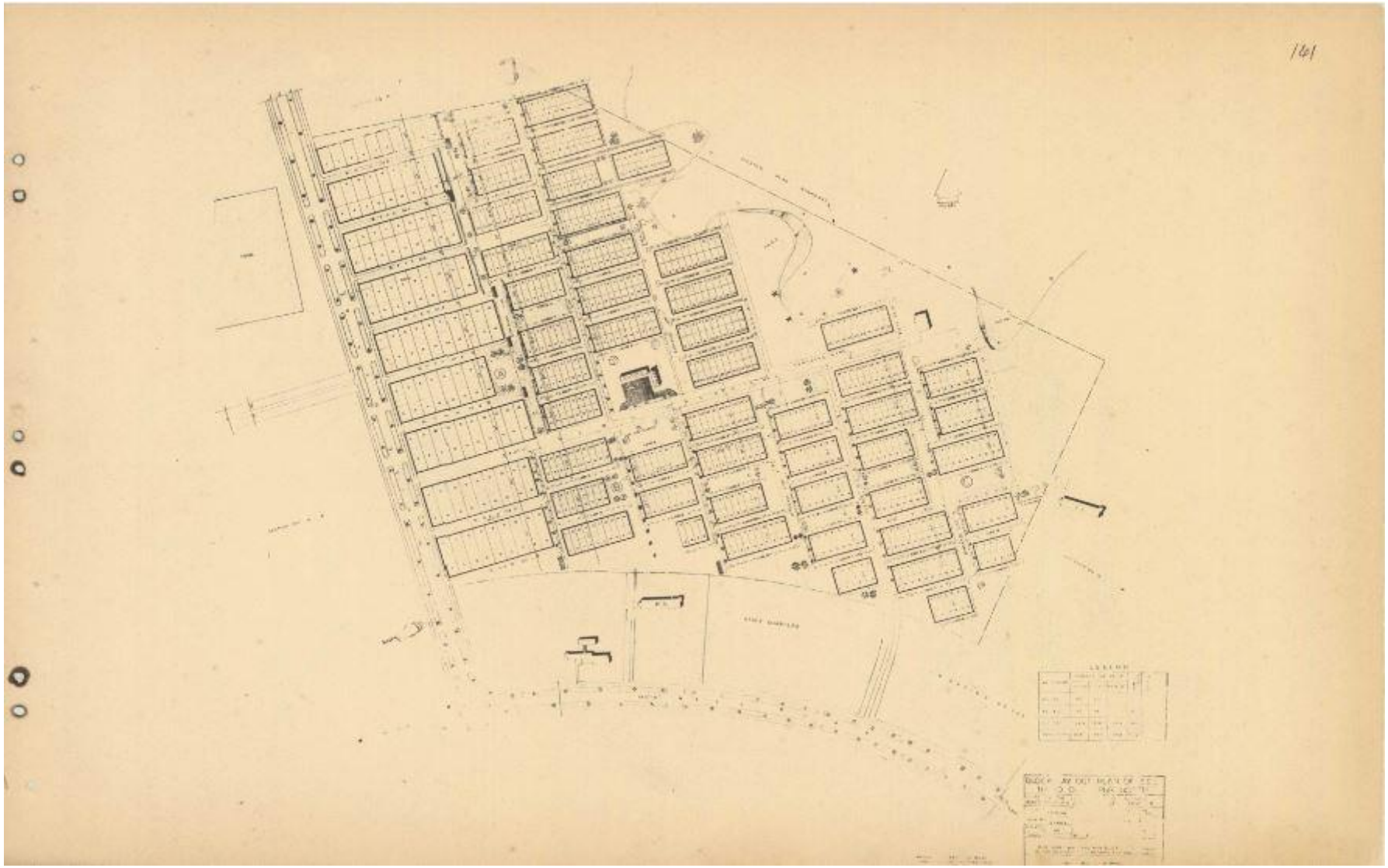
Layout Plans of Housing Estates

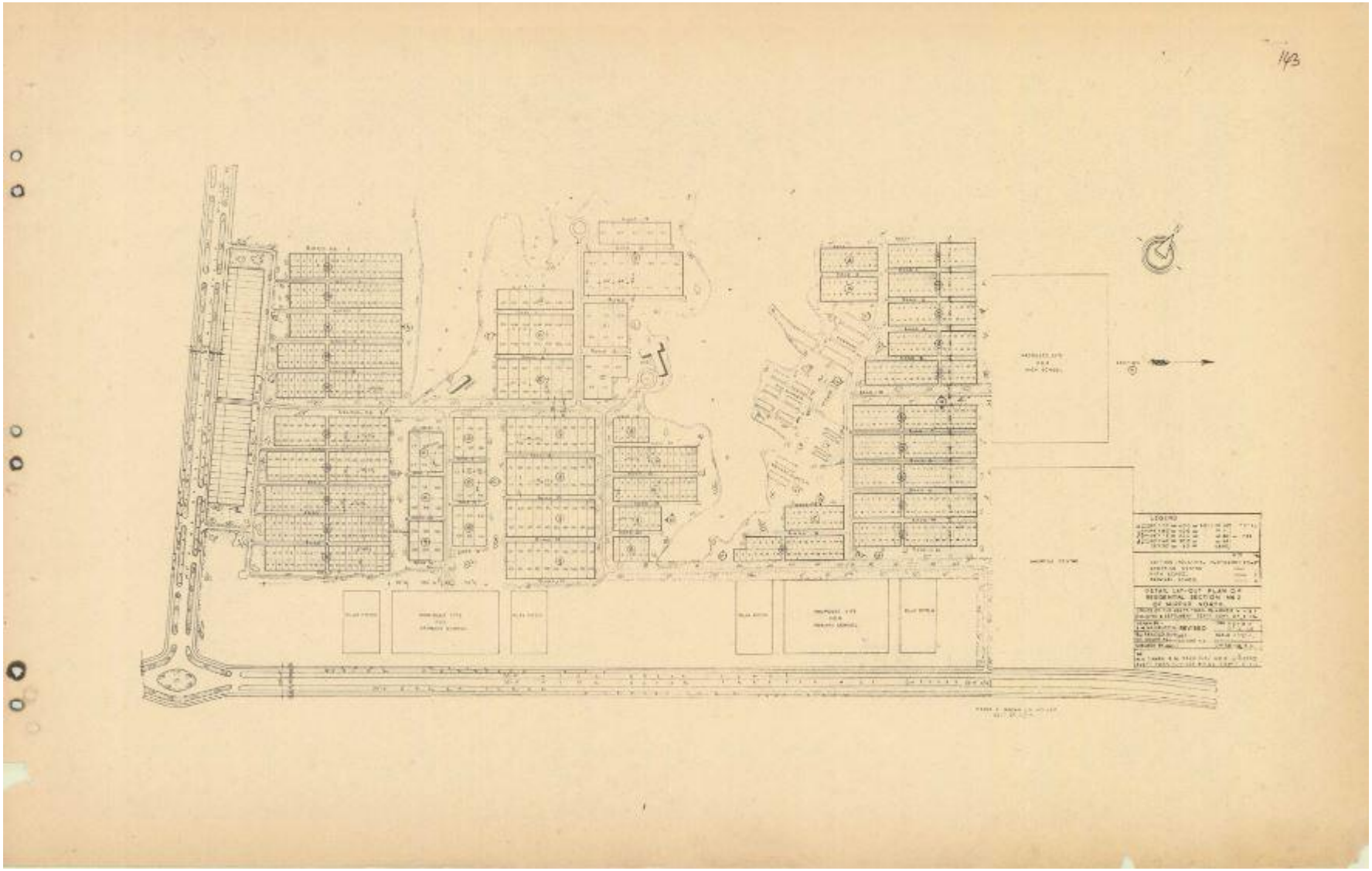
In 1958 the Government of East Pakistan launched a comprehensive programme "For Development of Urban Land and Construction of Public Housing" (including refugee housing) in various urban areas of the Province to rehabilitate the displaced families in the form of new communities. Those schemes envisaged the construction of nucleus houses and development of plots for the refugees with the provision of ancillary facilities and civic amenities required for the prospective dwellers. Those schemes further envisaged to develop some plots for distribution among the local public of various income groups to achieve social integration of the displaced persons with the local inhabitants. For this purpose the Government decided to establish new Residential Neighbourhood or Housing Estates on suitable sites within or at the outskrits of the urban areas and town planners were entrusted with the task of preparation of zonal and detailed layout plans for the Housing Estates.

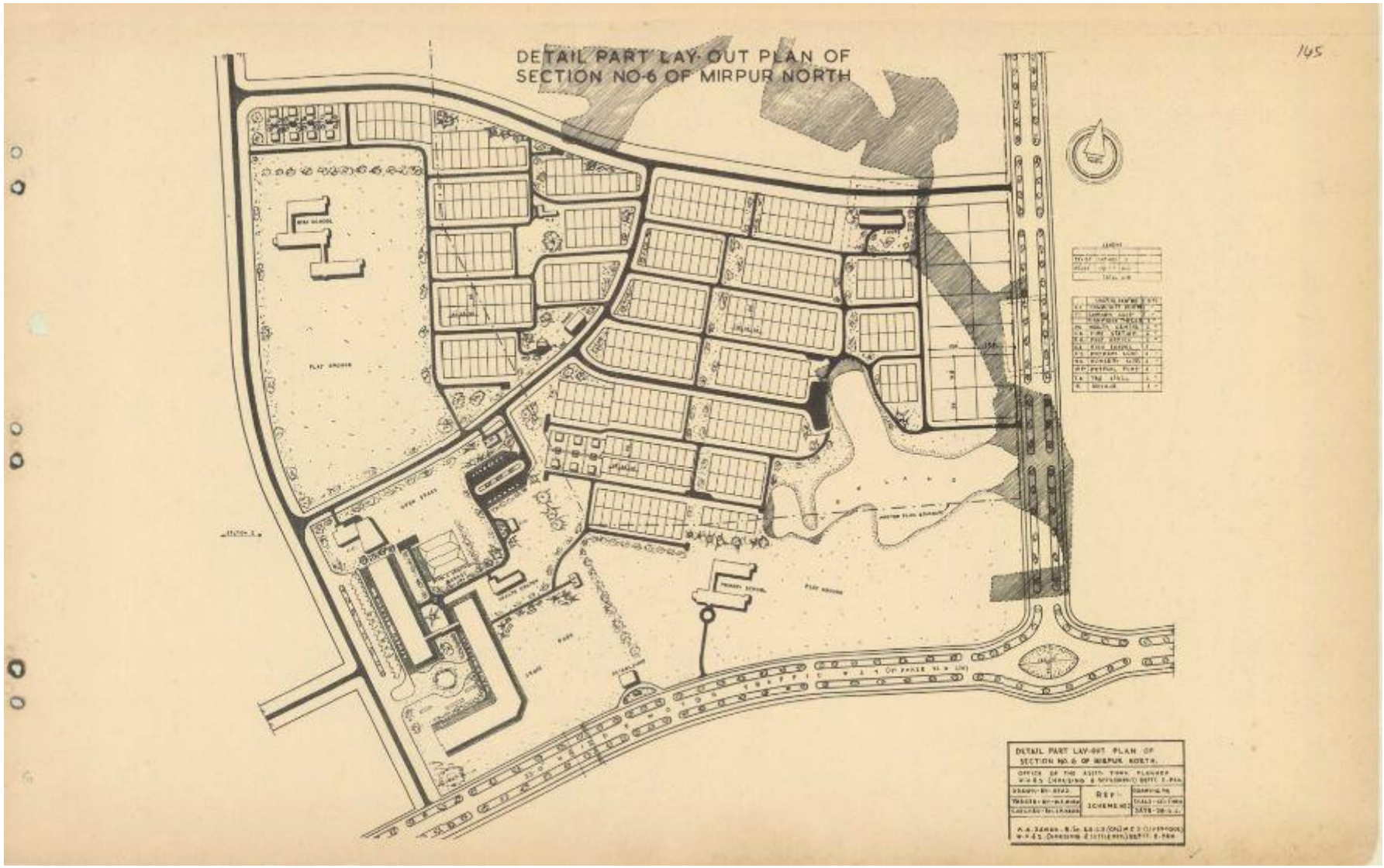
In the next few pages some of these plans have been presented. While preparing the plan most of these Housing Estates were conceived as self-contained residential neighbourhoods and provisions were made for all the civic requirements such as schools, open spaces, playgrounds, parks, children's corners, shopping and health centres and for other facilities required as per the number of persons to be accommodated therein. While designing the detailed layout special care was taken to locate the sites for primary schools within the reasonable walking distances and to avoid the crossing of main traffic routes. The layouts of the roads and the traffic circulation system were so planned and designed as to dis-courage the thorough traffic from entering into the residential units, while sufficient land was provided for the roads to meet the demand of the changed mode and means of traffic and transportation. Most of these housing estates had also areas reserved for cottage industries and commerce. More than 50 per cent. of the acquired area was planned to be utilised for net residential use which included plots, nucleus houses and blocks of flats.

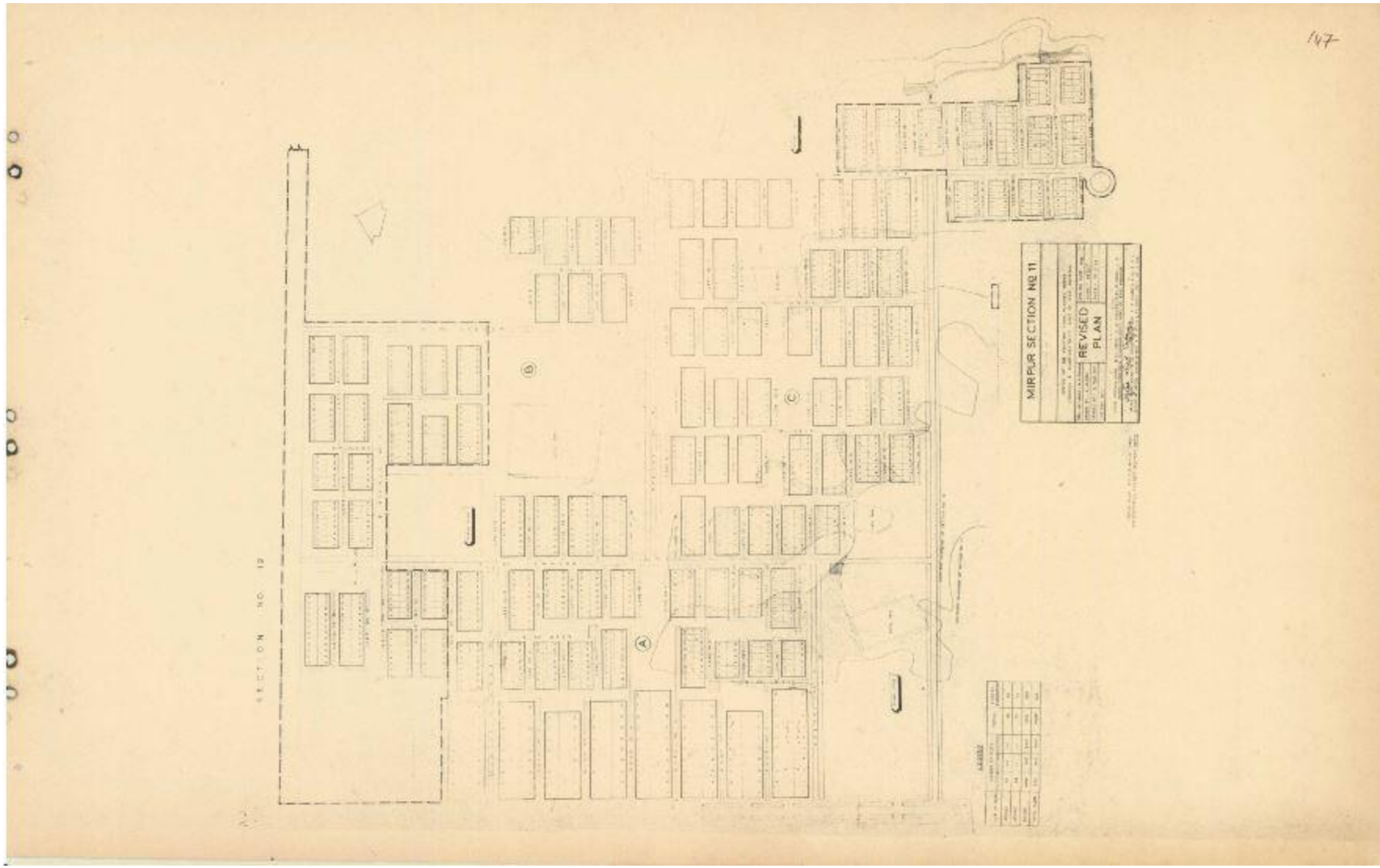


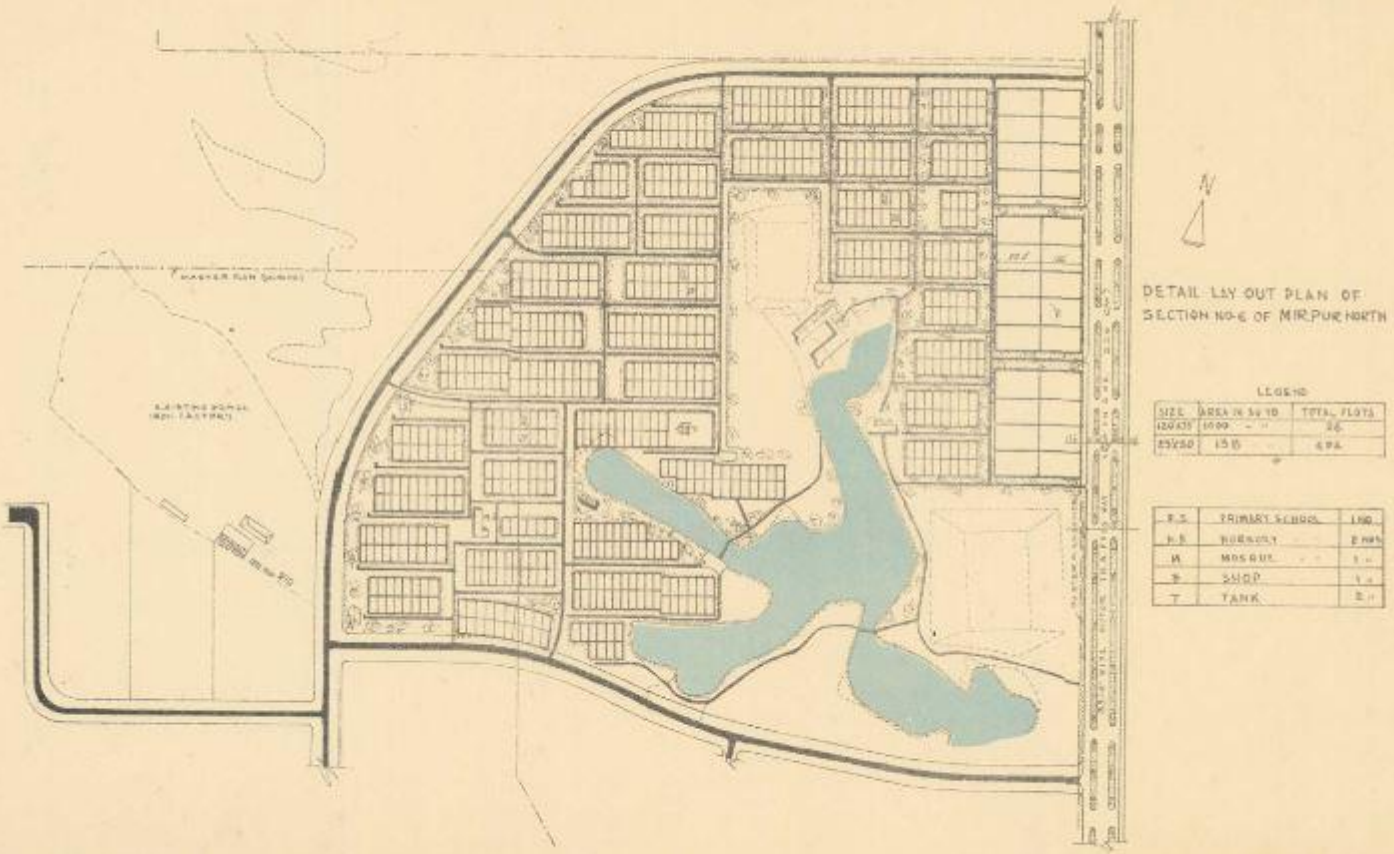


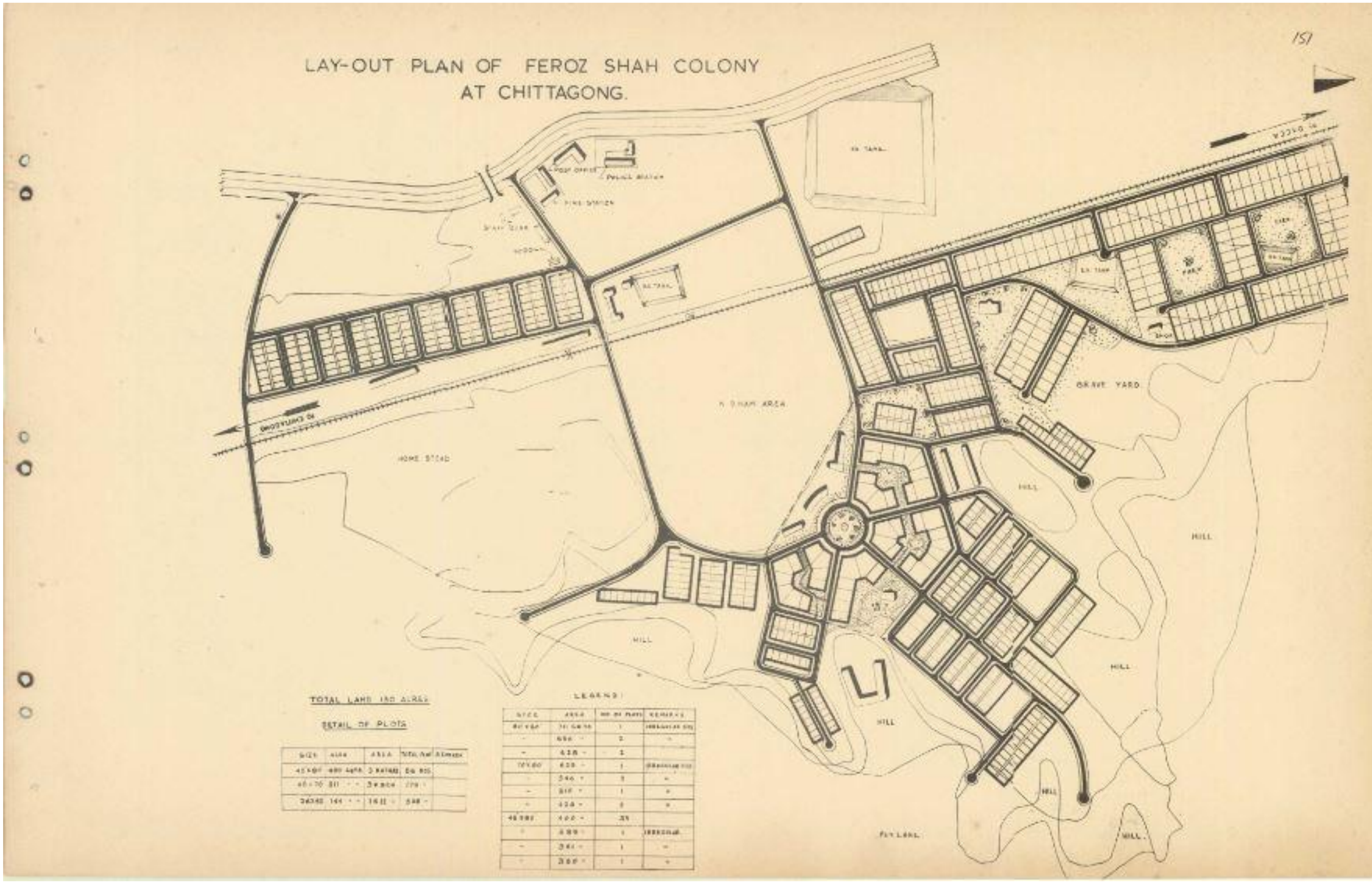


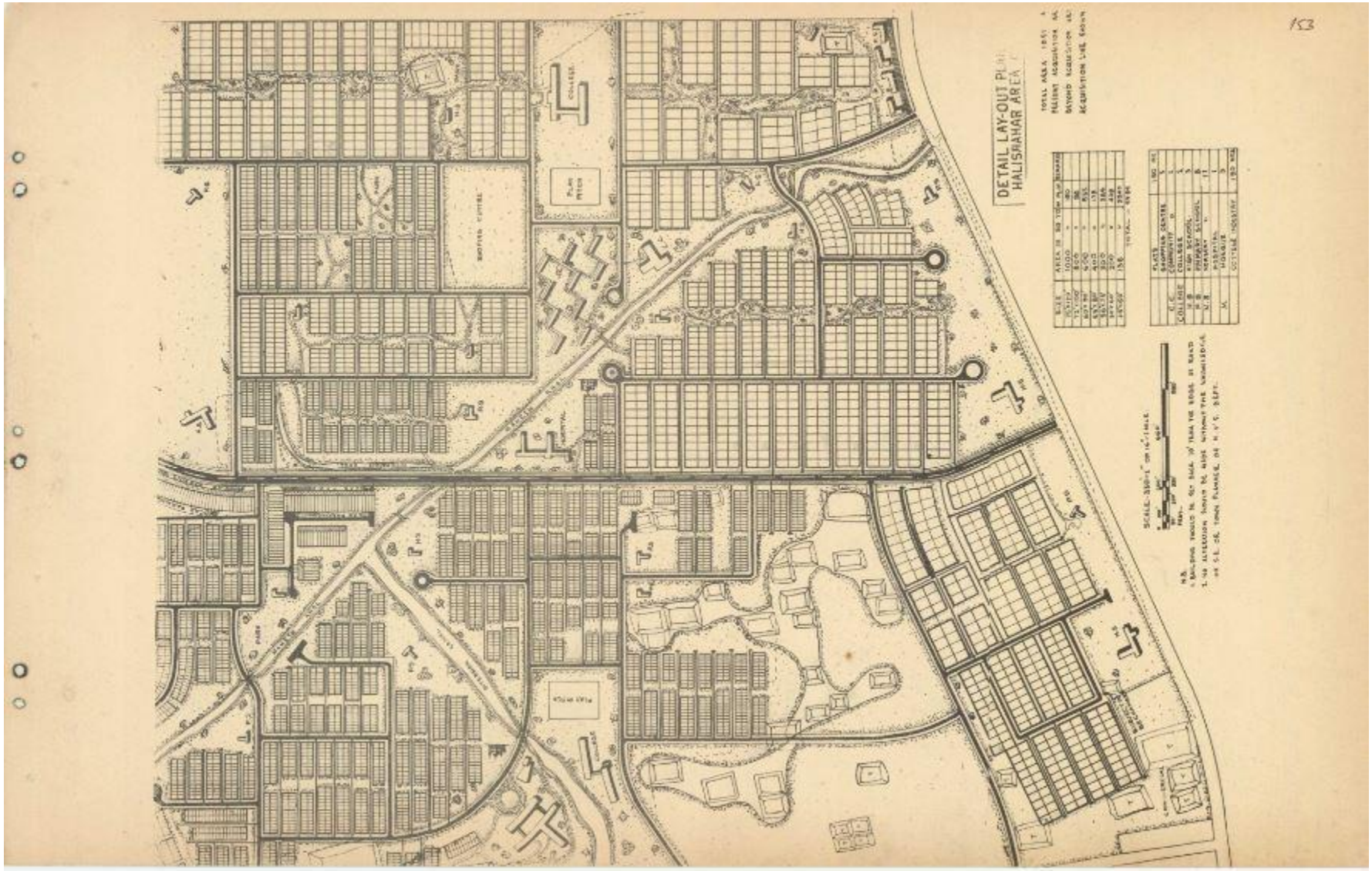


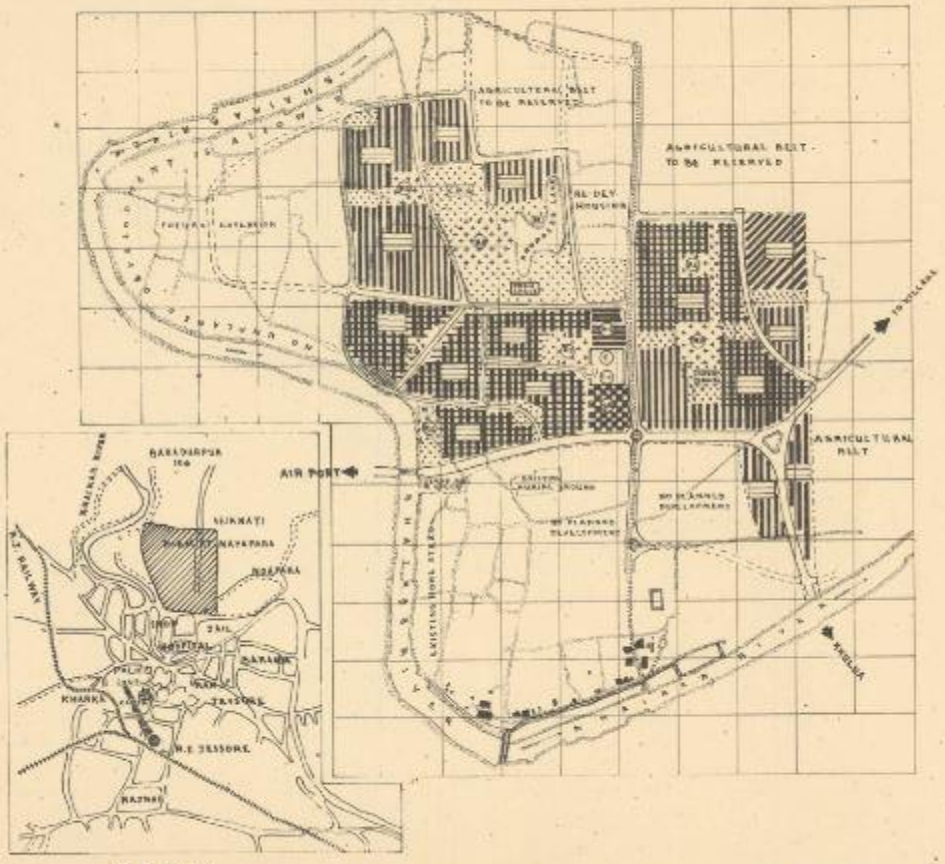












KEY PLAN
SCALE 1"=1 MILE
PROPOSED SITE AT JESSORE SHOWN

REFERENCES

1	RESIDINTIAL PLOTS
2	NUCLEUS HOUSES
3	OPEN SPACE PARK & PLAY GROUND
4	HEALTH CENTER
5	HIGH SCHOOL & PRIMARY SCHOOL
6	CINEMA & COMMUNITY CENTER
7	SHOPPING SUB-CENTER
8	COTTAGE INDUSTRIES
9	CENTRAL SHOPPING
10	LAKE
11	RELIGOUS BLDGS
12	EXISTING ROADS
13	PROPOSED ROADS
14	RIVER
15	EXISTING BUILDINGS
16	ACQUSITION LINE

MOINUL ISLAM B.E.C.E, M.I.E (PAK)
SUPERINTENDING ENGINEER WORKS
P&I (H&S) DEPTT. GOVT. OF E.PAK

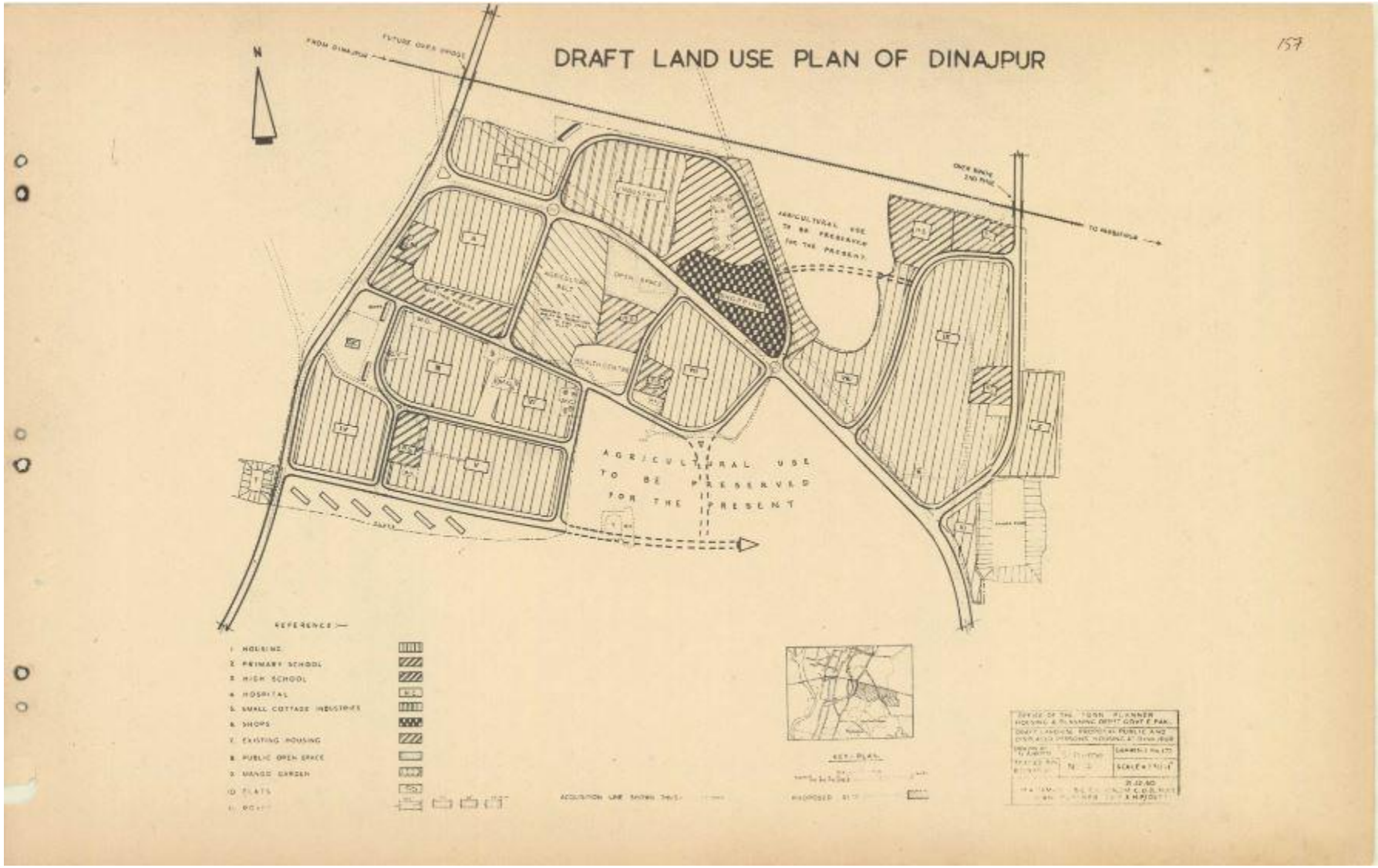
PROPOSED LAND-USE PLAN OF TOWN EXTENTION SCHEME PUBLIC & D.P's HOUSING AT JESSORE E.P.

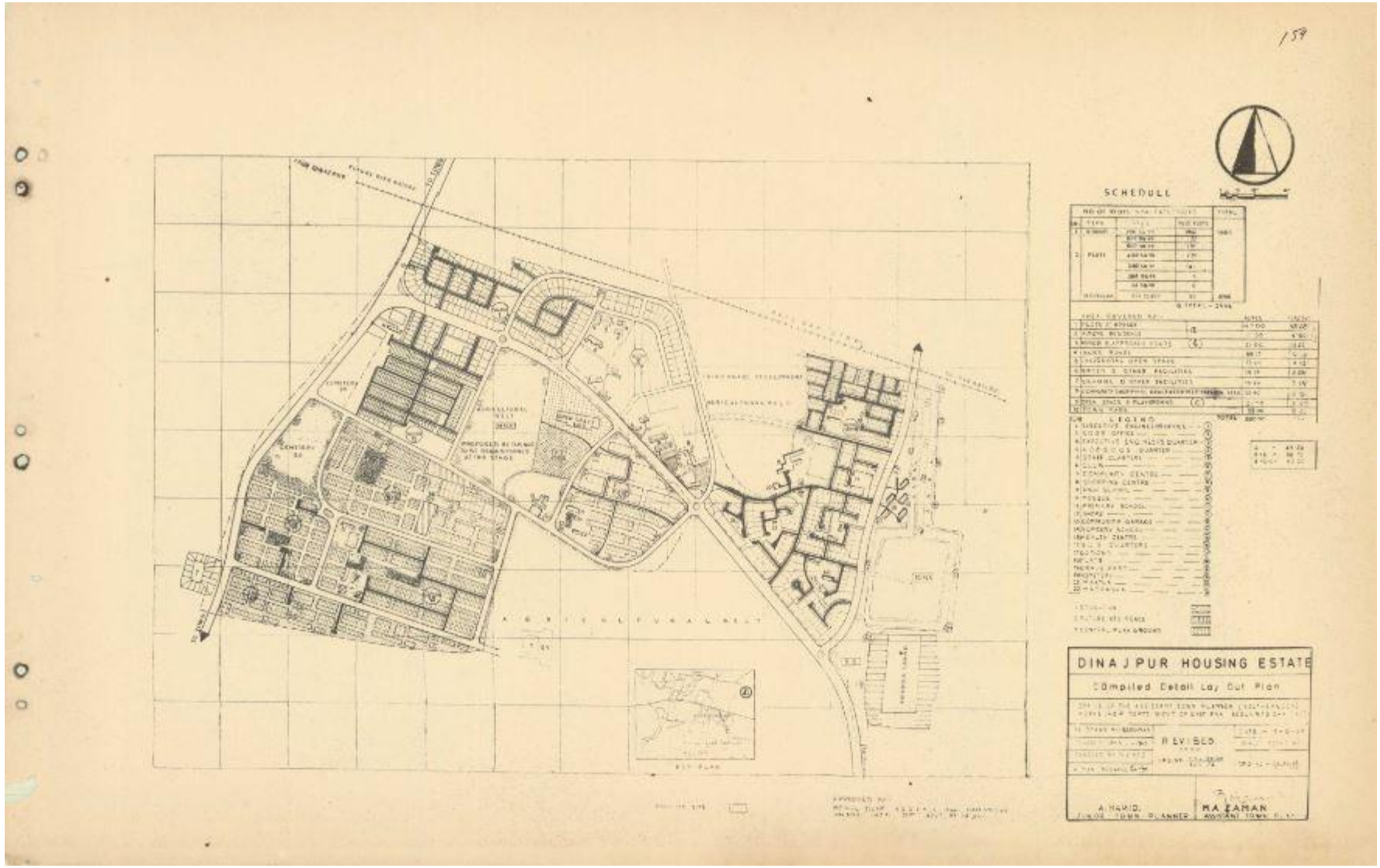
OFFICE OF THE ASSISTANT TOWN PLANNER
WORKS P & I DEPARTMENT GOVT. OF EAST PAK

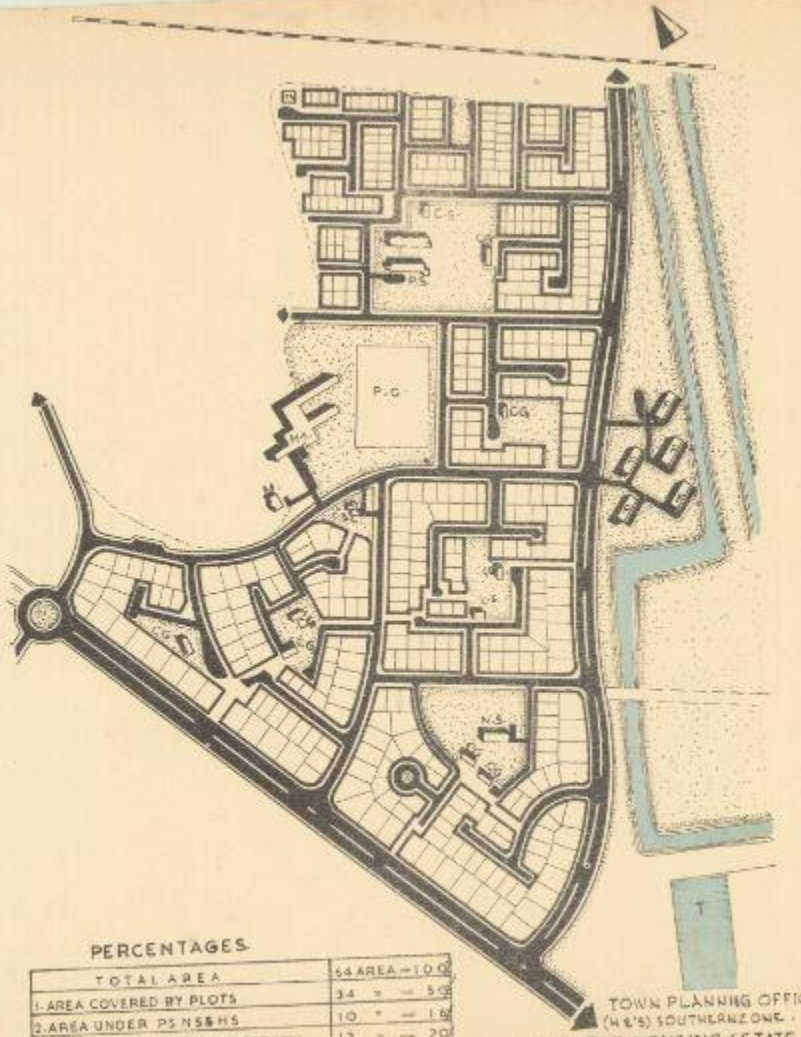
DRAWN BY:- K. ALAM	SCALE :-
TRACED BY:- B.B.DAS	DRG. NO. H&S/P. 312
CHECKED BY:-	DATED:- 31.8.62

ABDUL HAMID, B.SC. ENGG. (C.E.) D.E.K (ATHENS)
JUNIOR PLANNER, WORKS P&I DEPTT. E.PAK

R.A. ZAMAN M.C.P (LIVER POOL) B.SC. B.E.C.E (CAL)
ASSISTANT TOWN PLANNER W.P&I DEPTT. E.P.



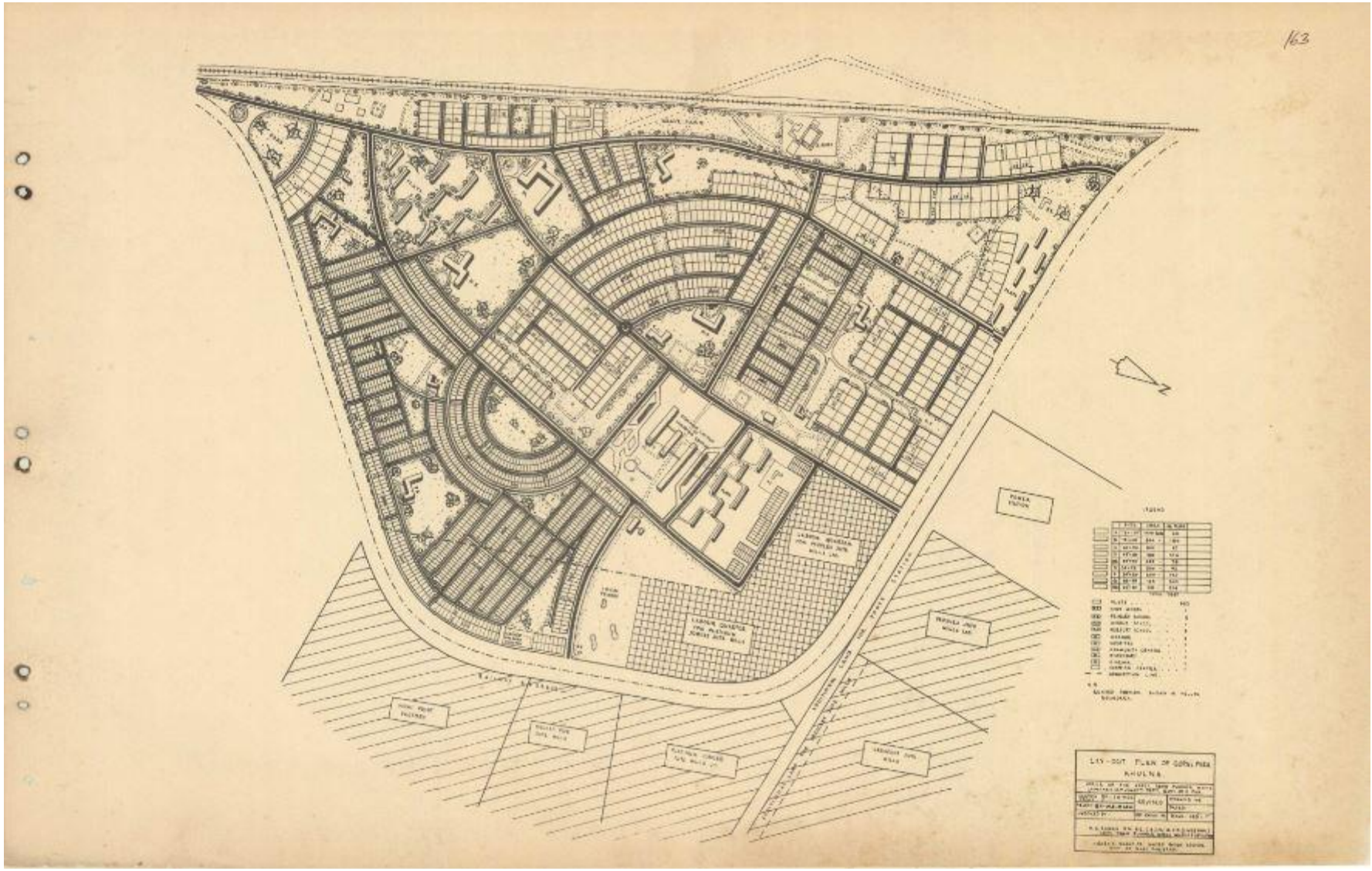


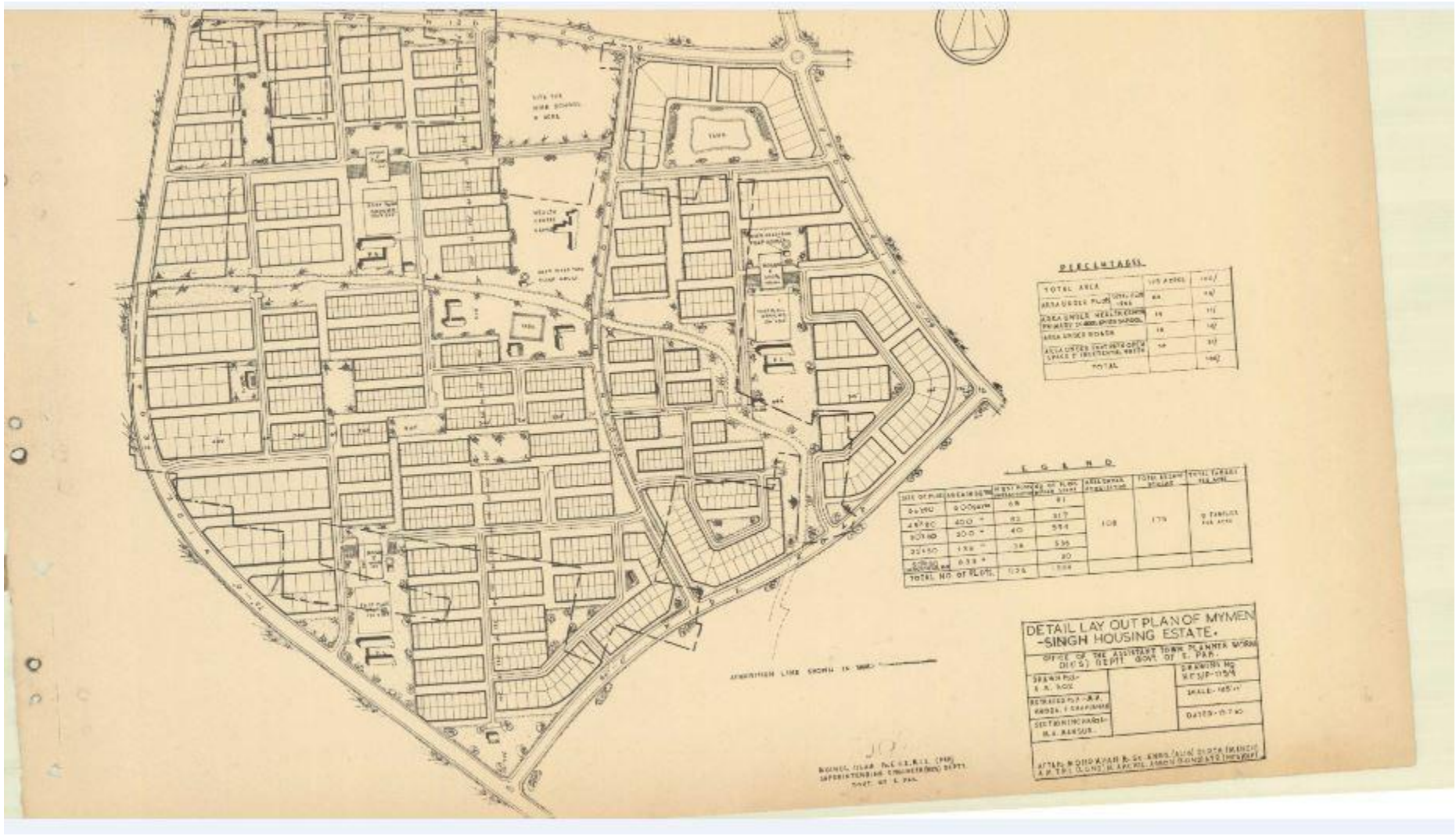


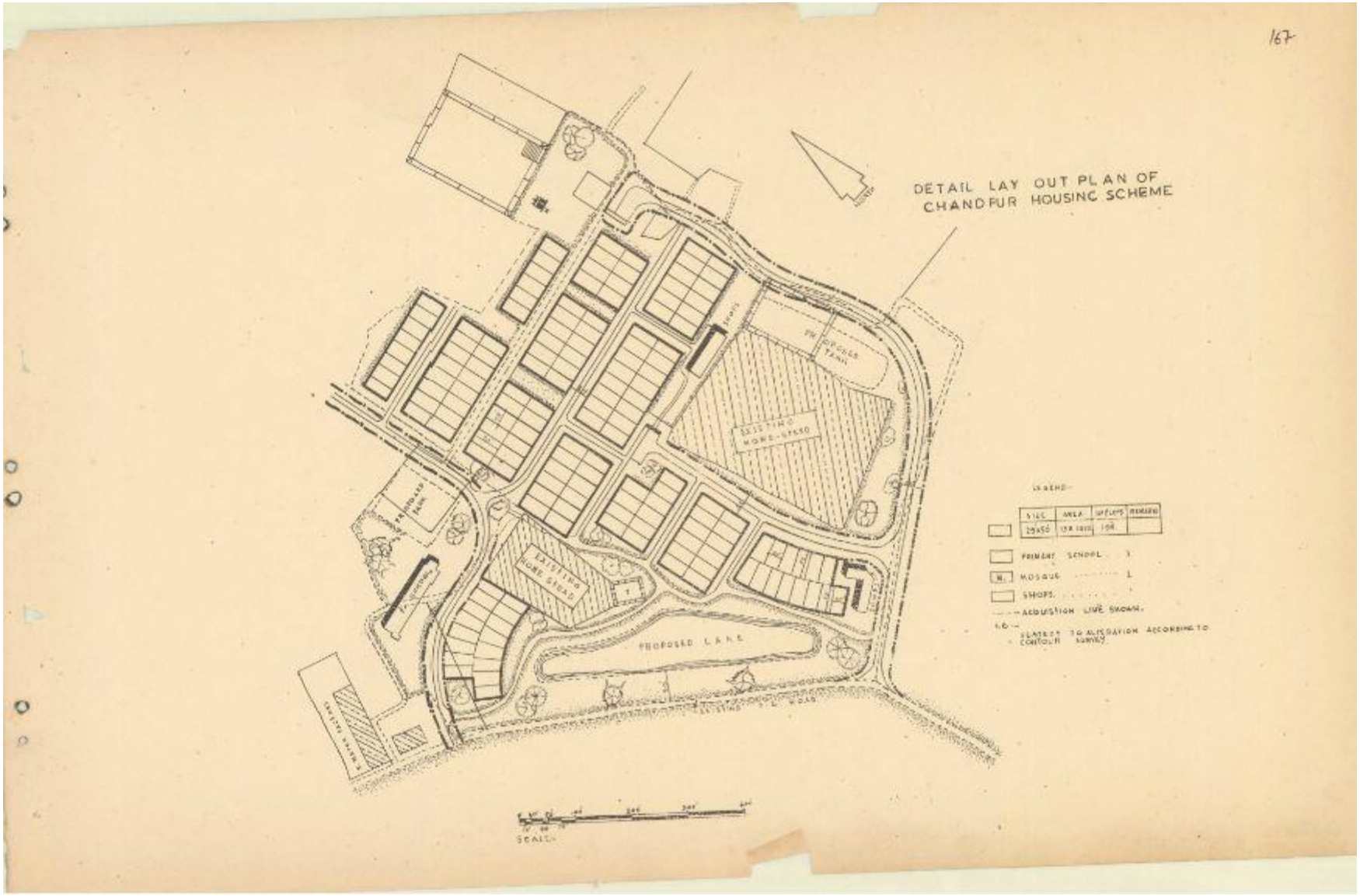
PERCENTAGES

TOTAL AREA	54 AREA = 100
1. AREA COVERED BY PLOTS	34 " = 50
2. AREA UNDER PS N.S & HS	10 " = 16
3. AREA UNDER ROADS & FOOTPATH	13 " = 20
4. AREA UNDER OPEN SPACE & GREEN	9 " = 14
TOTAL	54 " = 100

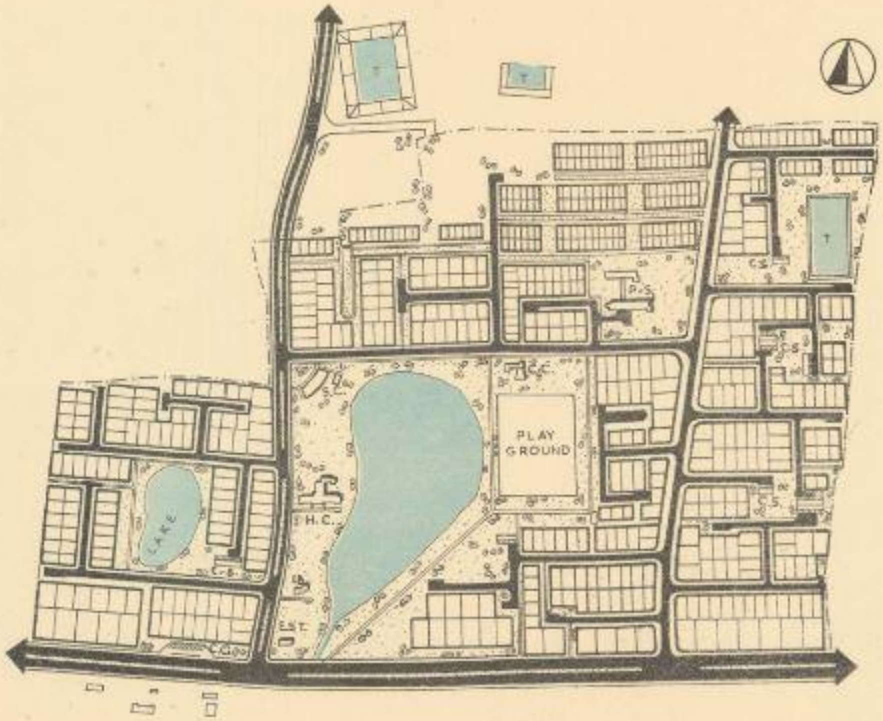
TOWN PLANNING OFFICE
(H & S) SOUTHERN ZONE.
DINAJPUR HOUSING ESTATE
DITAIL LAYOUT OF SECTOR NO VIII & IX.



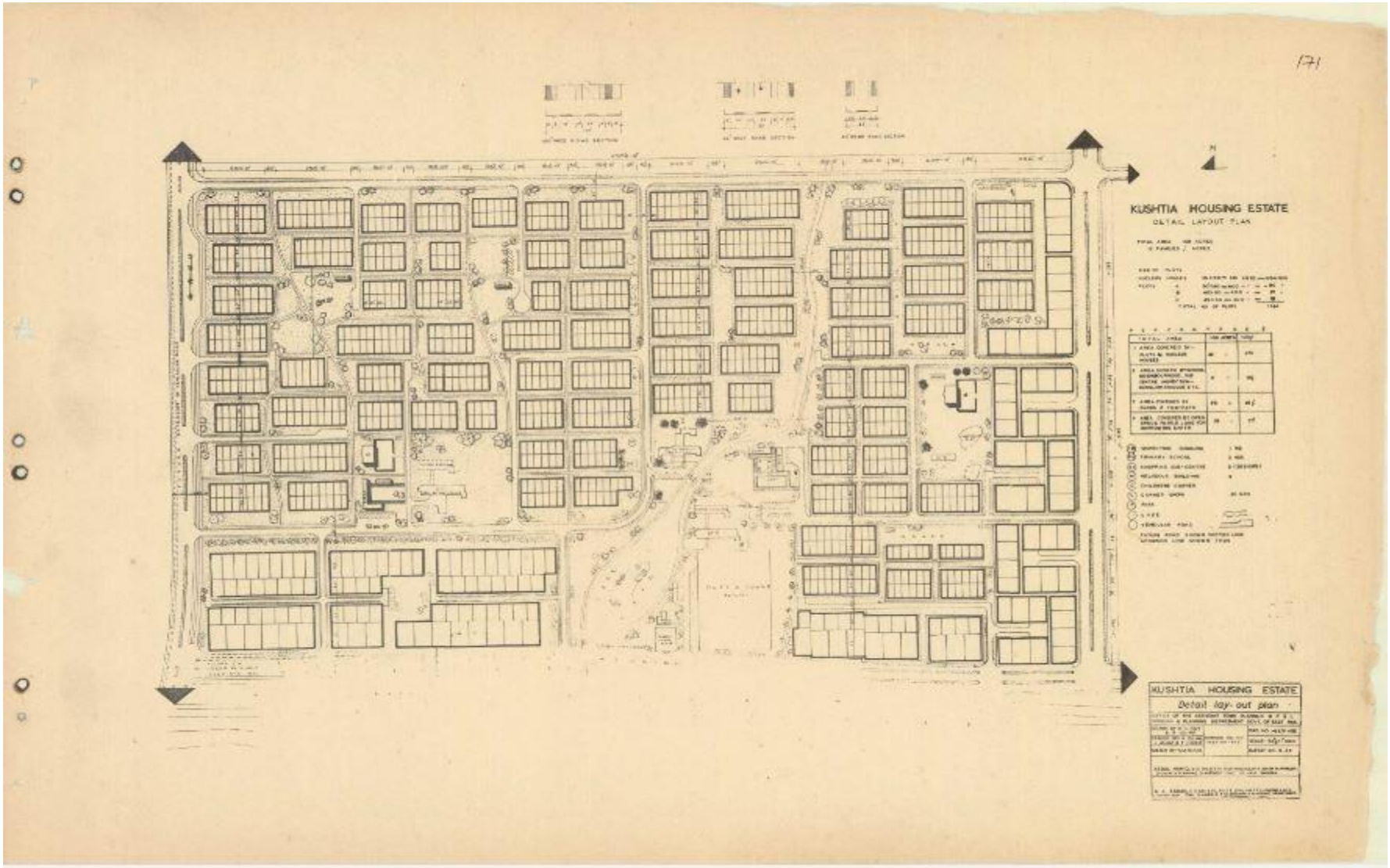


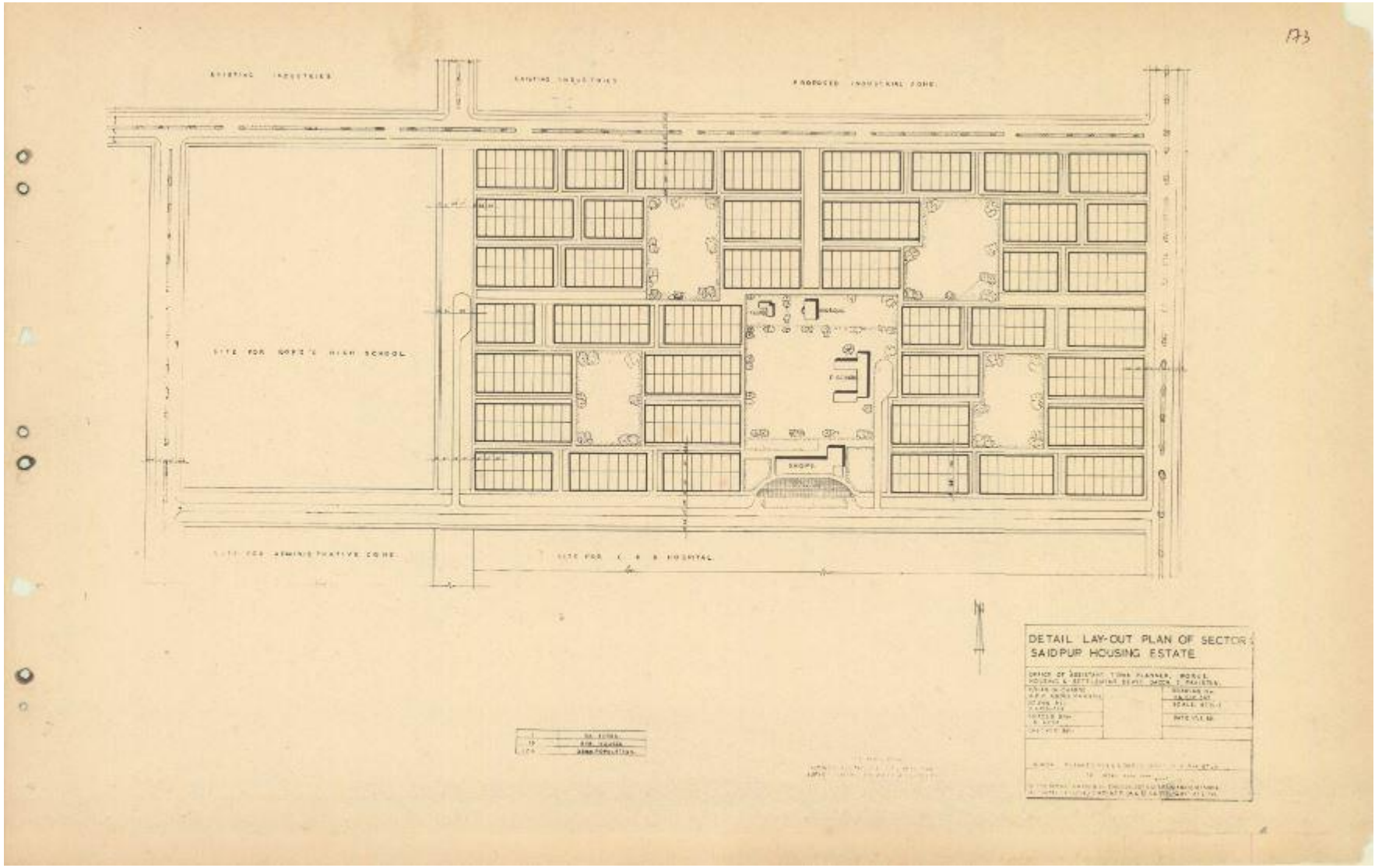


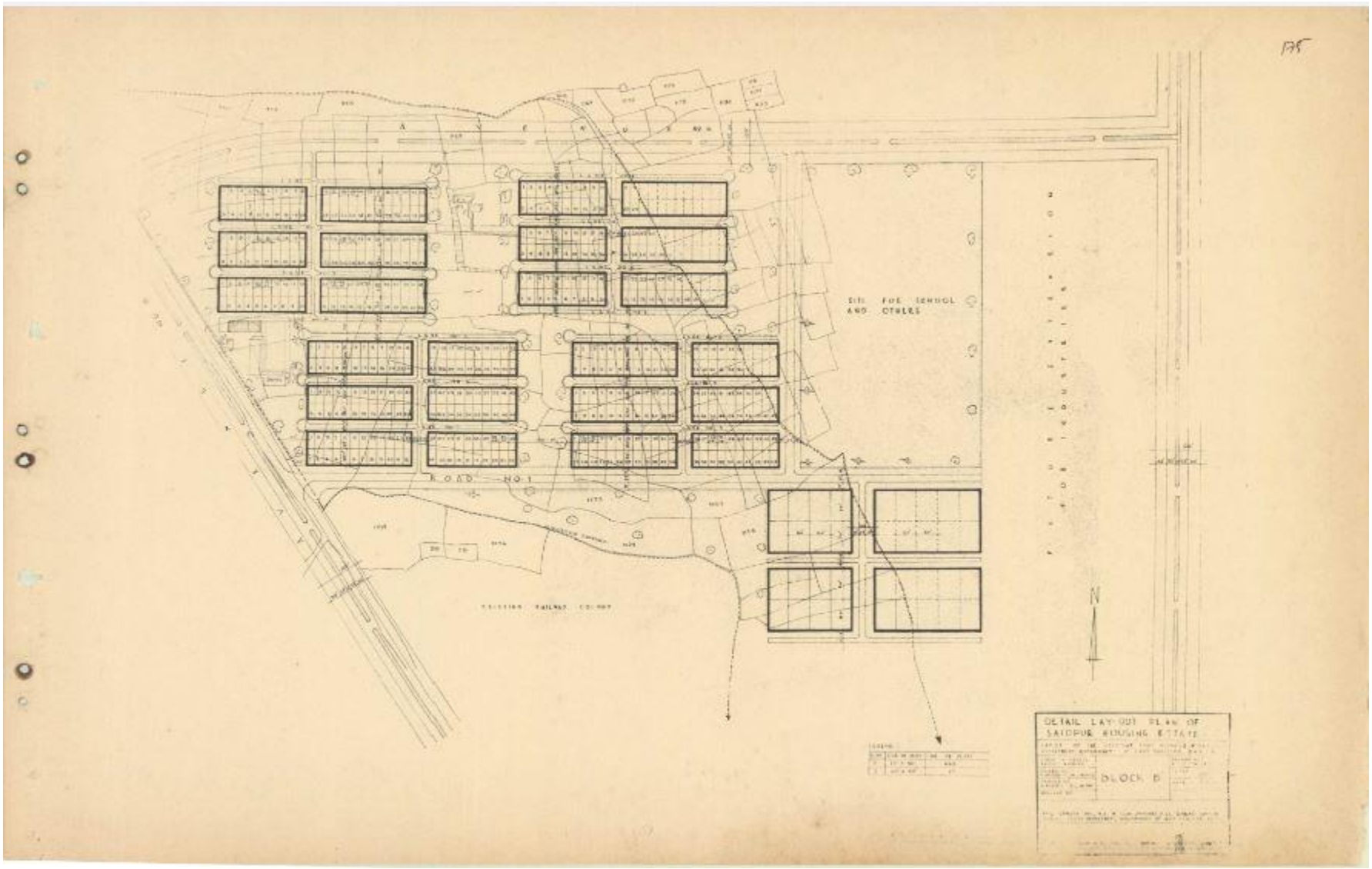
COMILLA HOUSING ESTATE

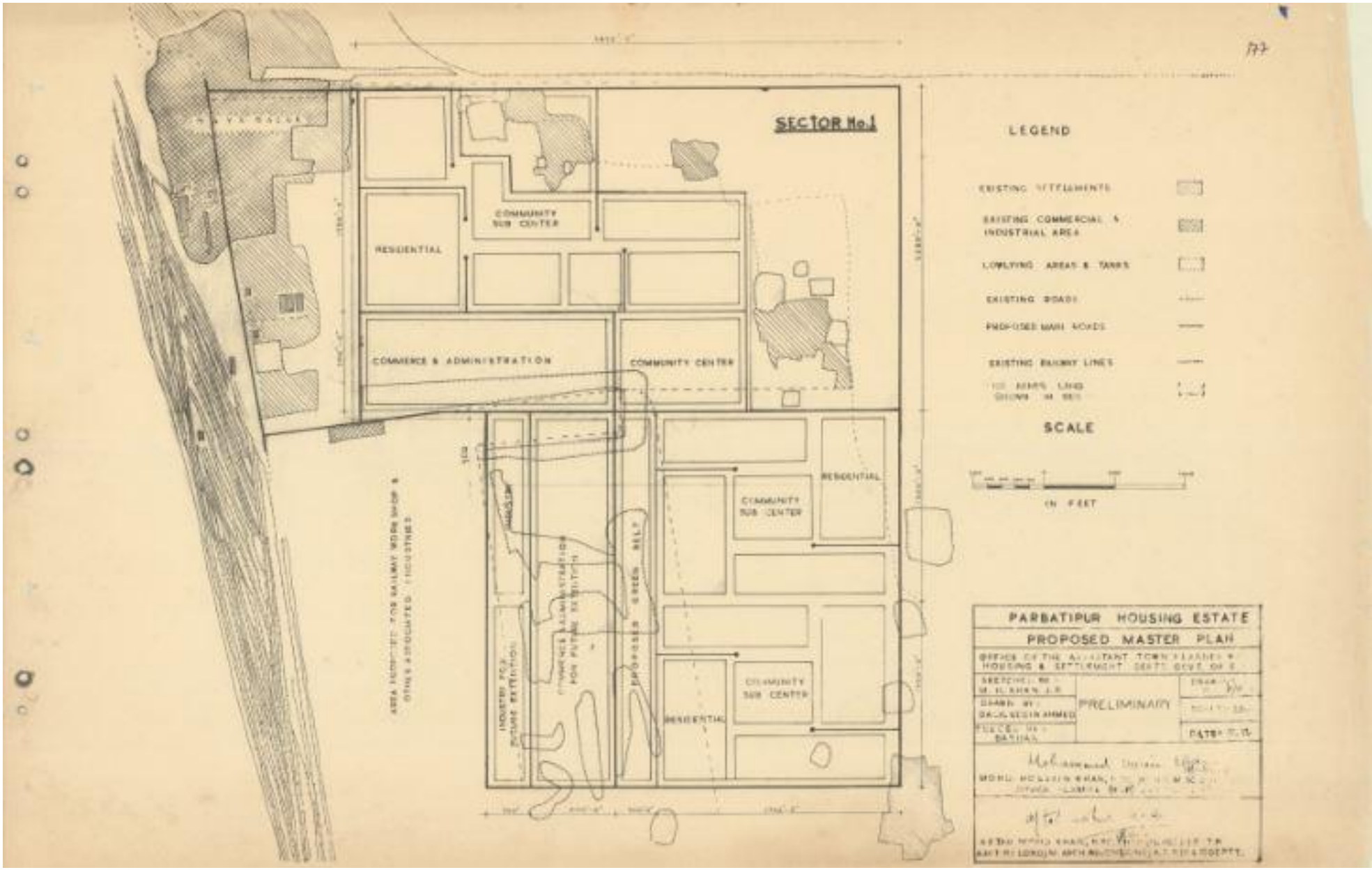


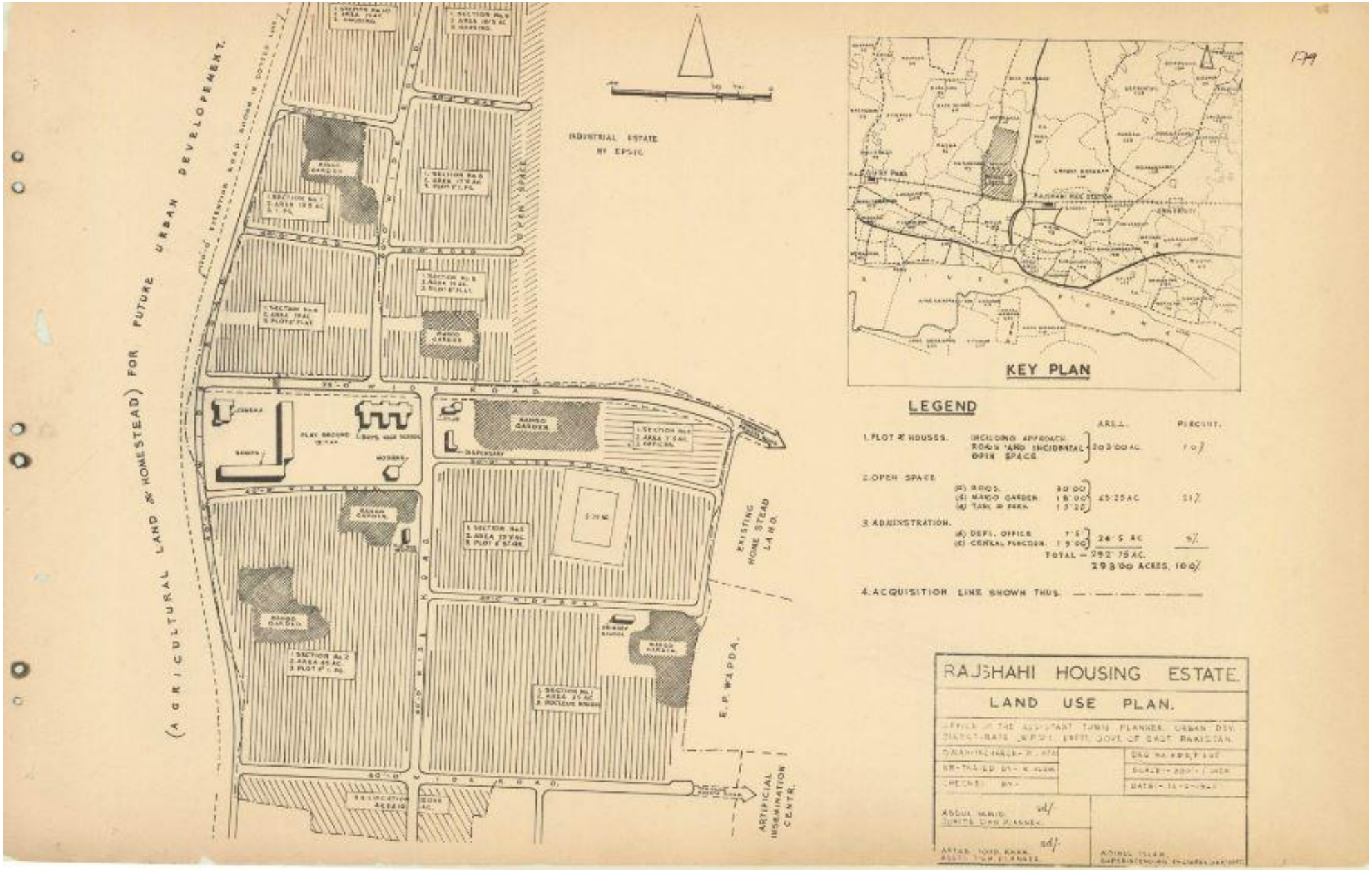
SL. NO.	SIZE OF PLOTS	AREA IN SQ. YDS	NO. OF PLOTS
1.	75'x150'	1000	[illegible]
2.	60'x90'	600	24
3.	57x30	600	188
4.	45x80	400	22
5.	45x50	300	111
6.	30x60	200	63
7.	25x60	150	107
8.	75x150	817	3
9.	60x115	733	4
10.	60x125	860	1
11.	45x80	420	7
12.	40x60	167	4
13.	60x100	666	8
14.	65x70	507	8
15.	50x60	330	8
16.	90x180	800	1
		582	7
		500	4
		TOTAL PLOTS	590

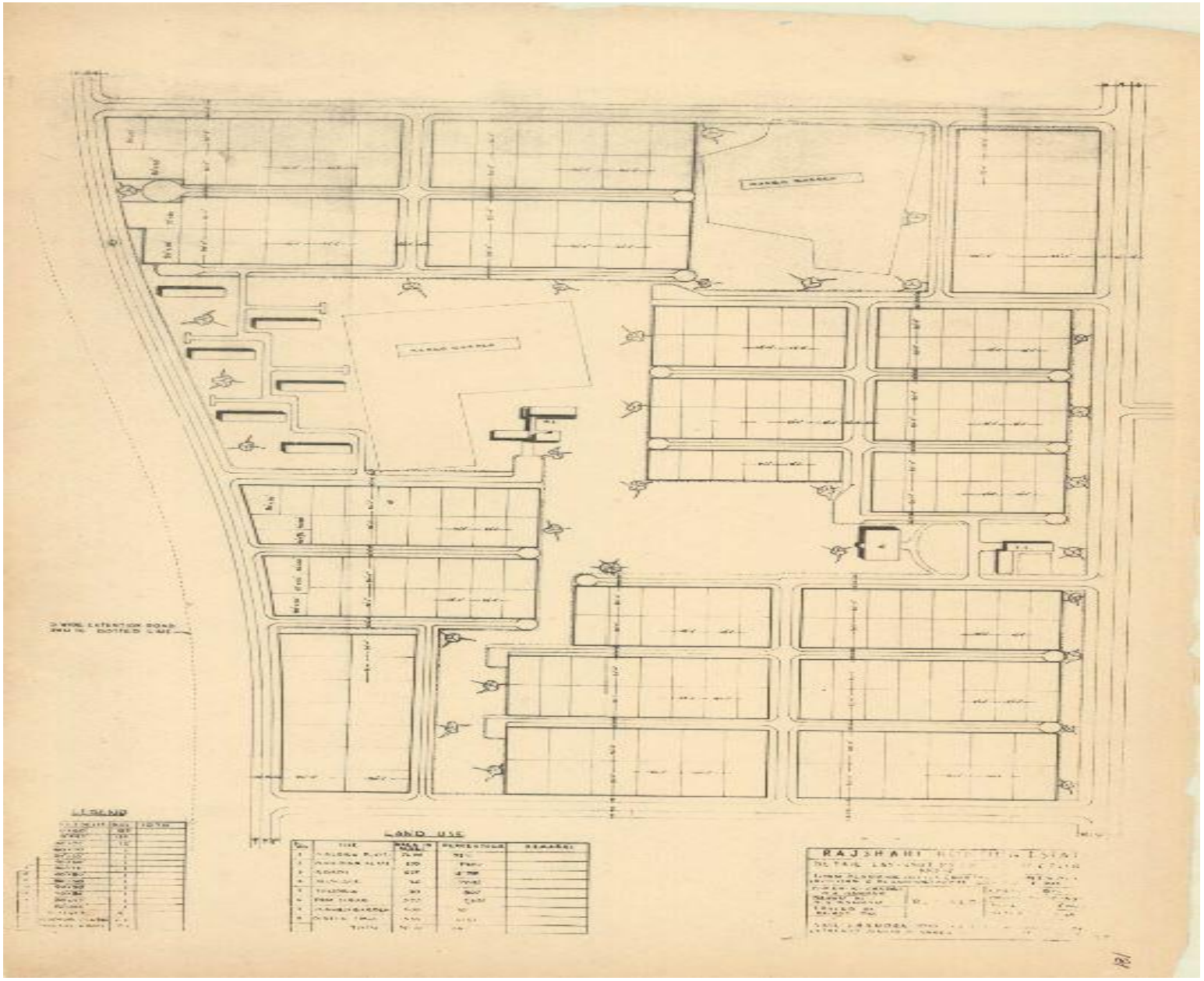












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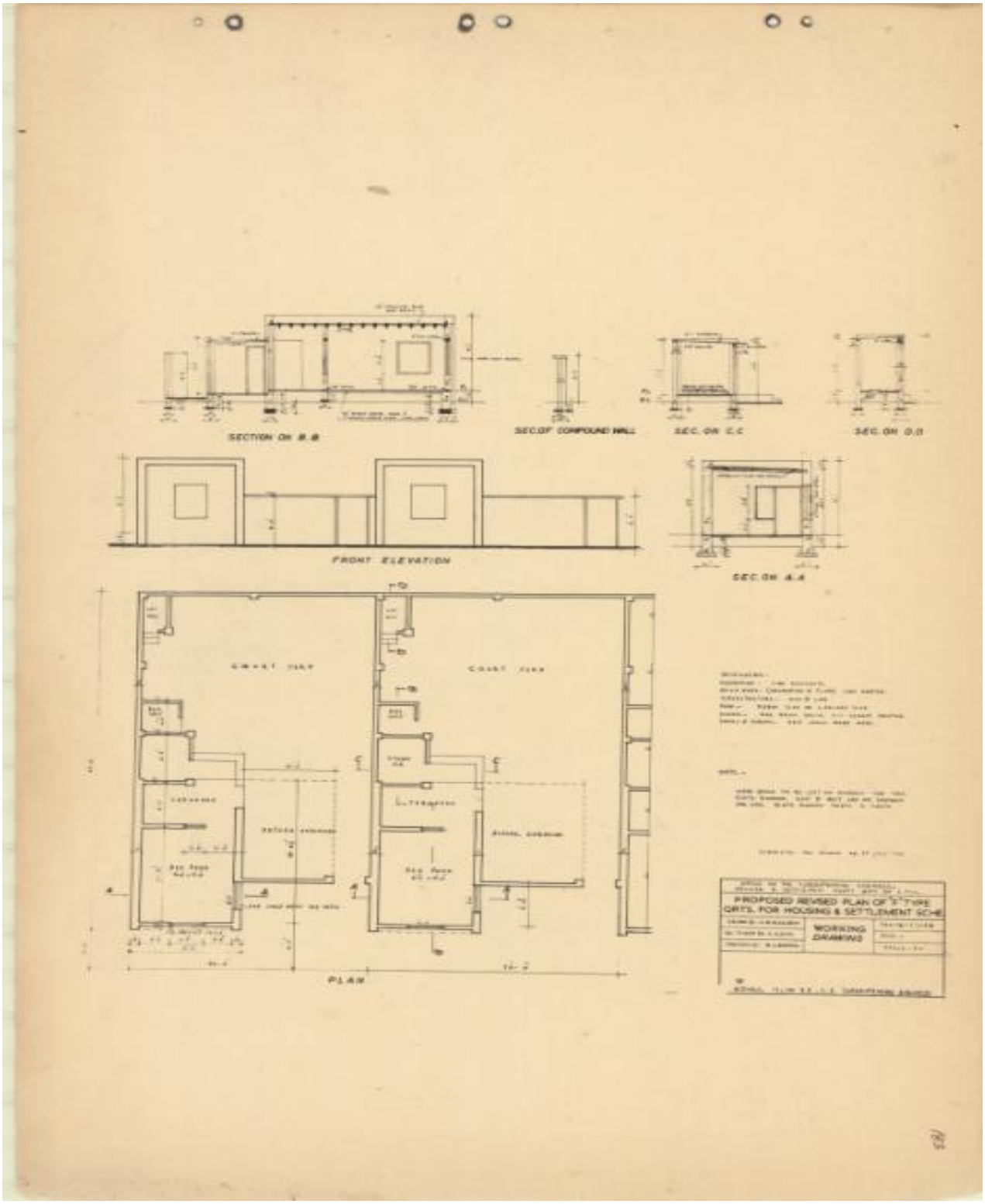
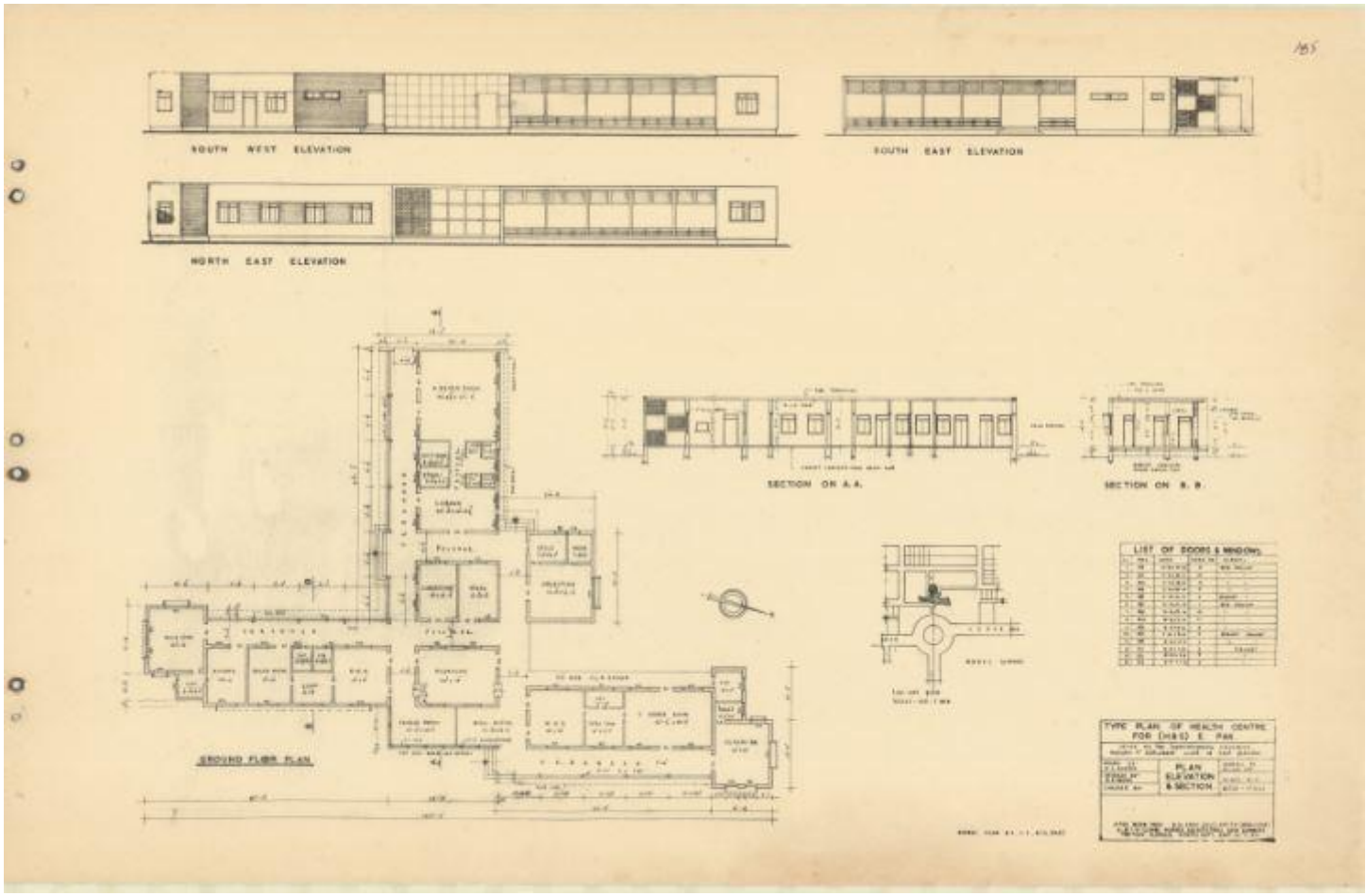




DEVELOPMENT PLANS FOR URBAN AREAS

Master Plan

The term "MASTER" stands for one who guides and controls with appropriate authority. In physical planning context Master Plan means "A frame-work that guides and controls the activities for physical development" of an area. The plan itself illustrates a comprehensive land use proposal accommodating all the proposed developmental activities on land for a specified period of time and is a guide for giving material expression to the solution of basic human needs expreienced through the journey of life. In case of urban area, it generally serves as a reference base for various factors, such as to prevent the wasteful and uneconomic use of land, to relate the various urban functions to the space, to put appropriate emphasis on the desired development pattern and to enforce development and aesthetic control to laydown standards for housing, to make provision for amenities and utility services and demarcate areas for Redevelopment and Renewal purposes including phasing of development. Such plans and proposals must be comprehensive in nature and realistic in relation to the economic potentialities of the community.

Preparation of Master plan involves three technical stages:

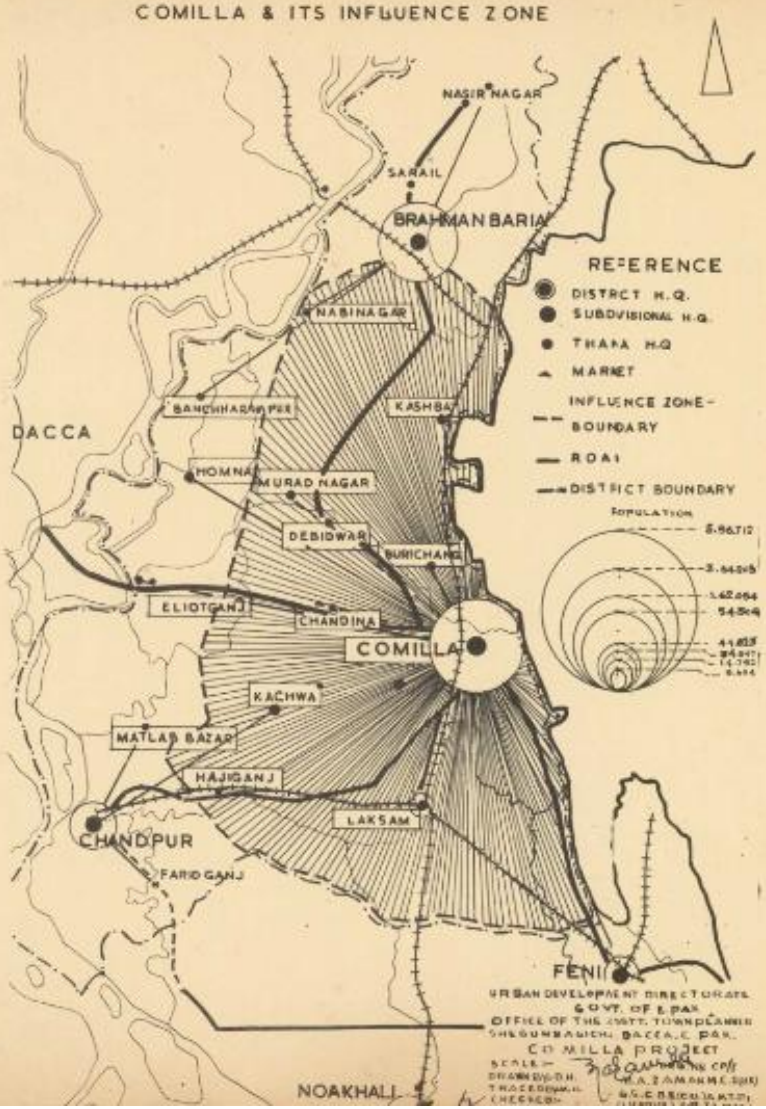
1. Collection of data through survey and investigation.
2. Formulation of policies and framing the proposal after analysis of the data and information collected for the purpose.
3. Preparation of plans and maps and writing the report.

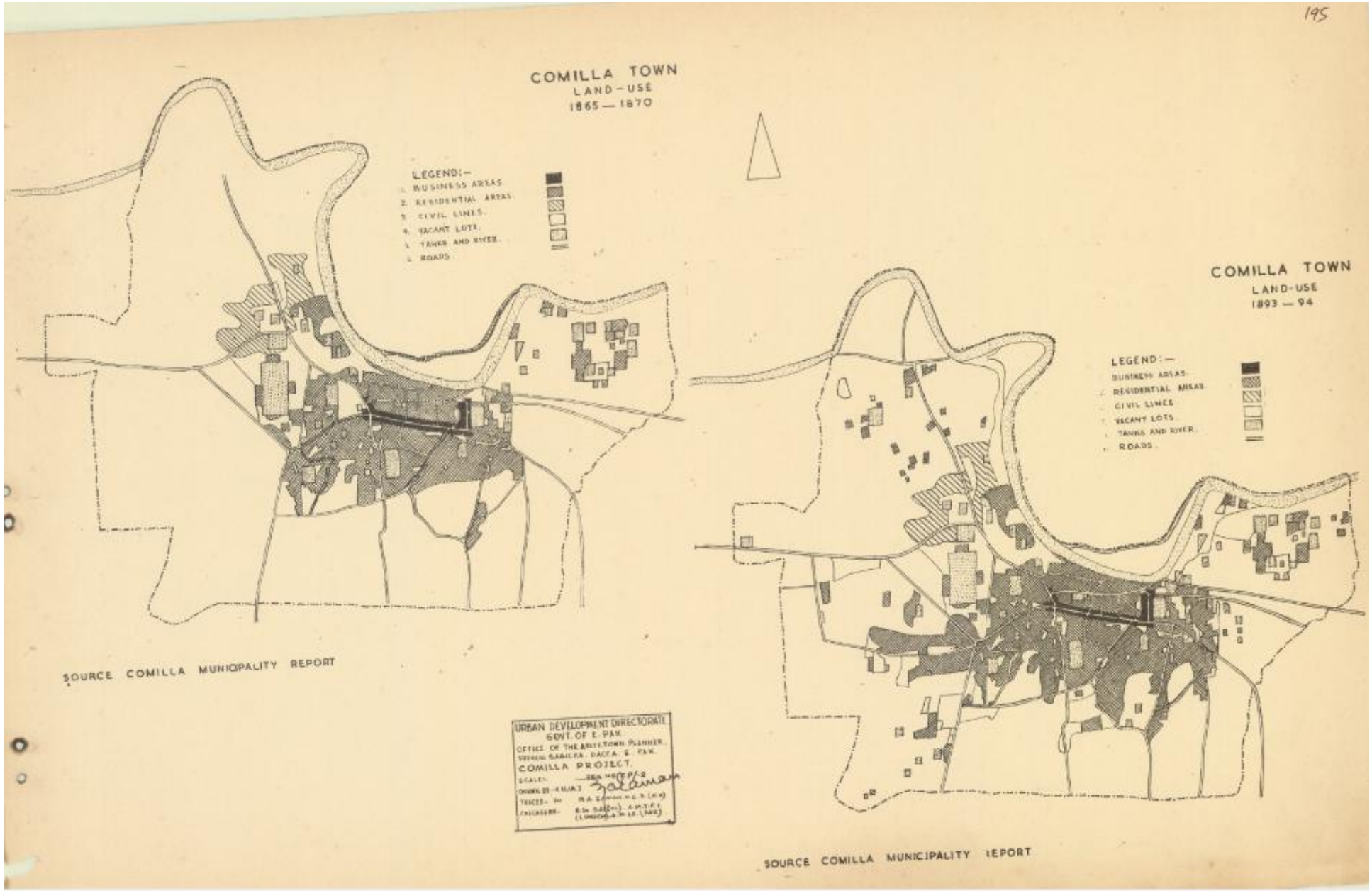
The Master Plan is not an end in itself ; it is rather the beginning of the whole process; and as such it should not be treated as static. It is a continuous process and the plan must have allowances for certain amount of flexibility. It should have a programme for short term period and a simultaneous long range propasals spread over the perspective plan period. This dynamic approach of reviewing and up-dating the plan after each phased period will make the plan capable of adjusting itself with any unexpected change without disruption of the framework.

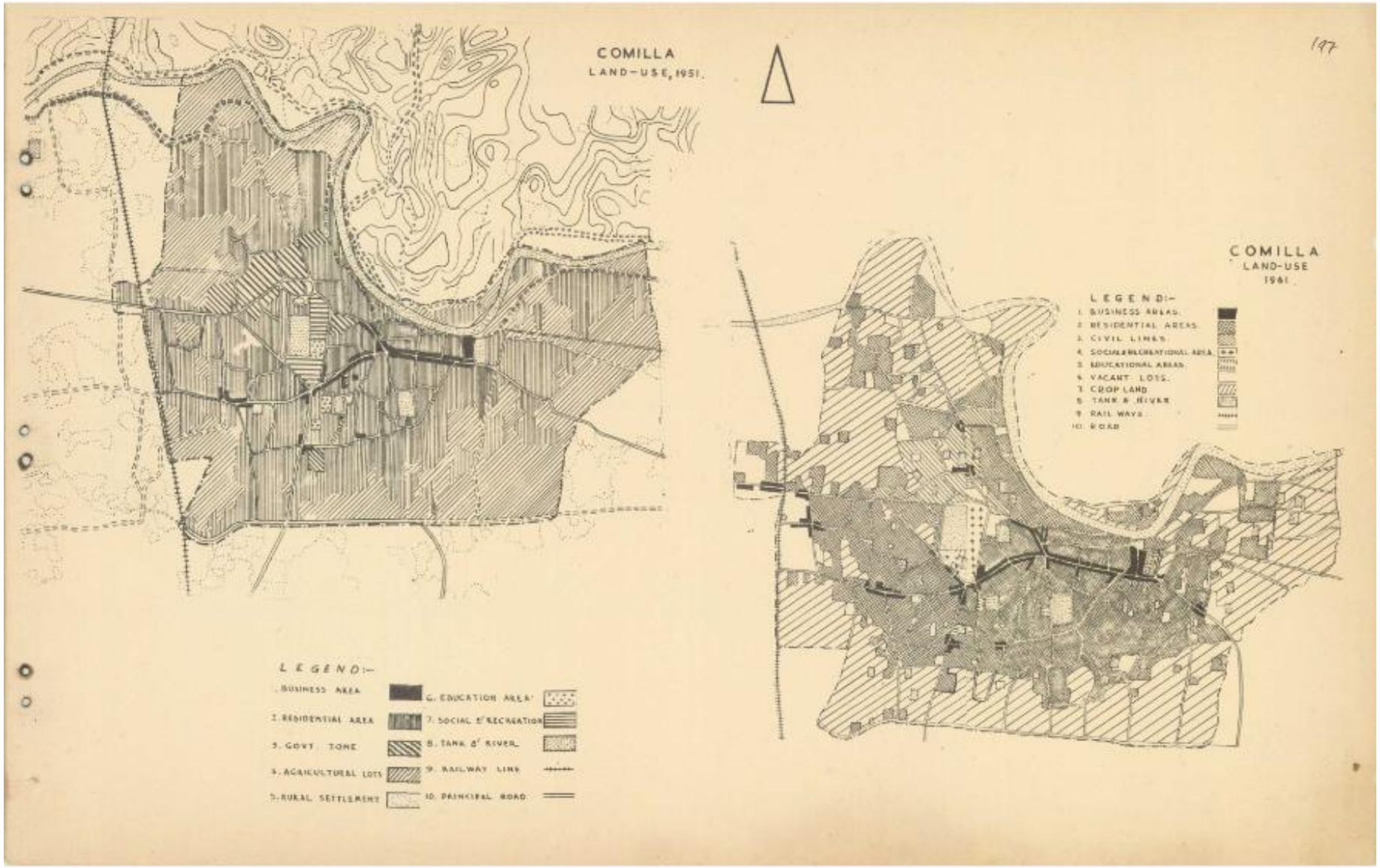
The process should really provide a means to correct the errors of the past, prevent the current errors, and to hold future maladjustments to the minimum.

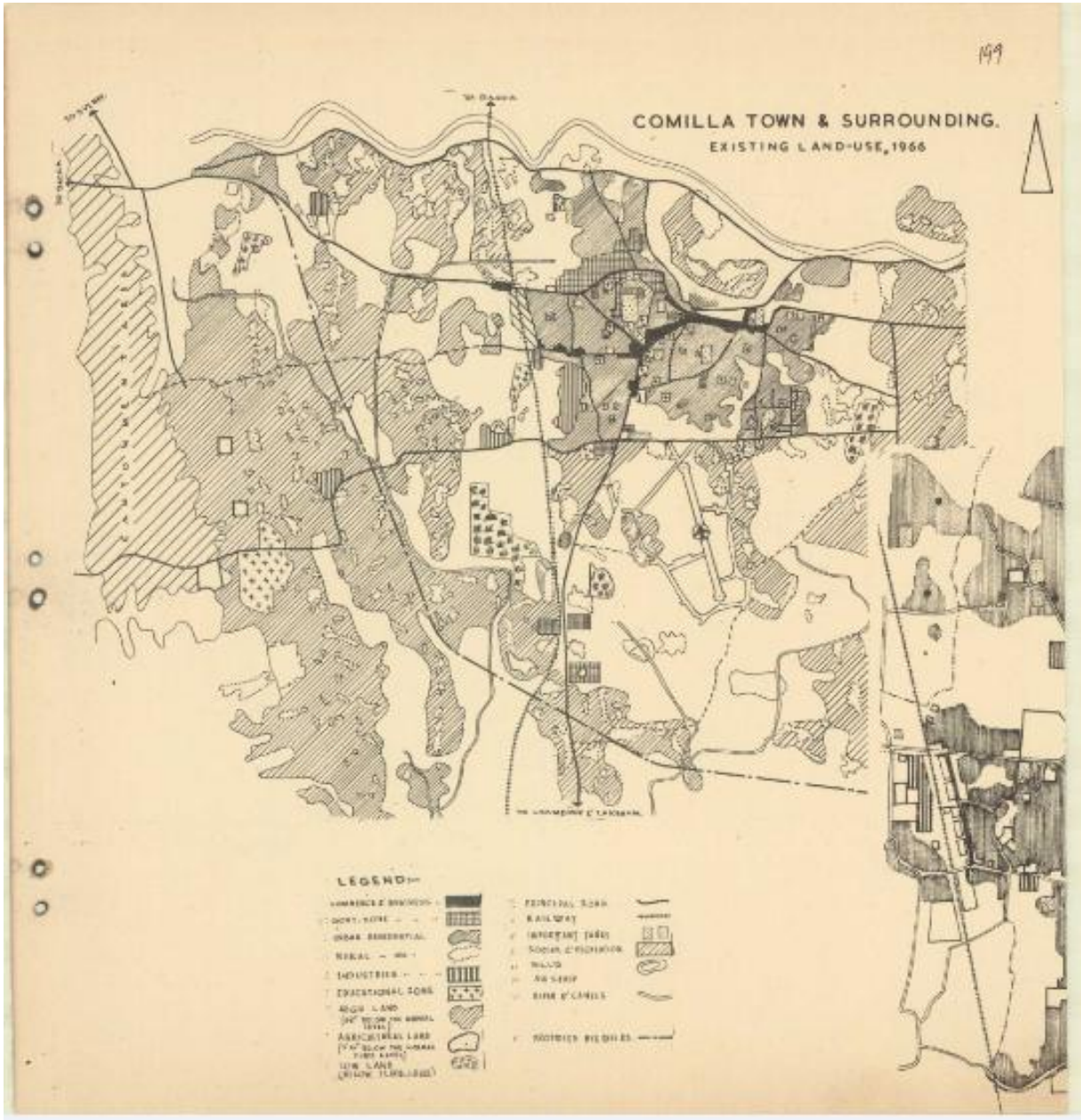
Preparation of a plan does not mean anything unless it is followed up and implemented. Translating the plan into action needs: (1) appropriate administrative machinery and (2) legal instrument.

COMILLA & ITS INFLUENCE ZONE









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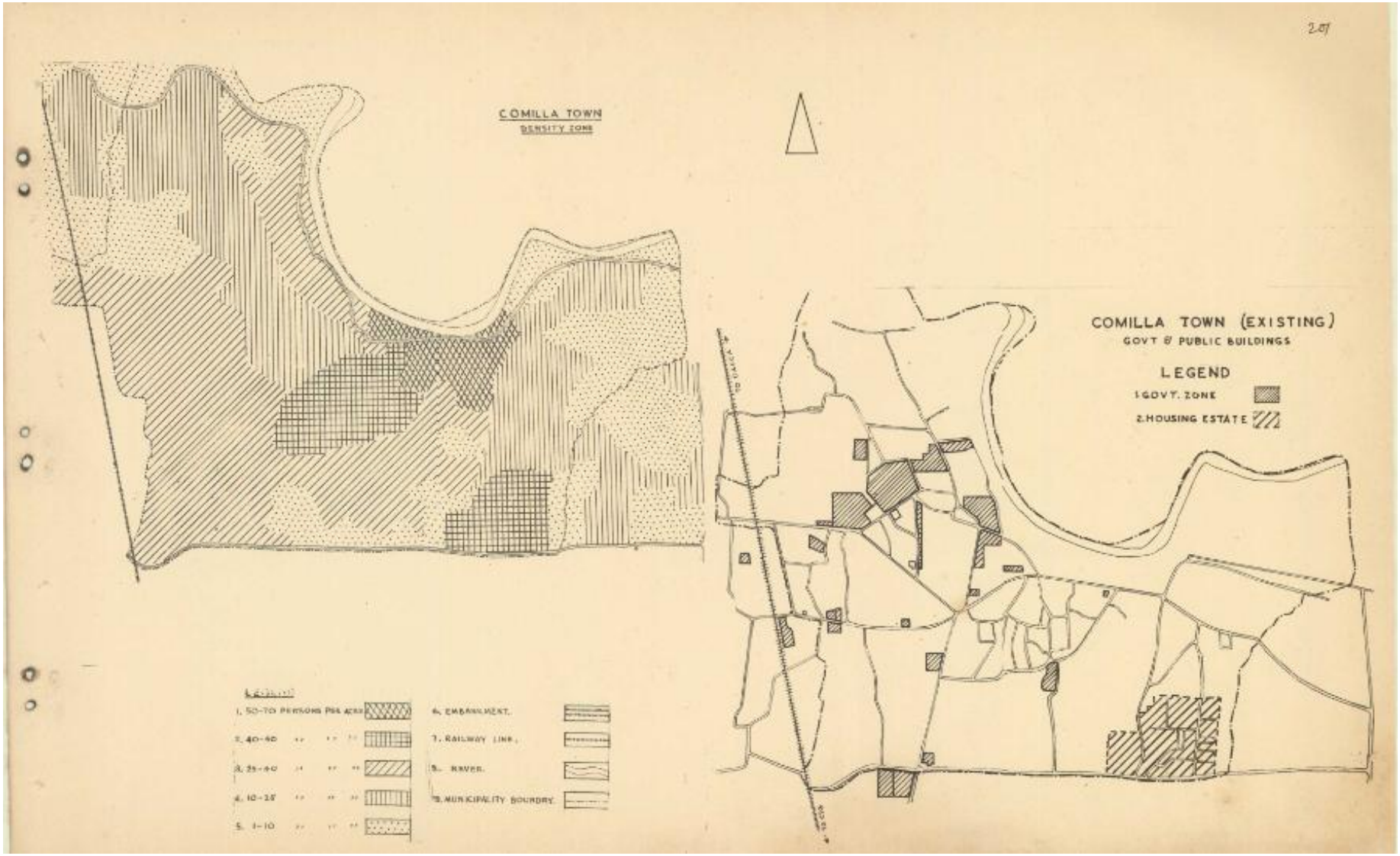
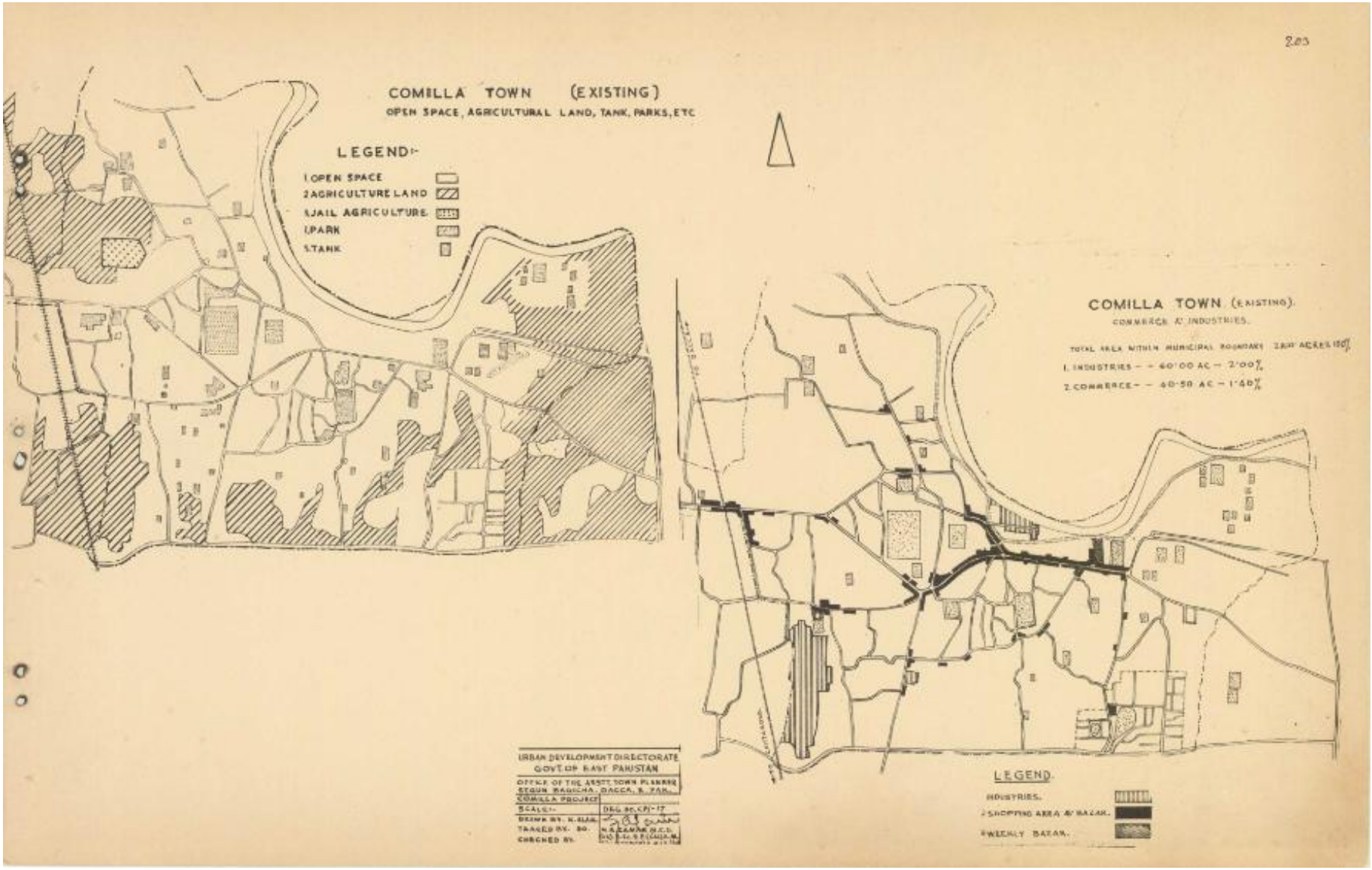
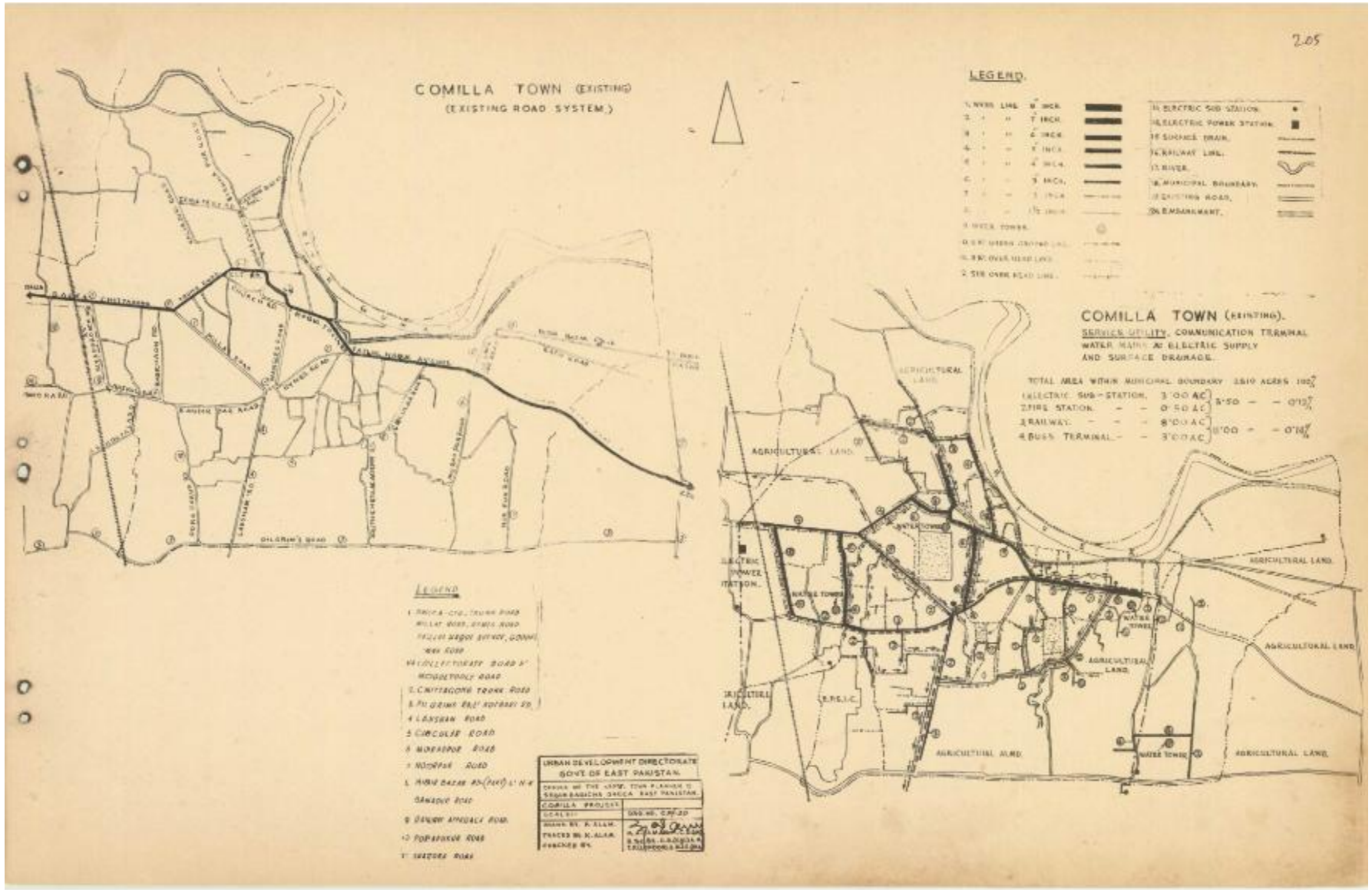
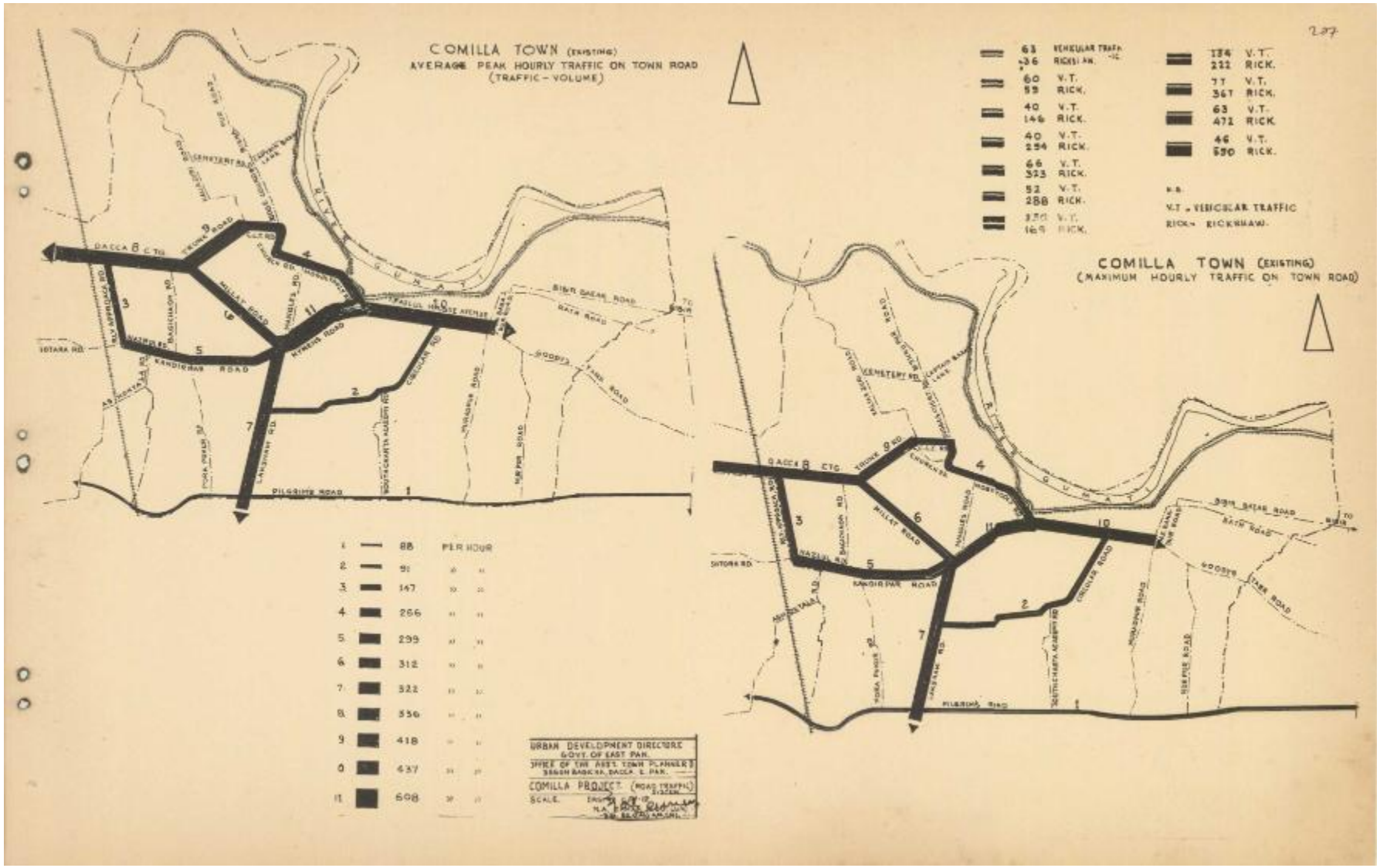
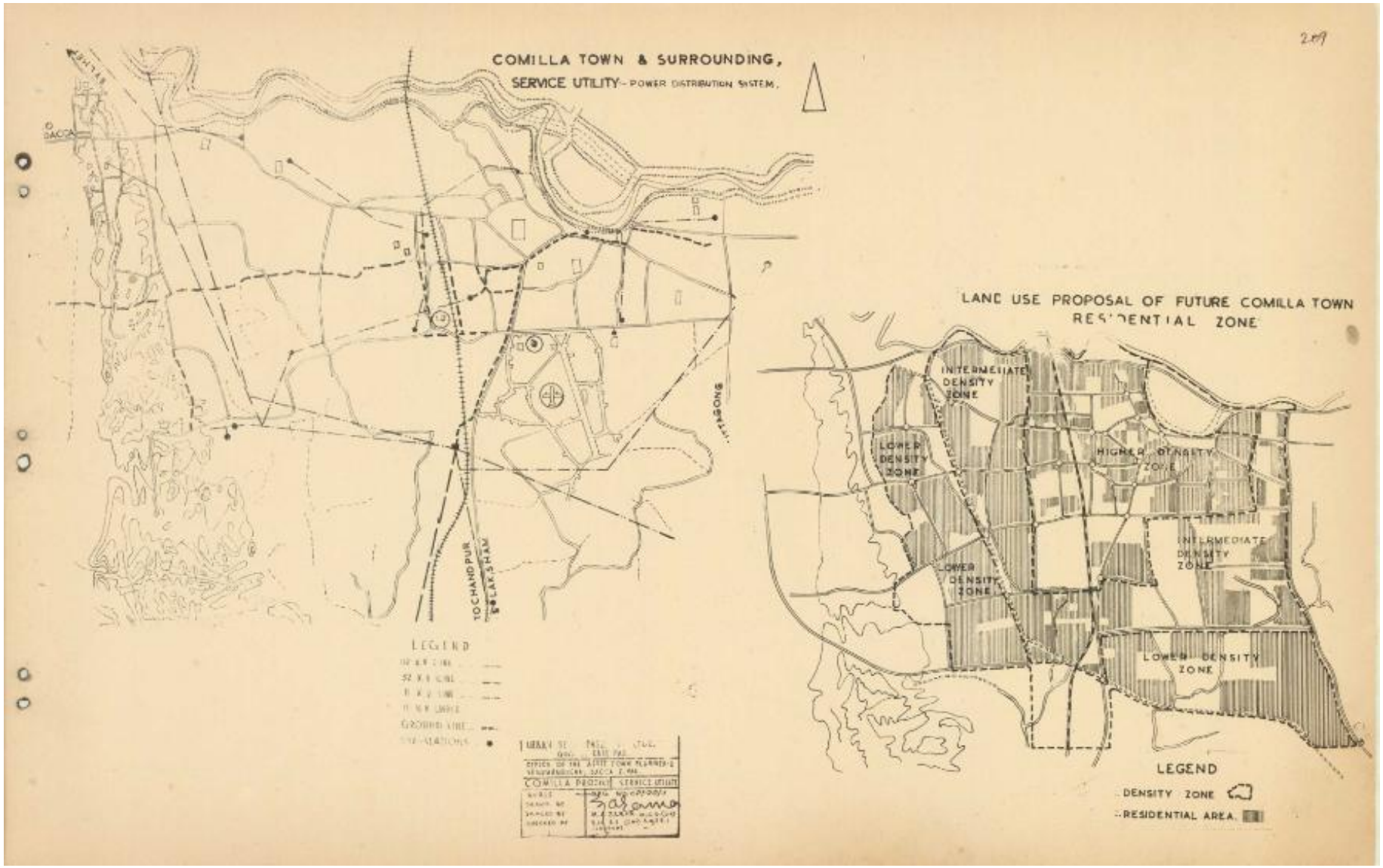
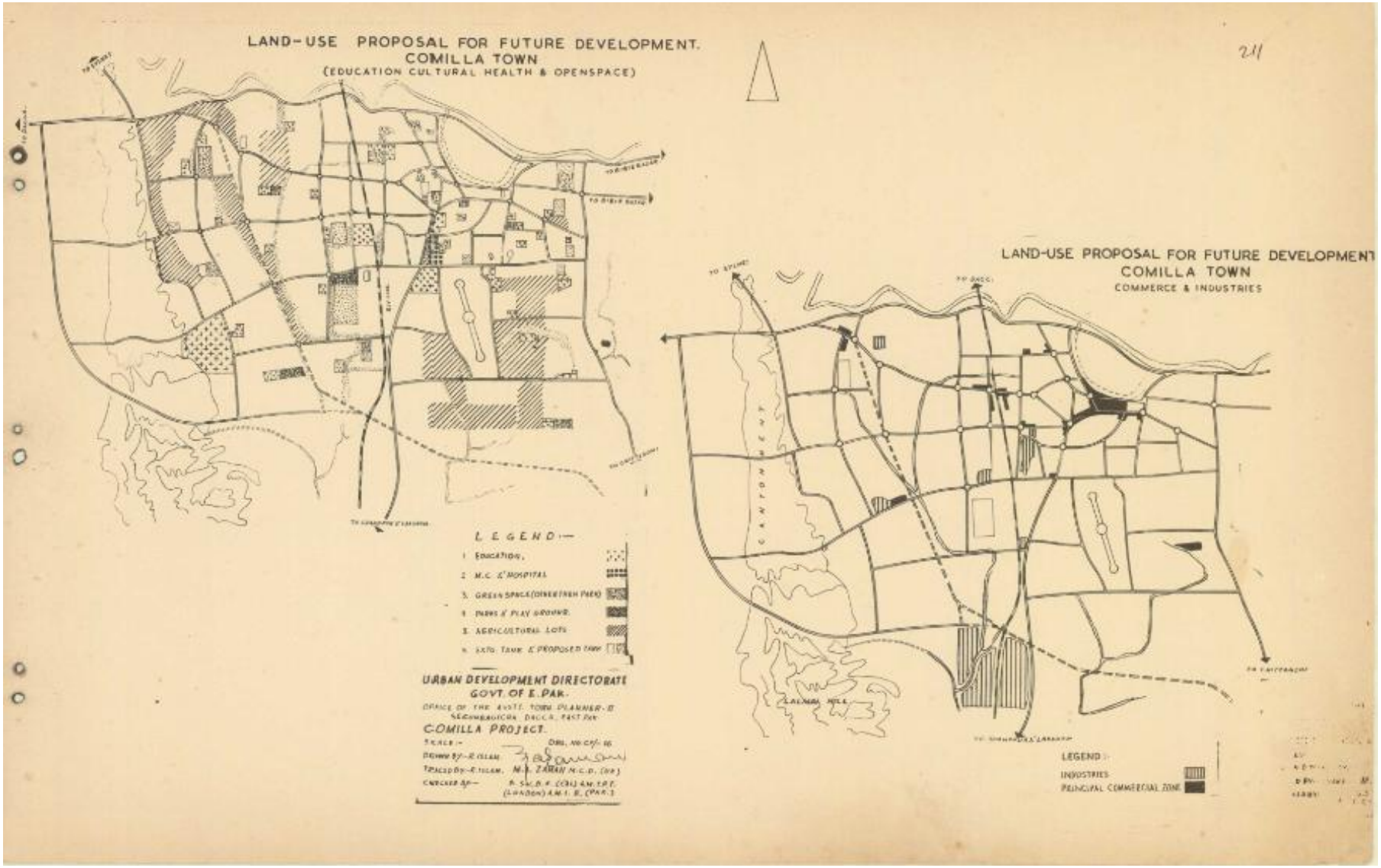


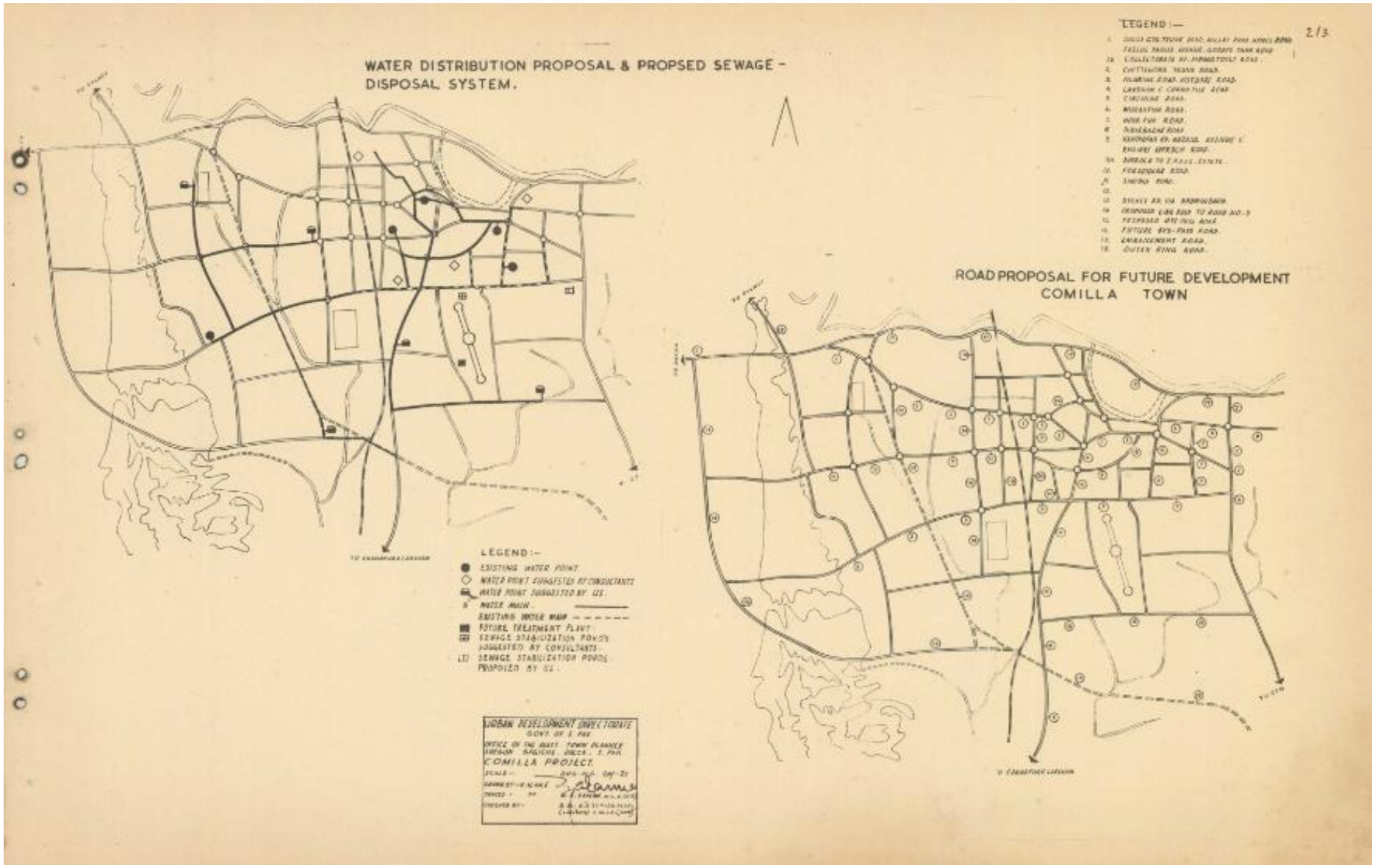


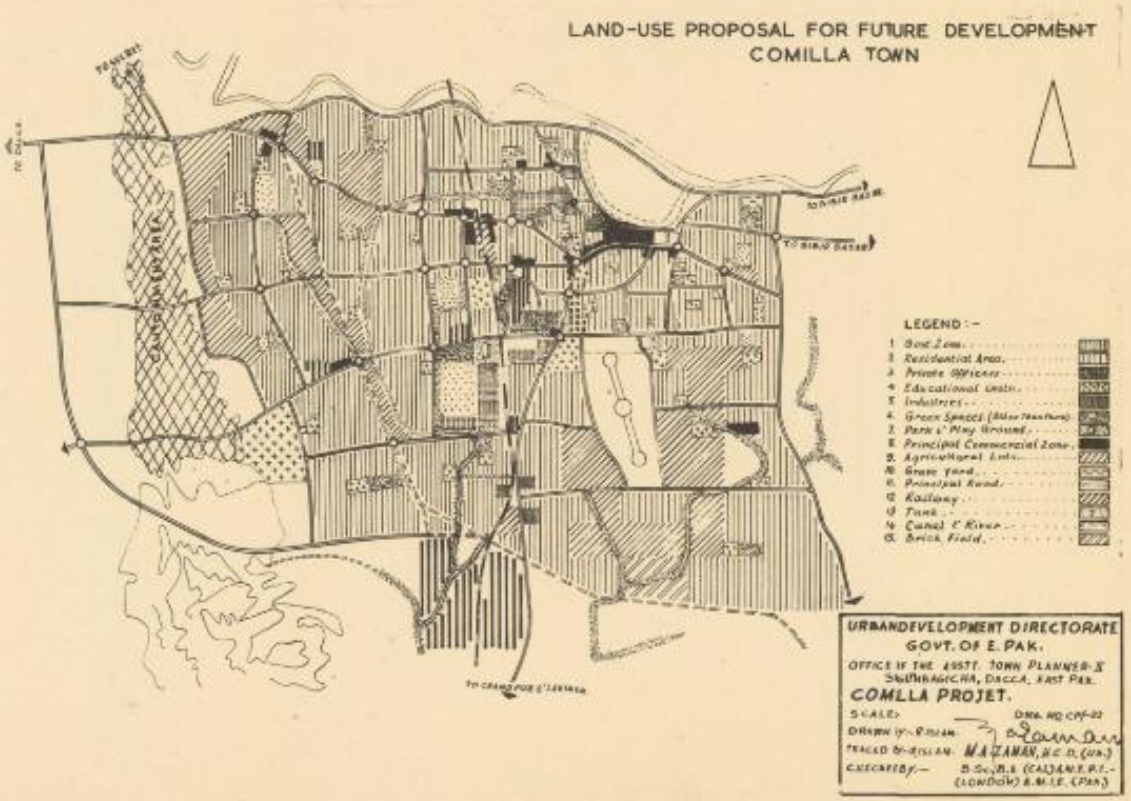


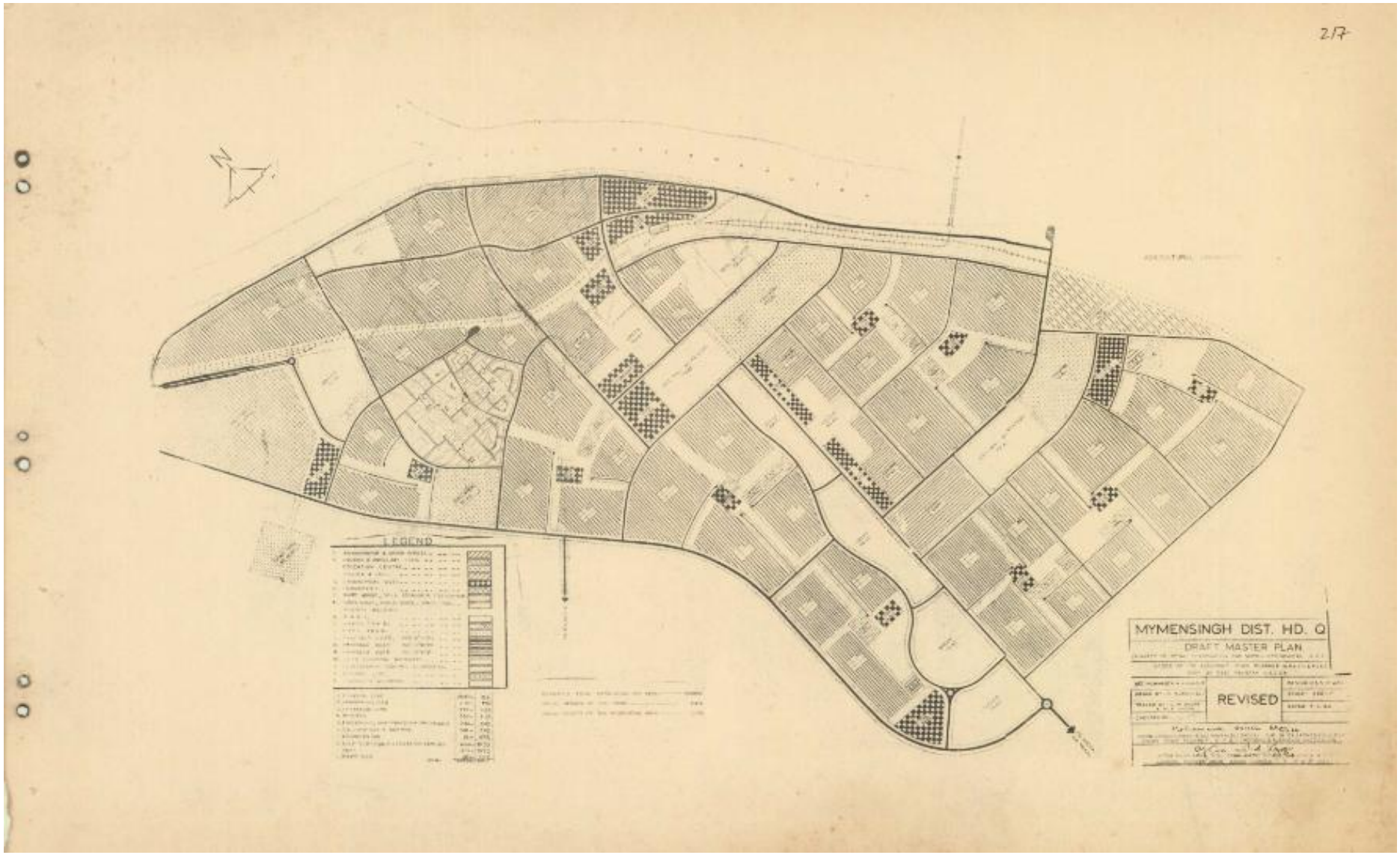


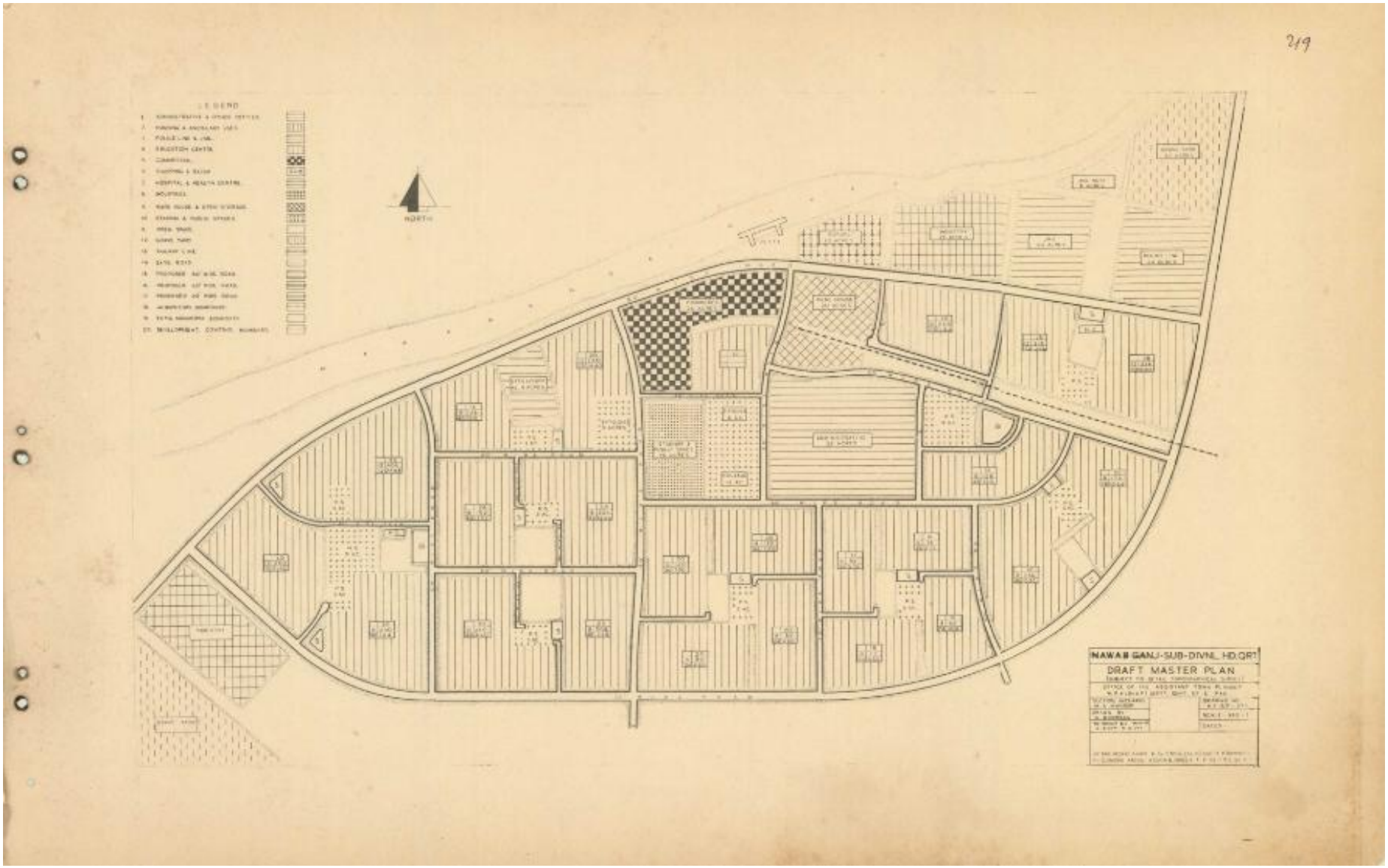


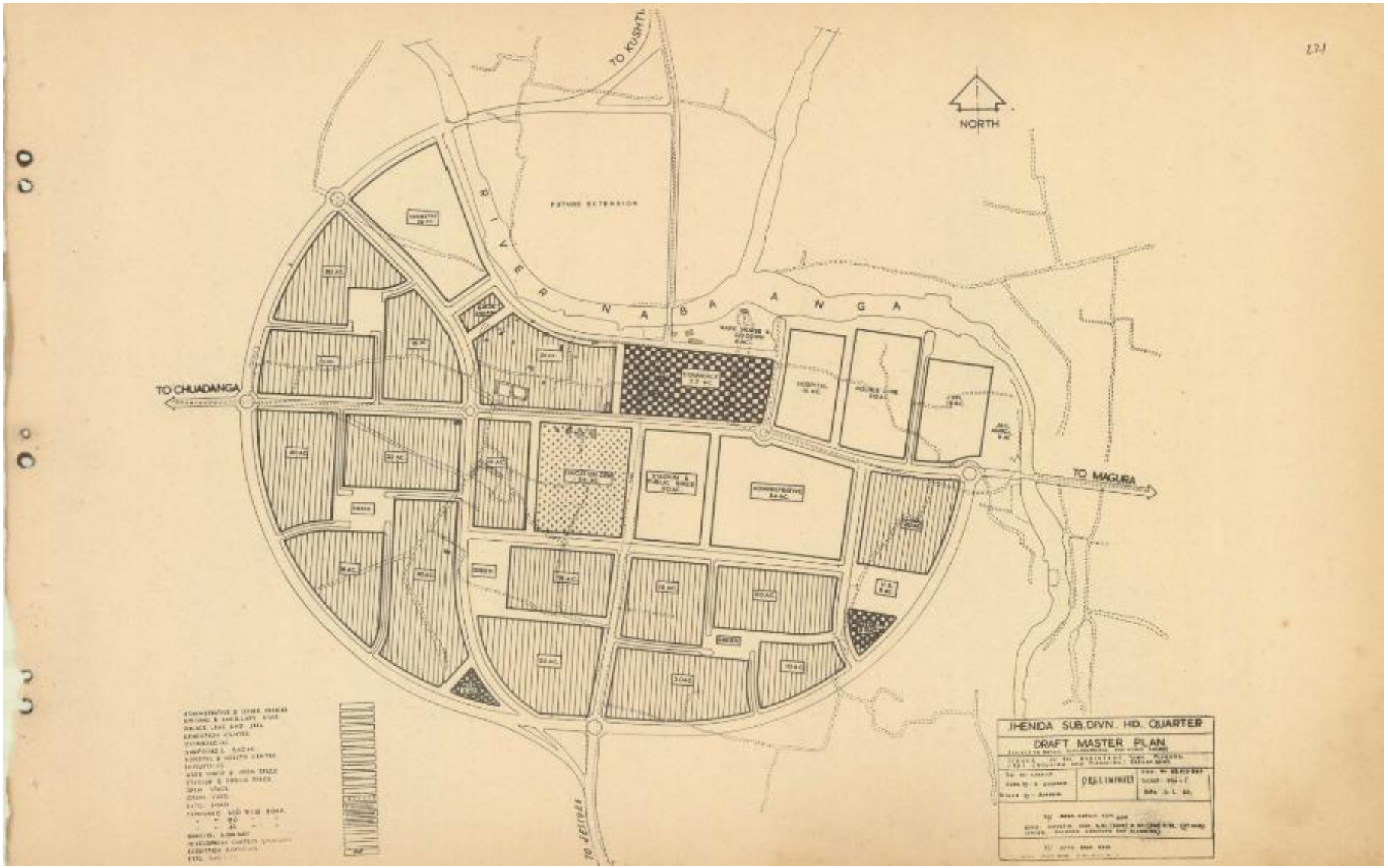


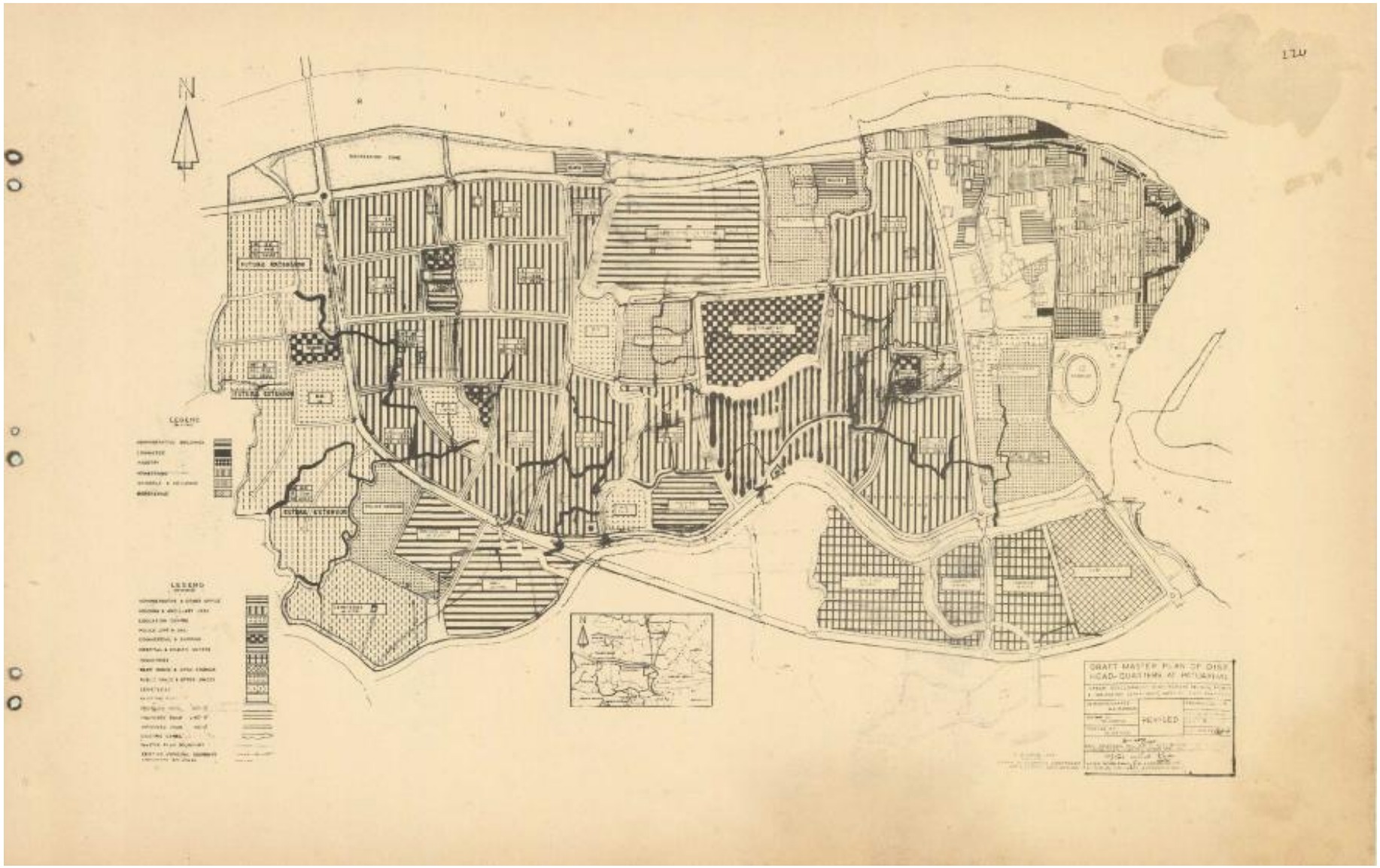


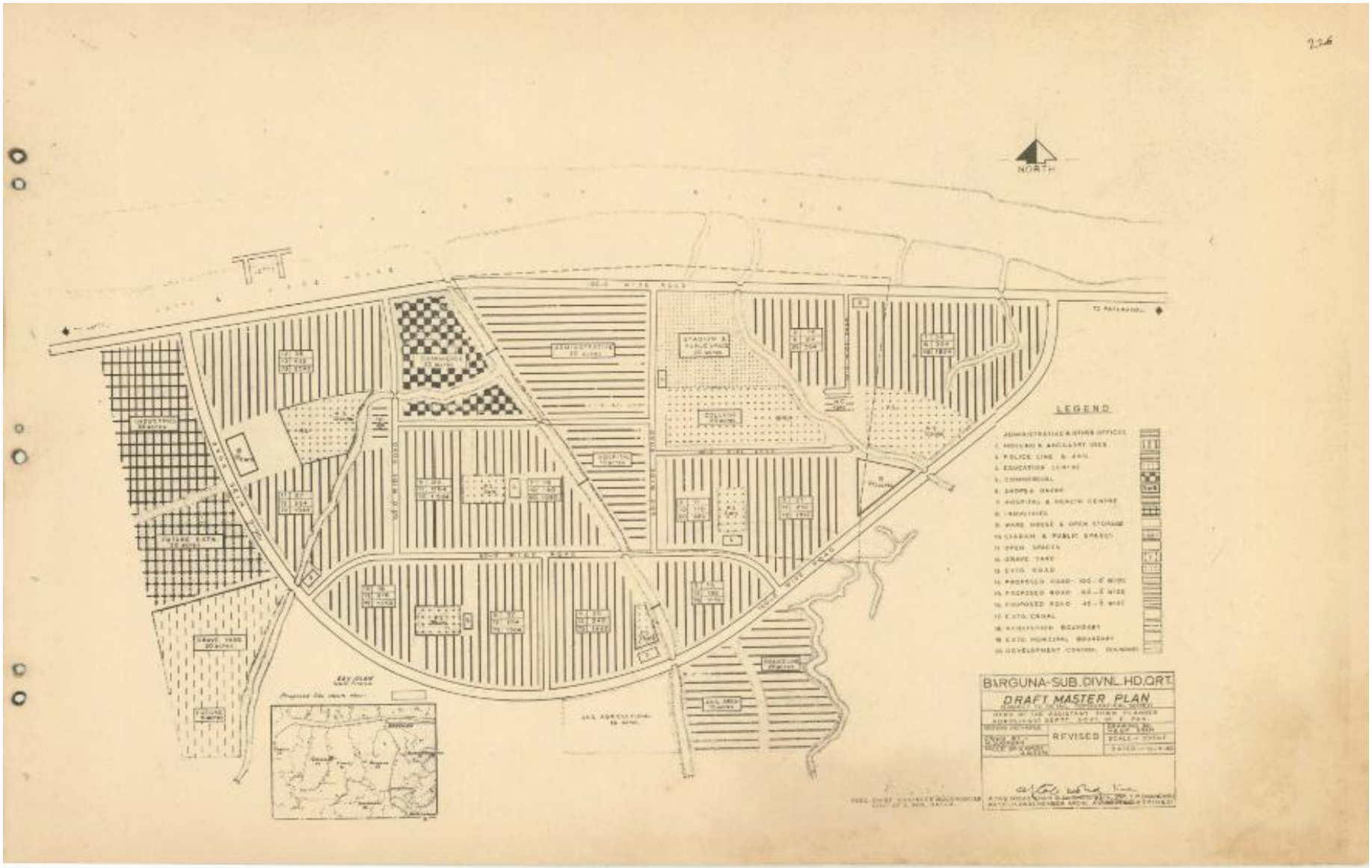


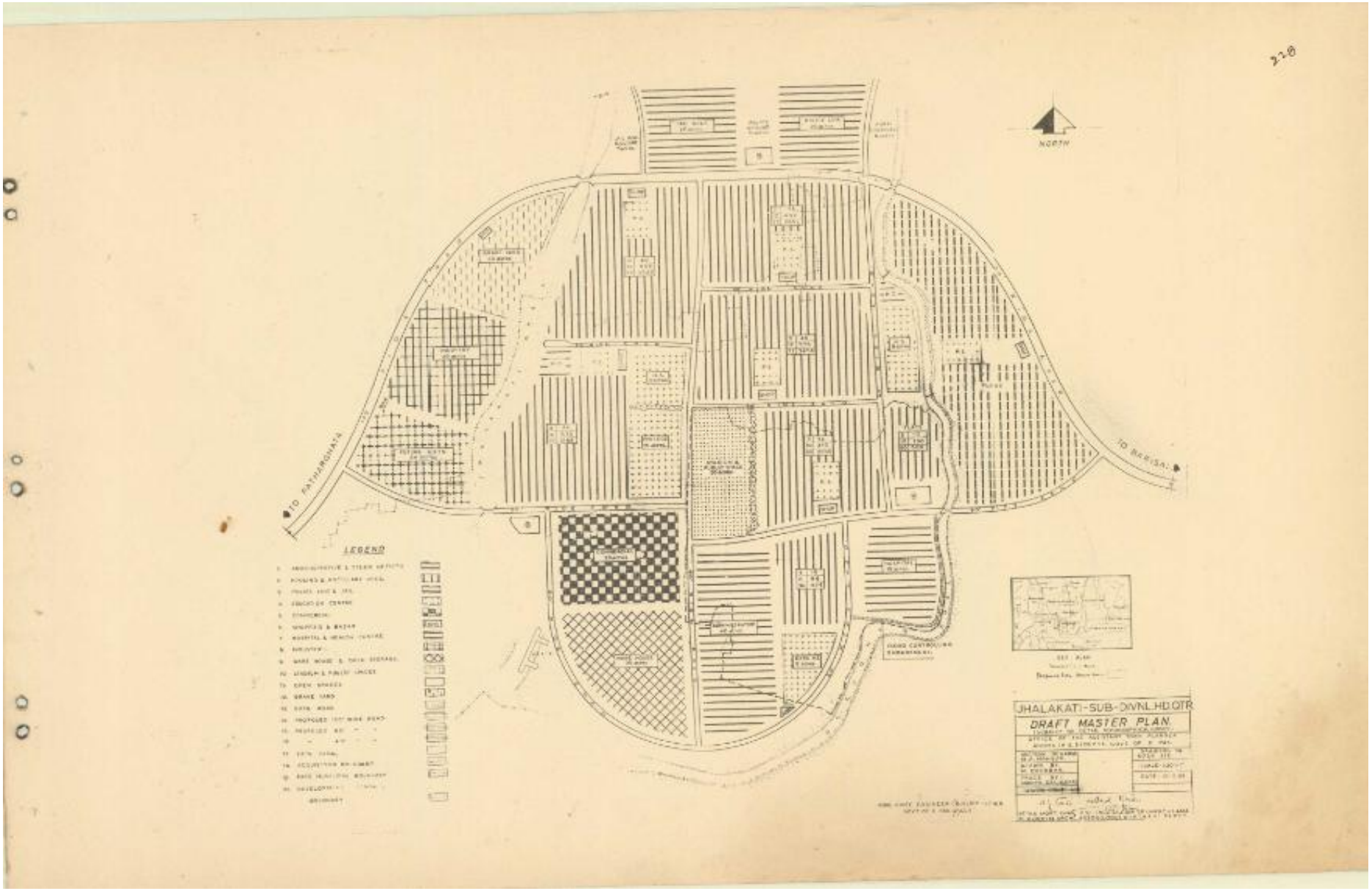


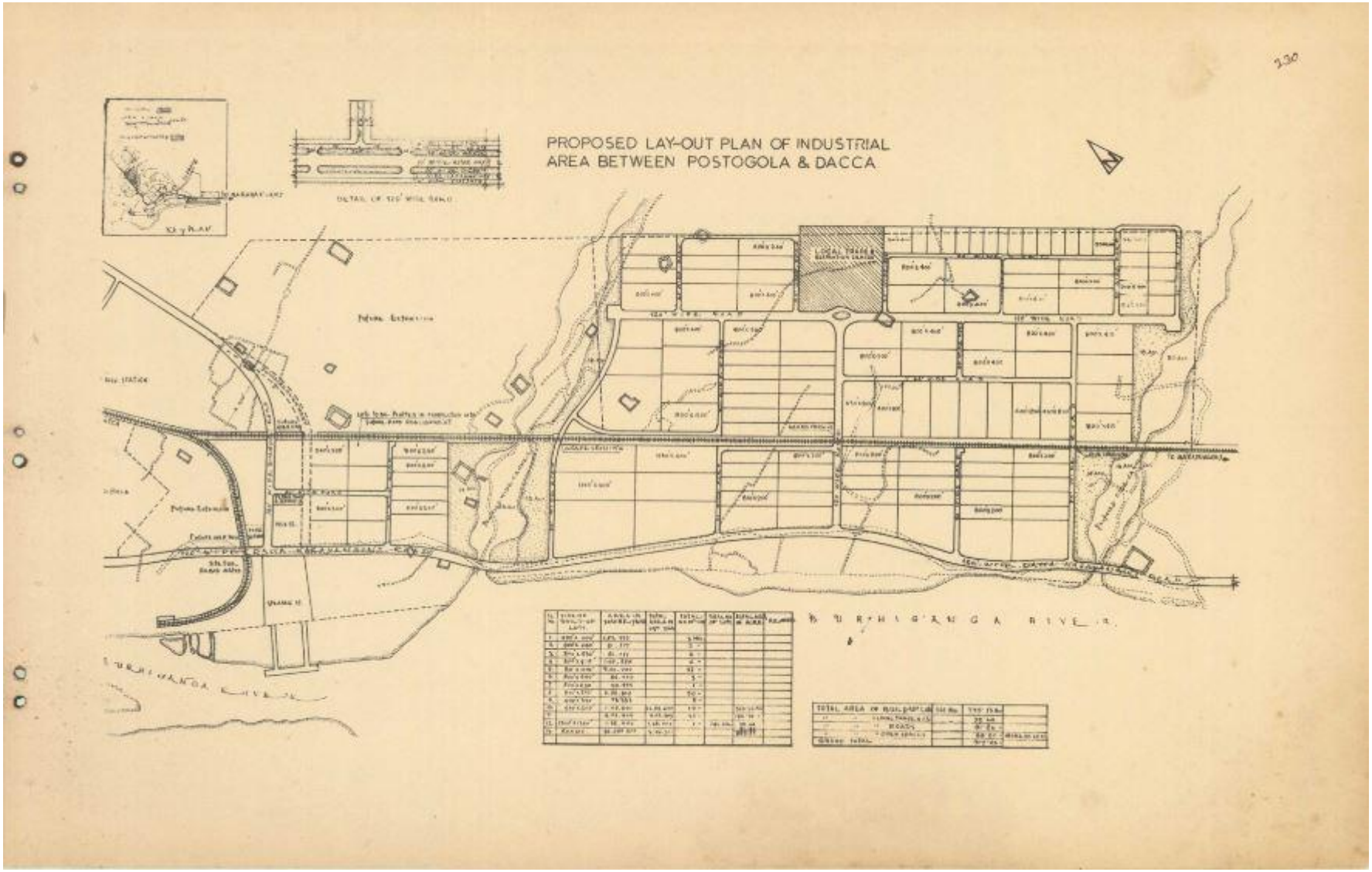


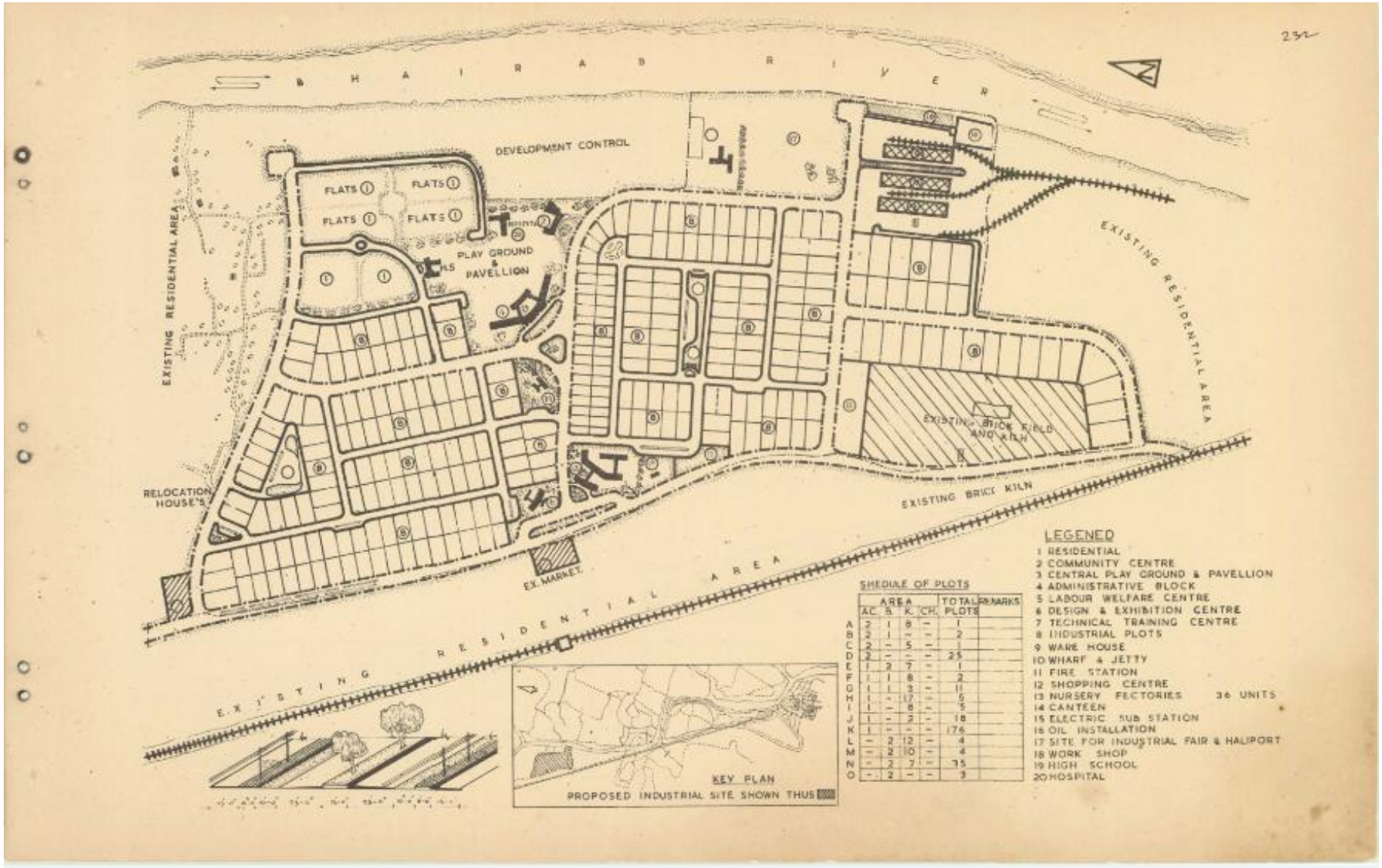








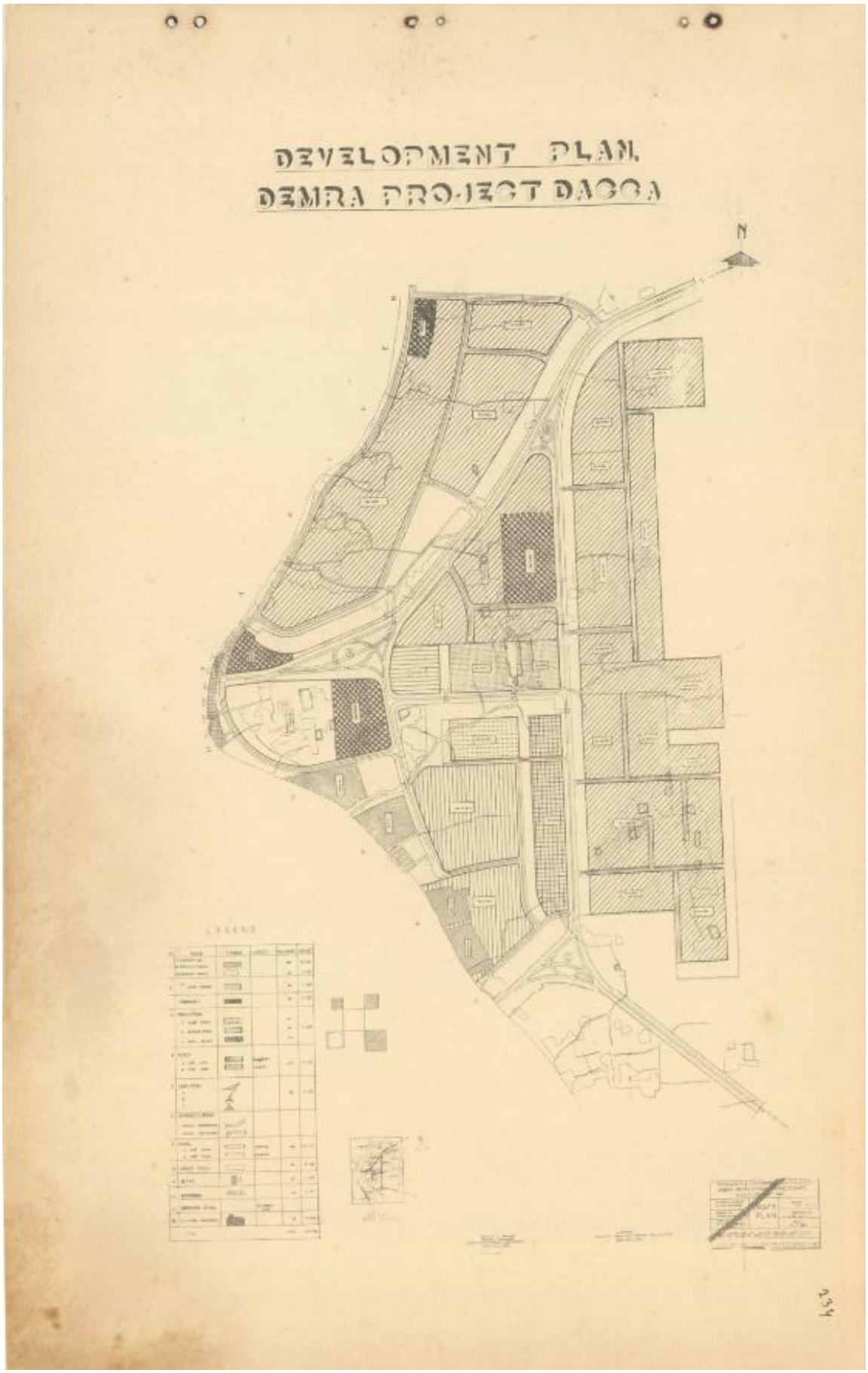


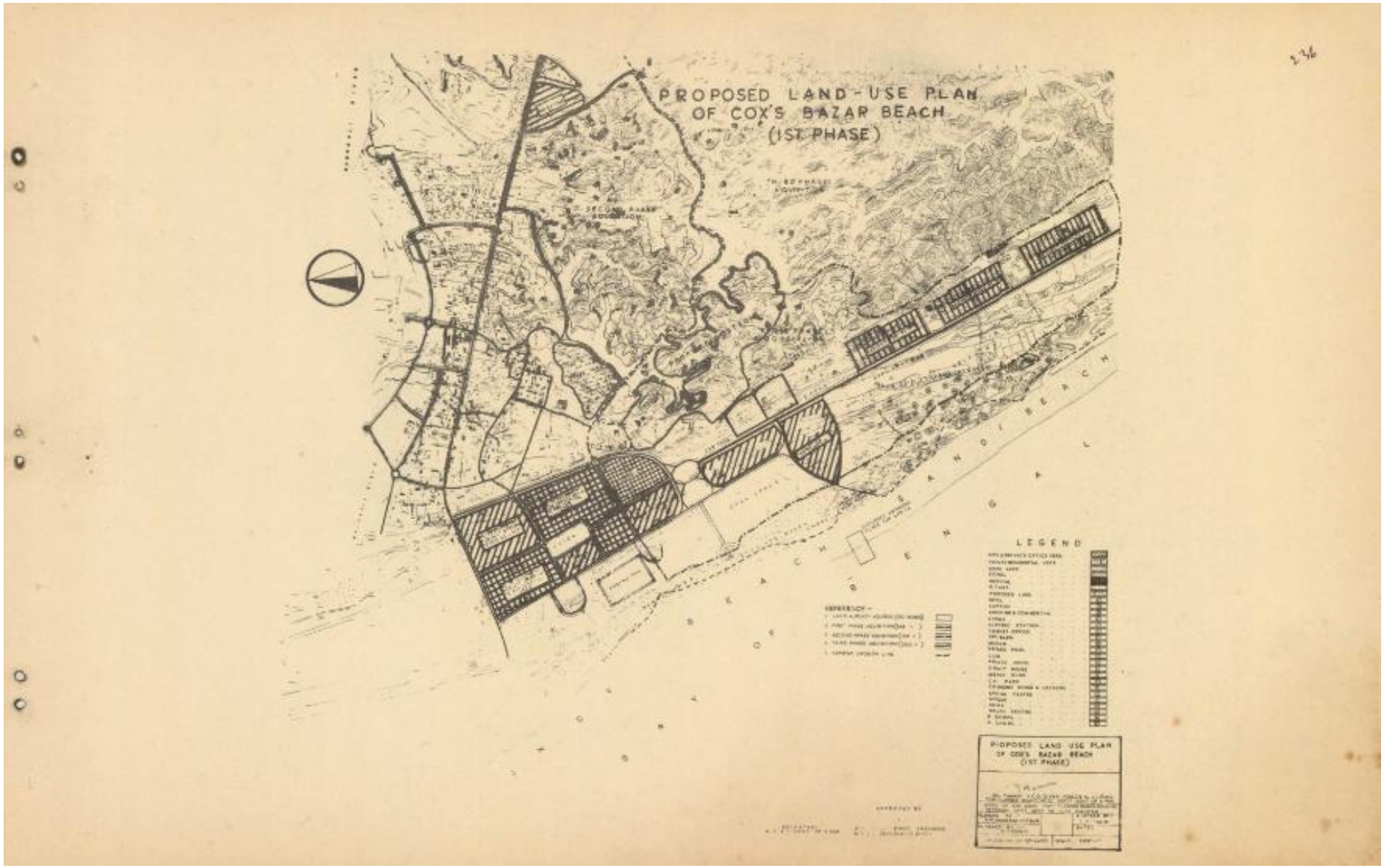


SHEDULE OF PLOTS

	AREA AC.	S.	K.	CH.	TOTAL PLOTS	REMARKS
A	2	1	8	–	1	
B	2	1	–	–	2	
C	2	–	5	–	1	
D	2	–	–	–	25	
E	1	2	7	–	1	
F	1	1	8	–	2	
G	1	1	3	–	11	
H	1	–	17	–	5	
I	1	–	8	–	5	
J	1	–	2	–	18	
K	1	–	–	–	176	
L	–	2	12	–	4	
M	–	2	10	–	4	
N	–	2	7	–	75	
O	–	2	–	–	9	

DEVELOPMENT PLAN
DEMRA PROJECT DACCA

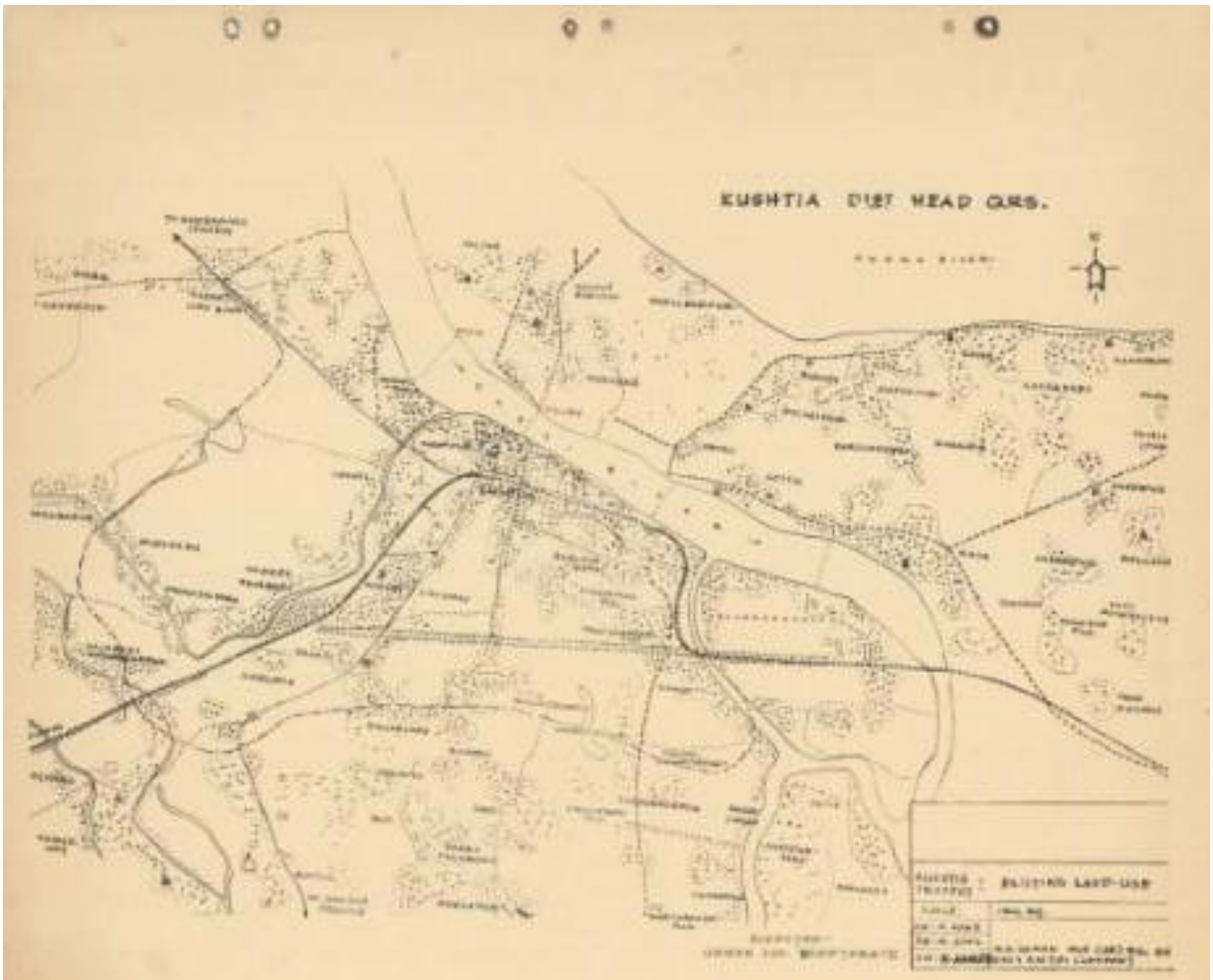


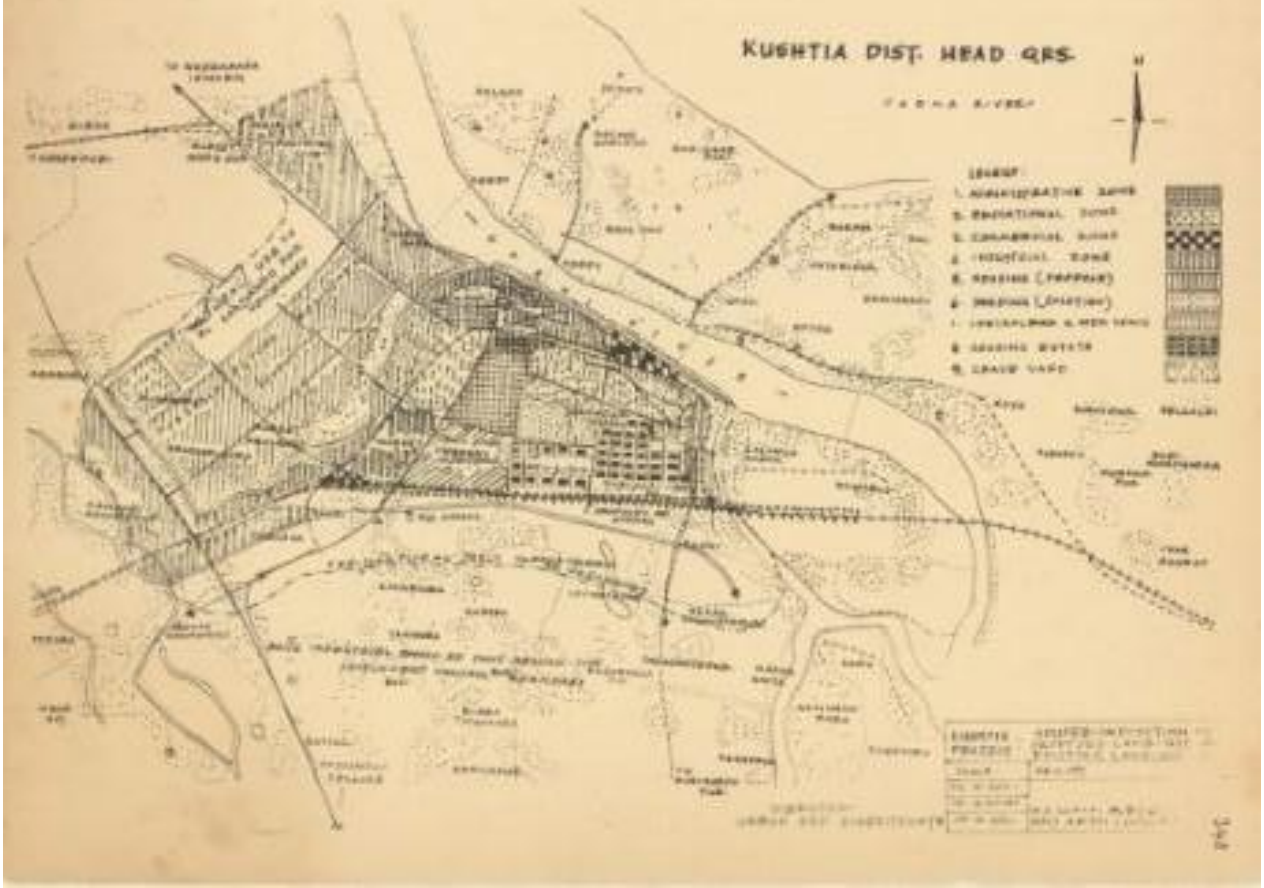


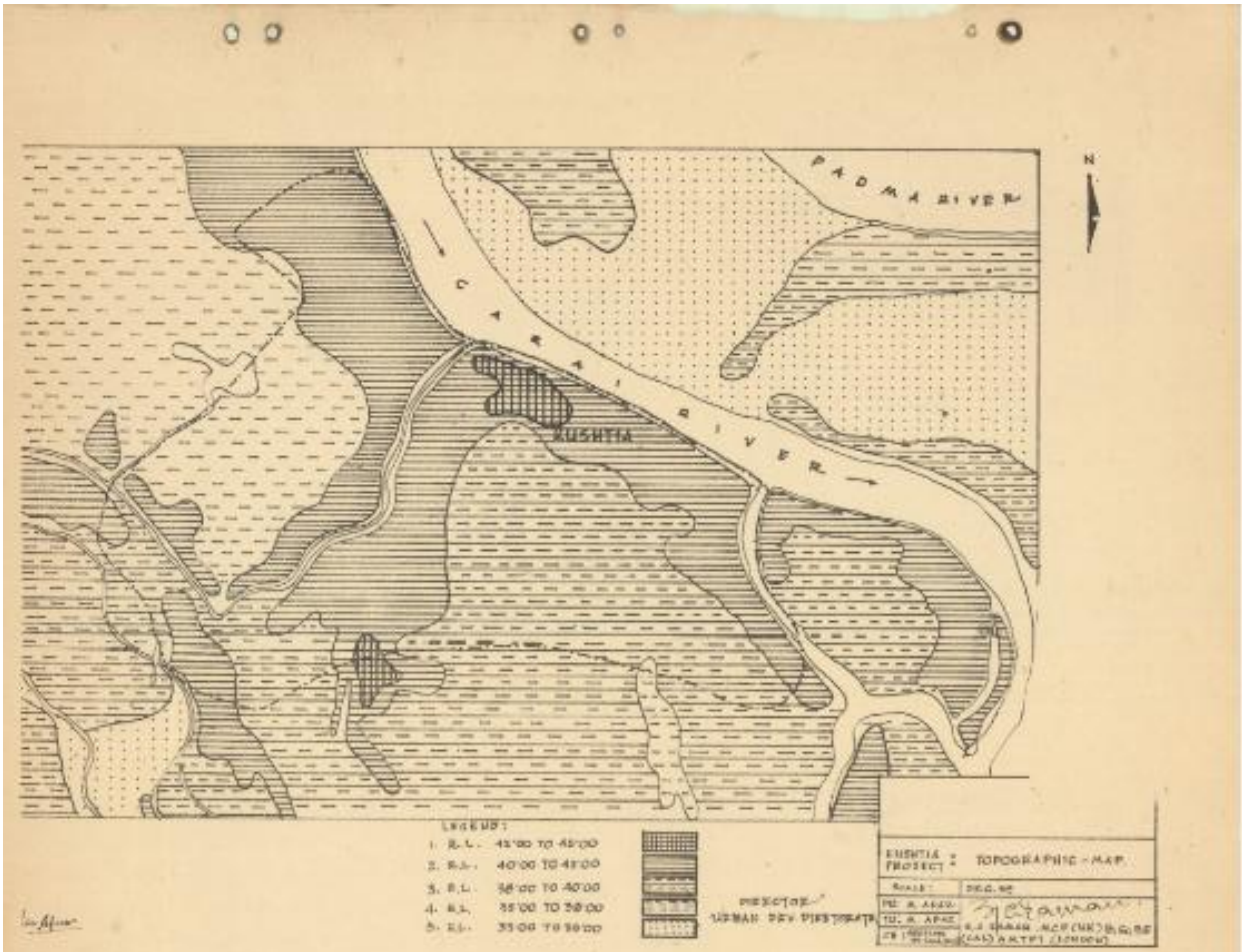
Interim Plans

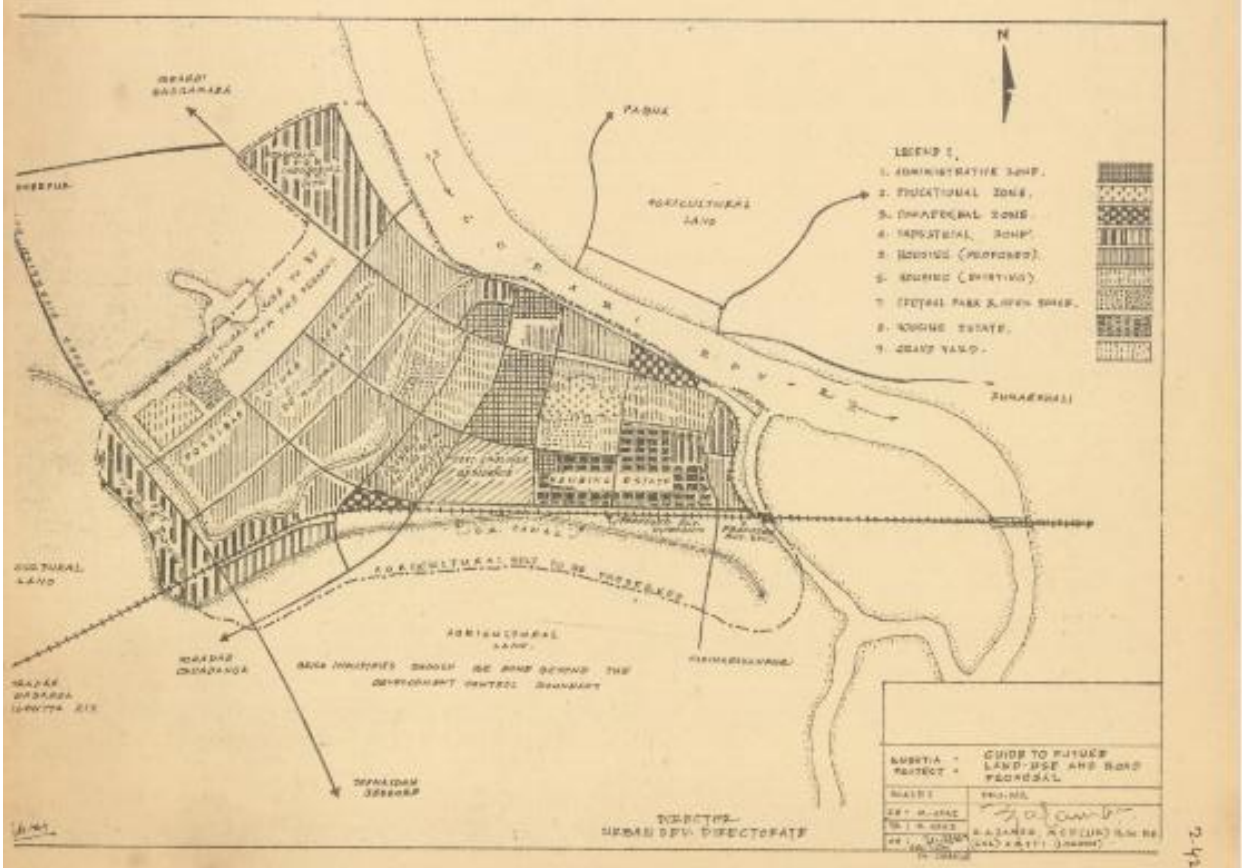
Today the necessity for planning is being recognised. Authorities for whom devlopment plans are being prepared appear to be generally alive to the cause of planned development. The responsibility of planning, range of problems to be considered and the various decisions to be taken are different from what they were before the beginning of this decade.

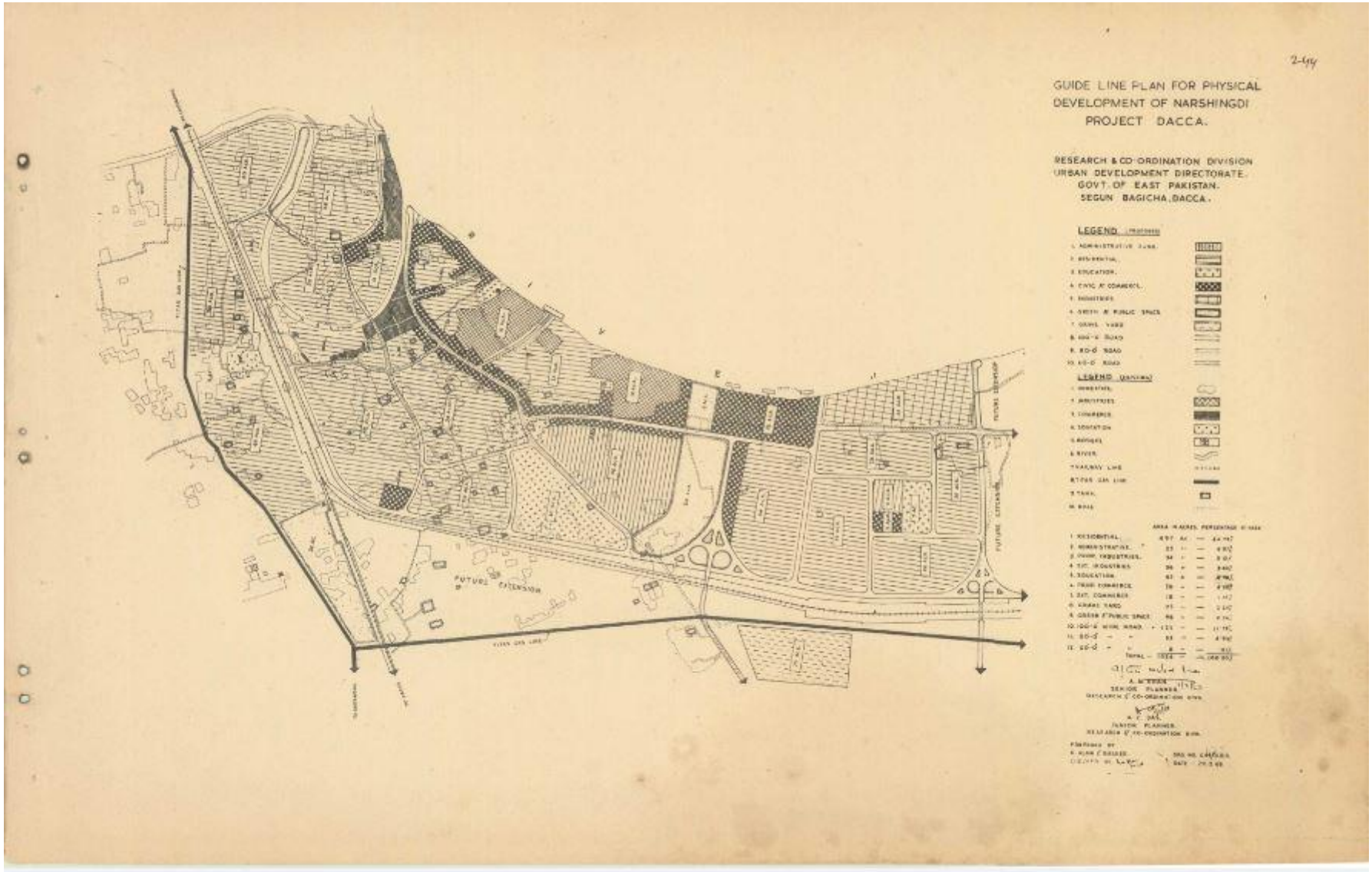
But it is obvious that the whole process from the beginning of survey to the finalisation of a Master Plan with completion of all the formalities will absorb a very considerable time but the physical development of our urban areas cannot wait for such a long period required for a Master Plan to be prepared and finalised. So as an interim measure to direct the growth of our urban areas, a sort of Interim Plan indicating the line of development for certain broad specific uses of land needs to be prepared to minimise the maladjustment of land-use during this period before the final Master Plan is complete. With this end in view we have embarked on the preparation of Interim Development Plan for the municipal areas on a priority basis.











An Approach to Town Development

ABDUL HAMID

Senior Planner, Urban Development Directorate.

For proper development of urban areas the people involved in the process of development, shall have to know the functioning organism of the urban agglomeration thoroughly. The process of knowing can be of two types (i) one can know the town by residing within it and (ii) one can know from the statistical information collected through surveys and presented in the form of maps, charts and accompanying reports.

In the minds of residents the knowledge of the town remains in disorganised form. While for the purpose of planning, development and administration of the town the information should be in systematic and organised form. This organised form can be identified in a series of maps as detailed below :

The Regional Maps ...	1 (1) Land use	... Urban uses of land in relation with agricultural areas.
	2 (2) Soil Quality	... Location of top soil according to degree of fertility.
	3 (3) Tributary	... Extent of area influenced by urban facilities.
	4 (4) Administrative Area.	Extent and type of local Government jurisdictions.
	5 (5) Communications	Net work of regional communications.
The Urban Maps ...	6 (1) Land use	... Distribution of residential, commercial, industrial, etc., uses.
	7 (2) Population living	Distribution of population by place of residence.
	8 (3) Population working.	Distribution of population by place of employment.
	9 (4) Services	... A—Sewers and water mains. B—Gas and power.
	10 (5) Communication	Traffic arteries in relation with local street system.
	11 (6) Public Transportation.	Bus and Tramway routes.
	12 (7) Education	... Location, type and capacity of schools
	13 (8) Recreation	... Location and type of recreational open spaces.
	14 (9) Age of buildings	.. Urban Development by approximate date of construction.
	15(10) Municipal Budget	Income and expenditures by source of revenue.

Advantage of Maps :

Maps of these kinds are primarily useful for Community Planning. But for many other purposes of local administration and physical improvement it is essential that each of the municipalities shall have a series of these maps giving accurate and useful information.

In a series of maps drawn to the same sale a community is seen as a whole—the various services, areas and functions are seen in relationship with one another. Such maps should be kept up-to-date as condition changes, thus presenting a continuous picture of urban development. Each municipal official has personal knowledge of certain aspects of municipal operation but situation constantly arise, at a council meeting or in the Engineer's office, when a problem can be clarified by reference to maps showing relationship between features of different kinds. A problem may arise, for instance, involving the relationship between a water main, a School location and a housing estate.

A precise record of exact location of maps will enable a solution to be worked out rapidly with an immediate view of sewers, traffic control and land use.

It is likely that one series of coloured maps will be useful as an exhibit in the principal municipal office or even in the council chamber. A number of the more cheaply reproduced black and white maps can be made for convenient use of individual members of the municipal organization or for public distribution. The method of making both coloured and black and white maps is fully explained in the following pages.

The adoption of this method of urban mapping employing the recommended symbols, colours and types of base maps, can facilitate urban administration. Accurate comparisons could thus be made between the conditions in various municipalities and so aid in the equitable solution of municipal problems. The adoption of such a uniform method of urban mapping would mark an important step towards the subsequent adoption of consistent methods of planning.

Method of Urban Mapping :

For compiling the Maps mentioned previously huge amount of information is to be collected. This collection is done through a process called Civic Survey. After collecting the information compilation work is done in the office.

There are two systems of map representation, one in colour and one in black and white. The black and white system has been taken to be more useful, because this system lends itself to economical reproduction. If maps are not required for reproduction it is simpler to use the colour system which is both easier to draw and also provides maps which are easier to understand.

Experience has shown that coloured pencils are clean to work with and can be used so that the colouring on maps will conform exactly with the colour standard accepted by city planners.

It is more difficult to work in black and white and obtain exact uniformity with a system of representation requiring shading or "hatching". Each draftsman's hand will give slightly different results.

For this reason the use of a commercial product, "Zip-a-tone" has been suggested, which is in the form of transparent sheets with various patterns of "hatching", these adhesive sheets are easily cut and applied to drawings.

Base Maps :

It is suggested that urban maps should be drawn to the scale of 330 feet to the inch and that regional maps should be either at the scale of one inch to a mile or 4 inches to a mile or 8 inches to a mile, which ever is available But the last one is the most useful one. Base maps of the Region and of the Urban areas should be drawn on tracing linen or a very good grade of tracing paper so that any number of prints can be obtained. Care should be taken to select a material which will not shrink over a period of years and so distort the scale.

On each base map there should be a clearly defined bar-scale and a North point. A space should be provided on which revisions and corrections can be noted and dated.

Prints must be taken from the original base-map drawings. The black line "Ozalid" or O. C. E." processes give prints suitable for colouring. Over a period of time the paper will become yellowish and the lines will fade but this will not affect the applied colour. For black and white maps the "Vandyke" process is very satisfactory for reproduction.

Regional Base-Map :

This map should cover the white area which is judged to be within the influence of urban development. The best basis for this map is the local topographical survey sheet obtainable from the Survey of Pakistan or East Pakistan WAPDA. The scale of these maps are one inch to a mile, 4 inches to a mile and 8 inches to a mile. The base map can be traced from these sheets, omitting all but the essential information.

Urban Base-Map :

This map should cover the area of the municipality and its built-up environs. Experience indicates that a scale of 330 feet to the inch gives the most convenient working sheets, providing for sufficient delineation of streets and services without the sheet becoming too large or too detailed. The Offices of the

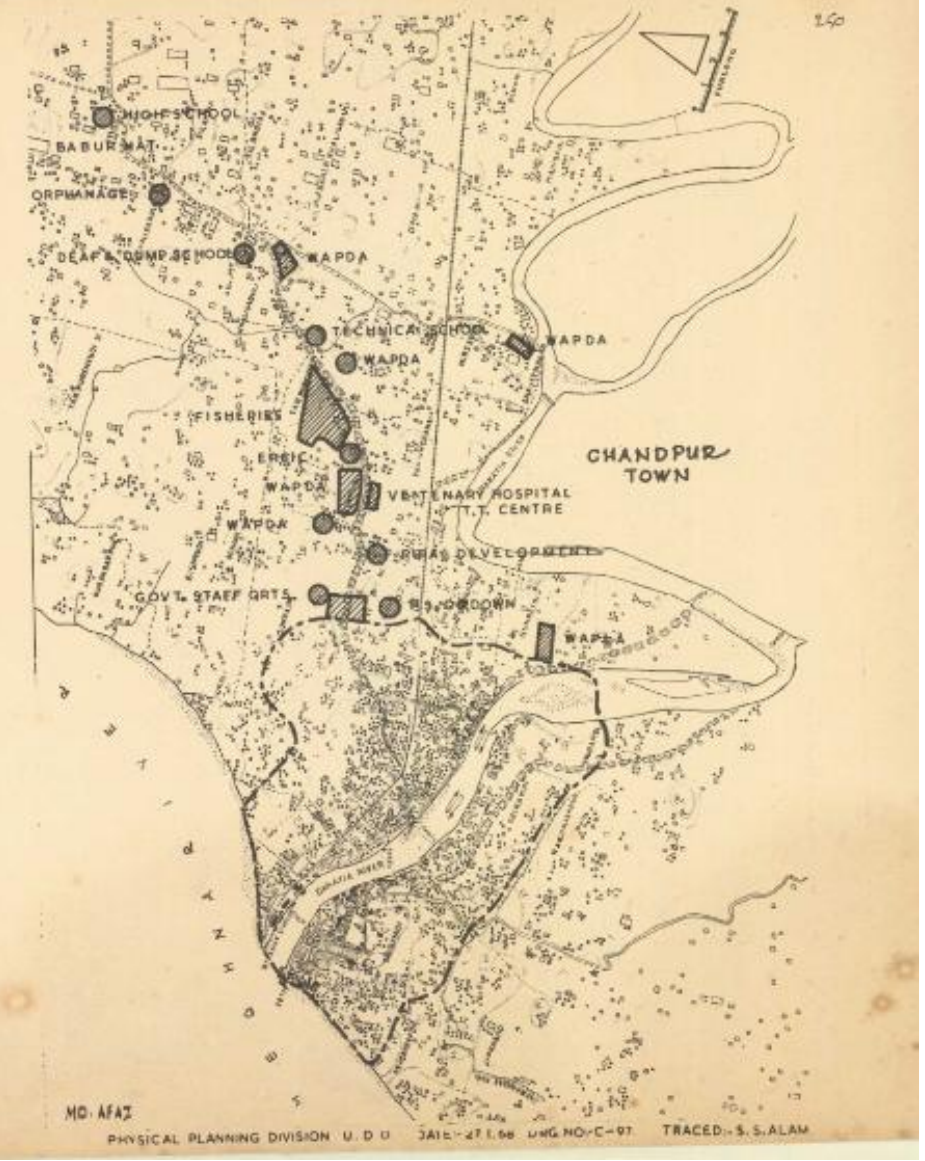
Deputy Commissioner and the Director of Land Records and Surveys are the best sources of these maps. These maps are locally known as Mouza maps or C. S. maps.

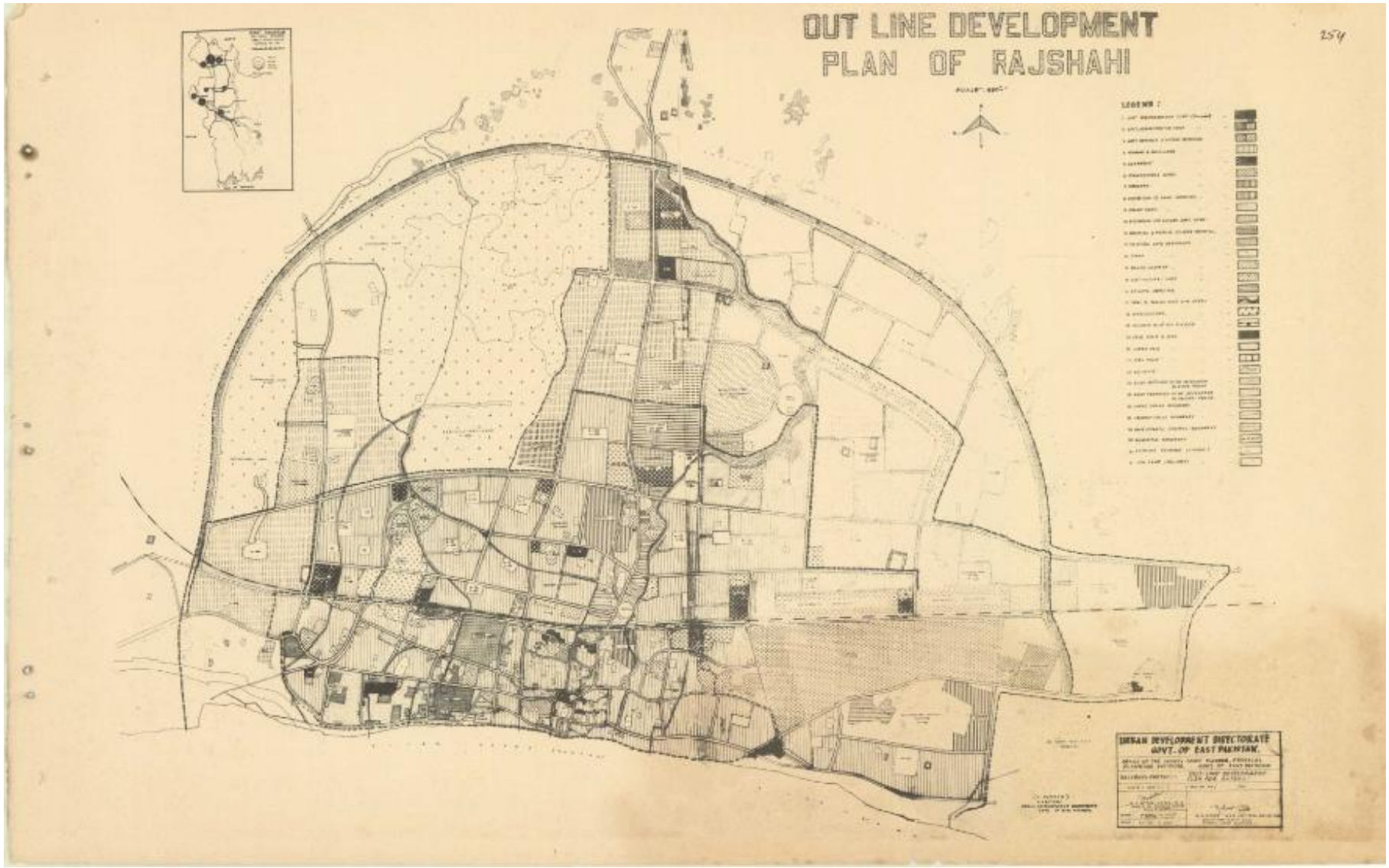
Assembly of Information :

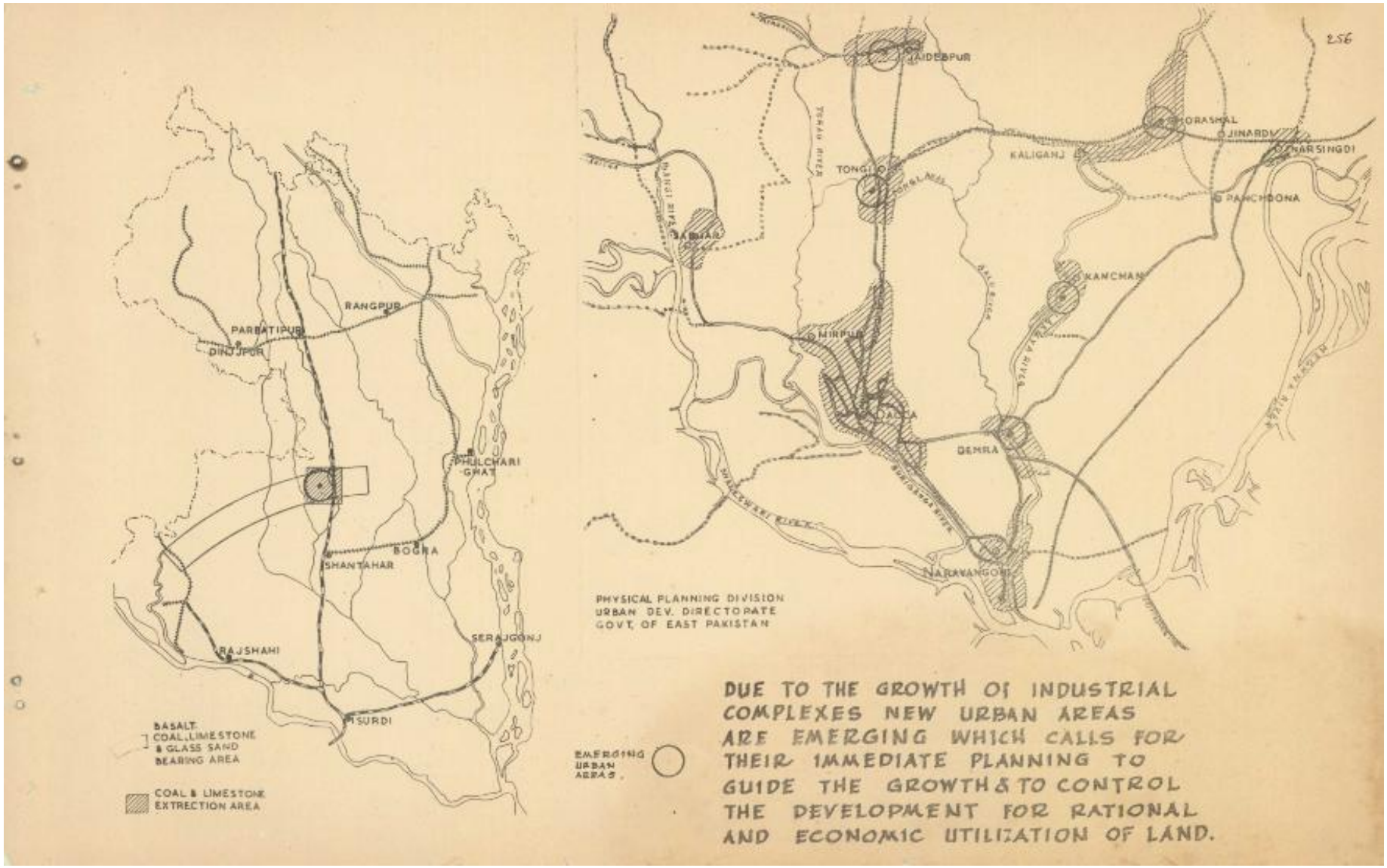
The information to be recorded on the maps are obtainable in most municipalities. Though owing to the diversity of municipal administration, it may be available from different sources.

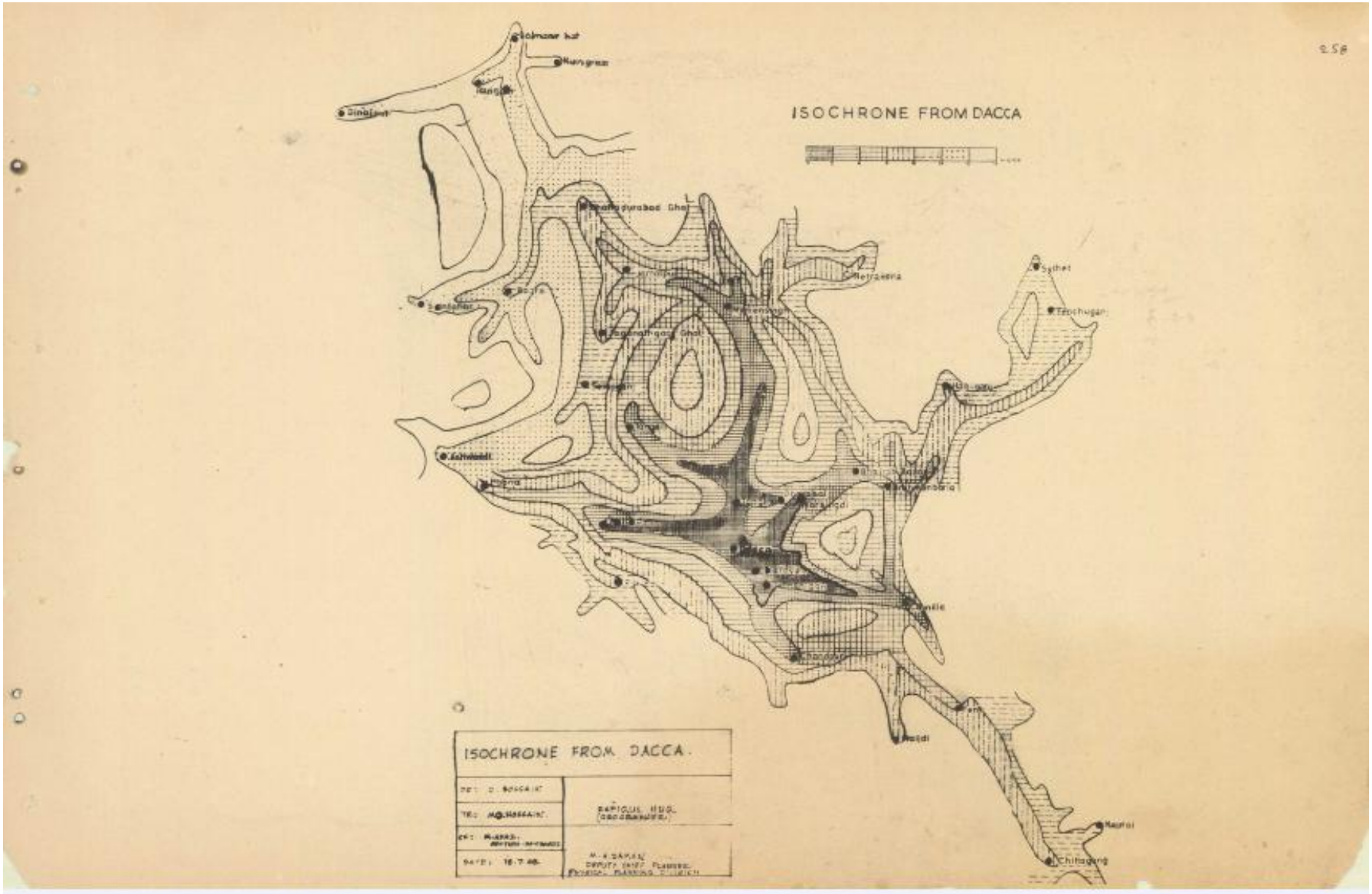
The accuracy of the regional and urban maps depends upon the systematic process by which information is transferred. To simplify this process it is useful to assemble information on work sheet prints of the base-maps and n loose leaf books which could be carefully filed for reference during the mapping process.

MOST OF THE NEW DEVELOPMENTS HAVE TAKEN PLACE BEYOND THE MUNICIPAL BOUNDARY IN A HAPHAZARD MANNER IN A RIBBON FORM. THIS HAS LED NOT ONLY TO UNPLANNED GROWTH OF TOWNS AND IRRATIONAL USE OF LAND BUT ALSO TO THE PROVISION OF UNECONOMIC UTILITY SERVICES.



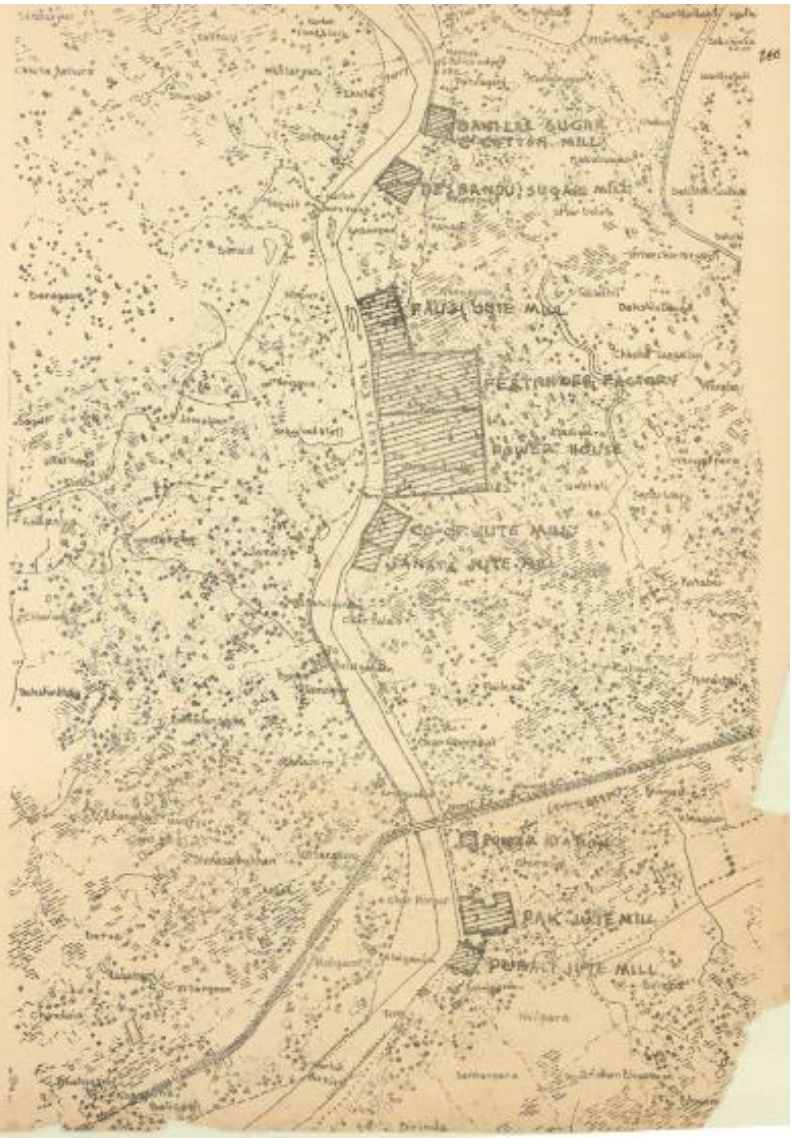


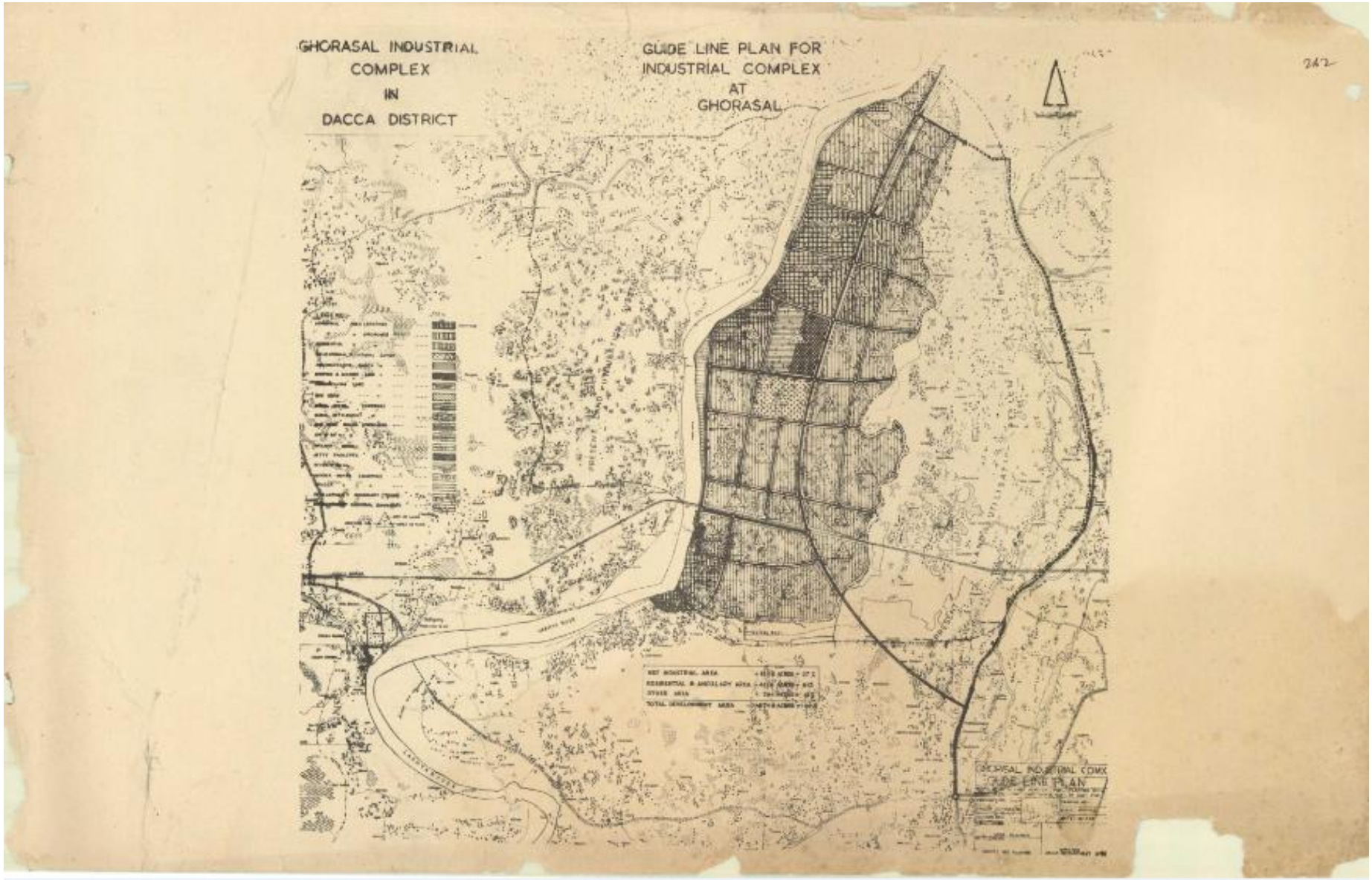




INDUSTRIES ARE GROWING HAPHAZARDLY ALONG THE RIVER BANK UTILIZING UNNECESSARILY LARGE WATER FRONT AND RENDERING THE BACK AND THE ADJACENT AREAS UNSUITABLE FOR FURTHER INDUSTRIAL DEVELOPMENT AND DEPRIVING THE LOCAL PUBLIC OF THE FACILITY OF ACCESS TO THE RIVER. THIS UNPLANNED AND UNCOORDINATED DEVELOPMENT LED TO UNECONOMIC USE OF BUILDABLE LAND SOMETIMES INVOLVING DUPLICATION OF EXPENDITURE TO PROVIDE NECESSARY INFRASTRUCTURE AND RESIDENTIAL AND CIVIC FACILITIES.

WITH A VIEW TO ARREST FURTHER UNPLANNED AND HAPHAZARD EXTENSION OF INDUSTRIES AND TO GUIDE AND TO CONTROL THE DEVELOPMENT OF THE AREA A PLAN HAS BEEN PREPARED.





Welfare of man is the true object of planning; his health, happiness and convenience is the primary aim.