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BLUEPRINT FOR THE DESIGN OF A HUMAN
SETTLEMENT IN AHMEDABAD CITY

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Abstract

Presents a blueprint for developing an integrated human settlement in Ahmedabad City in the stretch of land on the east side of the Sabarmati River admeasuring approximately 3000 acres where the Pirana Sewage Farm is currently located. The design specifications include provisions for constructing nearly one lakh dwellings of which at least half shall be for the benefit of the economically weaker sections. Consequently, this project will be an important step towards the resettlement of slum dwellers in a major segment of the City area and will serve as a preventive measure with regard to the problems of proliferation of slums, substandard living and urban poverty facing Ahmedabad City. Steps are recommended which would provide an opportunity for the continued improvement of the quality of life of the slum population through the creation of income generating possibilities. Recommends that a mix of facilities which together would promote the socio-cultural and aesthetic aspects of the City life, besides making the project economically viable (within a time span of 5-10 years) should be planned in this new settlement. Organizational pre-requisites for the successful implementation of the project are also discussed.

BLUEPRINT FOR THE DESIGN OF A HUMAN SETTLEMENT
IN AHMEDABAD CITY

By

Akkanad M Isaac

The urban agglomeration of Ahmedabad had a population of 17.41 lakhs in 1971 and the decennial growth rate was 44.2%. 28.3% of the Ahmedabad population are workers of which the percentage of female workers is very small. According to the 1961 census there were 19,652 households (0.87 lakhs people) living in slums and this represented 7.58% of the total population. In 1976 when the Ahmedabad Municipal Corporation took a special census of hutment dwellers it was found that approximately 4.38 lakhs people lived in slums (81,255 households). This represented approximately 22% of the city population. In other words, over a period of 15 years the growth of slum population exceeded 400%. Slums are widely distributed in the entire urban area with relative concentration in areas around the city walls. Besides the percentage of workers in the slum population has shown a gradual reduction during the last two decades. To a considerable extent this has led to the spreading of poverty and substandard living in the entire city. The Ahmedabad Municipal Corporation and the Government of Gujarat have been taking a variety of steps to reduce the problems of slums and to ameliorate the condition of the slum dwellers. However, the success so far has been limited. The problems of slums in Ahmedabad can be tackled only by bold and innovative approaches. A search for various

possible alternatives is required for the achievement of this. At the heart of any innovation, one discerns a new idea or a concern. Most often this will mark a departure from a conventional practice and wisdom and so there is a likelihood of an immediate opposition from certain segments of the population. Only through impartial approaches and patient negotiations it is possible to conceive and implement viable programmes.

In this paper we propose to describe an approach which besides attempting to partially tackle the immediate problem of shelter of urban poor in Ahmedabad City recommends measures which would provide an opportunity for the continued improvement of the quality of life of the slum population through the creation of income generating possibilities.

The Ahmedabad Municipal Corporation owns a vast stretch of land on the east side of the Sabarmati River spanning an area from the densely populated Jamalpur to Fatewadi covering approximately 3000 acres. Ahmedabad Municipal Corporation's 84 million gallons per day (MGD) Sewage Plant is located in this area (Exhibit 1). A good percentage of the land in this Farm was used for the cultivation of fodder grass by a group of 140 relatively rich farmers. The semi-processed water discharged from the Sewage Plant was given to the farmers for the fodder grass cultivation; however it was decided to discontinue this arrangement almost two years back since it was feared that the unprocessed water from the Plant might create some health hazards. Currently, the water from the Plant is discharged into the River. Even now there are complaints from the residents of the city who are within a radius of 5 Kms. from this

Plant regarding hazards due to mosquitoes and the prevalence of skin diseases on account of pollution from Sewage discharged water. The lobby of the "rich farmers" is clamouring for the continued supply of sewage water so that they can re-start fodder grass cultivation.

The Gujarat Slum Clearance Board has been aggressively looking for the availability of open vacant land in the City to construct alternate accommodation to the slum dwellers who are living in highly unsatisfactory squalid conditions. The Board considers that if a portion of this land can be obtained for the construction of houses/tenements for the present slum dwellers, it will considerably help to clear the slums from the south eastern part of the city lying outside the walled City between the Sabarmati River on the west side and the Railway Yard on the east. This area is spotted with a large number of slums with high population density. The following 4 slums constitute only approximately 60% of the slum population in that area:

	<u>Slums</u>	<u>Population</u>
1 Jamalpur Town Planning Scheme (TPS) 1	3189	15841
2 Kankaria TPS 2	1295	7160
3 Baherampura TPS 13	3122	15201
4 Dani Limda	<u>1813</u>	<u>8728</u>
	<u>9419</u>	<u>46930</u>

The Gujarat Slum Clearance Board has already requested Ahmedabad Municipal Corporation to allot approximately 500 acres of land to the Board so that it can start housing construction activities for the poor slum dwellers. It is the view of the Board that this arrangement will directly benefit the Municipal Corporation since besides clearing unhygienic slums from a major segment of the City, it would open ways

for developing an important City area whose potentials have not been fully exploited so far. It is suggested that this proposal would be viewed in the context of a total urban perspective and it is the purpose of this note to make some tentative suggestions. There are two alternate ways to evaluate the situation: 1. on the assumption that the Sewage Plant will continue to exist in the same area; and 2. on the premise that the Sewage Plant should be moved out of this area, possibly to Varzan which is far from the City.

Certain prerequisites for developing this farm into a viable human settlement are indicated below:

1. The Jamalpur Road which links this Farm to the main arteries of the City has low capacity and it needs strengthening. In the Town Planning Schemes (TPS) of Ahmedabad Municipal Corporation there is a proposal to widen the road. The possibility of constructing an additional link road should also be considered.
2. There is no technical reason why approximately 3000 acres of precious land be kept idle in the surroundings of a Sewage Plant. Even in the present level of technology of sewage purification it is certainly possible to carry the entire sewage water in closed conduits to areas outside the city limit for discharge. Although this would involve additional investment (the City has already planned to do this) unless this is done, the health of the City population will be affected and so the City should initiate immediate action to achieve this basic public health requirement. For the time being it is assumed that only a maximum of 100 acres will be reserved as "the adjacent area of the Sewage Plant".

3. Out of a total of 3000 acres, approximately 1500 acres may be earmarked primarily for residential purposes. After providing sufficient space for roads, parks, etc., approximately 1000 acres will be available for building construction. If we consider a density of 100 housing units per acre, it is possible to accommodate one lakh housing units in this area. It is desirable that 50% of the housing units are earmarked for the benefit of economically weaker sections including slum dwellers. The remaining land earmarked for housing may be used for the construction of Lower Income Group, Middle Income Group and Higher Income Group houses. This strategy will lead to the development of an integrated housing colony where people with different income levels co-reside and create a "natural human settlement". This will also enhance the employment opportunities for women from economically weaker sections.

4. Approximately 200-300 acres covering the areas of Fatewadi, Gaspur, etc., may be earmarked for the development of a large industrial estate primarily for small scale industries, handlooms and khadi industries. Besides, 200 acres may be allotted for Poultry, Dairying etc. In other words, what is recommended is to reserve a total of 400 acres for economic activities which would create jobs, primarily for a good percentage of people belonging to the economically weaker sections living in the same settlement.

5. Approximately 700 acres may be reserved for recreational facilities, parks, forests, etc. It is considered that the area adjacent to Shawadi will eminently suit for this. This area should comprise of the following:

a. A very large children's park (modelled after Walt Disney land in United States); b. A forest (Ahmedabad Municipal Corporation has approved plans to develop a forest in this areas); and c. A large park. As a result of the commissioning of the Vasana barrage a lake will come into existence in the area on the west side of the Farm. Therefore, by combining the lake, the forest, the park and the children's land, the entire area can possibly be developed into a major tourist attraction.

6. The proposals given above will induce the development of a number of commercial facilities, including hotels, a market, etc. The market value of the land would certainly increase as a result of the developmental efforts. Plans should also be made to start a number of Schools and atleast one College in the area earmarked for the residential purposes. Again it is necessary to make a provision for a large Municipal Dispensary/Hospital and a Cinema theatre. 300 acres may be reserved for the commercial and social facilities.

The basic idea suggested in the plan is to envision an integrated human settlement which incorporates atleast the minimal required social facilities for the population. It will definitely improve the quality of the environment. The employment potential for the people in the settlement will be augmented when the industrial estate idea gets implemented. The mobility of the settlement population will be two directional — towards the Jamalpur area for employment and other facilities of the existing City and towards the Fatewadi area for employment in the industrial estate recommended and for social facilities

that would be created within the new settlement. The criterion used to allocate land for various purposes is judgmental and basically involves the following concepts: maximise the number of housing units in this area subject to the condition that the settlement is self-contained and the allocation of land for various activities is mutually consistent; besides, the project cost should be recoverable within a time span of 5-10 years.

An area of approximately 300 acres on the west side of the River covering Gaspur, Shahwadi, etc., also belongs to the Municipal Corporation. In fact this area is just separated from the Farm by the River. It is recommended that this area should also be considered as part of the total settlement while designing strategies for development. Part of the Dairy, Poultry and small scale industry establishment may be located in this area. This area should also function as a link (buffer) between the rural and urban areas adjacent to the proposed settlement.

The Vasana area is fast developing. The Vasana bridge (Sastri bridge) connects the areas on the east and west sides of Sabarmati in the vicinity of the Sewage Farm. Besides, vast areas of vacant land (partly owned by the Government) are available near Vasana which can be subsequently acquired and integrated with this project. Already private investors have started building a large number of houses in and around Vasana. The transportation facility currently available in this area (Sarkhej Road; Railway line leading from Sarkhej to Vejalpur, etc.) is good and there is potential for developing such facilities

in future. In fact, within the next 5 years it is desirable to develop a Railway link line from Vejalpur to Vatwa (circular Railway line). The investment required for developing this Railway line can most probably be realised from the additional returns that would accrue from the development of the entire belt. Between Sarkhej and Vejalpur somewhere near Shahwadi, it is desirable to have a Railway Station, so that the potential for economic activity in this region can be enhanced.

Implementational Aspects

The following approach is recommended for evaluating the appropriateness of the proposal and to develop proper machinery for the implementation of the total project:

1. A meeting of the Minister of Planning, Housing, Industries, Chairmen of the Slum Clearance Board, Gujarat Housing Board, Gujarat Industrial Development Corporation, Gujarat Small Scale Industries Corporation, Gujarat Industrial Investment Corporation, Secretaries of the Department of Panchayat, Housing & Urban Development, Industries, Finance, General Administration and Planning, Chief Town Planner, Mayor of Ahmedabad, Municipal Commissioner, Ahmedabad Municipal Corporation, Chief Executive, Ahmedabad Urban Development Authority, etc., should be held to consider the viability of the basic plan. Prior to this meeting, Urban Development Authority, Ahmedabad in consultation with Ahmedabad Municipal Corporation and Town Development Department should develop a background paper (in the nature of a cost-benefit analysis) which defines the total resource requirements and the social and economic benefits that would

accrue from this project. It should also specify a time horizon by which the entire development can take place.

2. After broadly accepting the concept of integrated development of the settlement, it is necessary to prioritise the commencement of activities and on that basis land should be allocated to different agencies with broad guidelines regarding the execution of specific projects by them. For example, if the recommended high level meeting is convened without much delay, within a period of 3-6 months it might be possible to allocate land to individual agencies with specific mandates to plan and develop their activities consistent with the broad guidelines for the development of the total settlement.

In a major project of this type, it is necessary that multiple agencies work together in a spirit of co-ordination and common perspective. This project should provide an excellent opportunity for various agencies (including non-governmental) engaged in the development of social projects to co-ordinate their activities and contribute to the balanced development of the City. It will facilitate the eradication of slums from a major segment of the City. It will solve, atleast to a limited extent, the critical housing shortage position of the City. The additional investment required by way of transportation facilities will be within reasonable economic limits when we balance against the benefits that would accrue from the project. Approximately 17 lakhs cubic feet per month of cooking gas from the Sewage Plant is at present

let off since it is not economical to carry it for use under the present conditions. If a residential colony comes adjacent to the Plant, it is conceivable that the gas may be sent by pipelines for the direct consumption of the residents in the area.

Even if it is not possible at present to carry the discharged sewage water in closed conduits, most of the noxious effects may be contained by allowing the effluents to pass through closed drains after adding necessary chemicals for purification. In other words, there is no technical reason for not allowing a residential colony in the environs of a Sewage Plant. It is desirable that the proposed human settlement is given a name which is not reminiscent of the "Sewage" association. In fact what is proposed is to develop a "posh balanced human settlement" which would before long be humming with economic activities.

Land has always been a political issue. Same is the case with most strategies for clearing and improving slums. However if a viable human settlement project should get established, it is necessary that a spirit of mission and common cause is developed amongst the various political parties and social agencies so that an objective assessment can be made and a viable project implemented without loss of time. It has to be stressed that inadequacy of residential accommodation is currently creating considerable social tensions in Ahmedabad and social planners and administrators should recognise that the issue of providing shelter to the houseless is a matter of utmost urgency. A prerequisite to develop a viable project is to convert a normally political issue into a technical

issue and evolve suitable strategies for implementation. A spirit of compromise and accommodation is required for the speedy realisation of the project. By developing appropriate administrative strategies, land occupied by slums like Ram Rahimnagar, Dani Limda, etc., can be released for useful and economically rewarding purposes. To facilitate this a multi-prong approach of organizing the slum dwellers, making them understand the implications of the project, and mobilising necessary resources, etc., with their active participation, are required.

The development of the entire project should not take more than 5 years. The preliminary planning and allotment of land should be completed within one year. Each agency should develop a phased and co-ordinated plan so that each year a portion of activities will get implemented which matches well with the activities of other agencies. From the beginning of the third year it should be possible for residents to move into the new area and most of the required facilities should be available for them by then.

It is very likely that a project of this type can get the financial participation of international agencies like World Bank and so negotiations (even for the planning phase) can be started immediately with them. A preliminary analysis of the capital required for the project indicates that within 5-10 years all the investment can be recovered.

Other Aspects

The Ahmedabad Municipal Corporation has at present two Sewage treatment Plants, one at Pirana (77 MGD) and the second at Vasana (12 MGD). It is proposed to erect another Plant in the outskirts of the City (Varzan). A desirable approach is to move the Pirana Sewage Plant to the new site planned. Municipal Corporation is planning to expand the Pirana Plant to a capacity of 162.5 MGD. It is suggested that instead of expanding the Plant at Pirana, the Plant may be moved to the new location and capacity added. Such a step would make the entire area of the Sewage Farm exceedingly suitable for residential and other purposes as envisaged.

In this paper we have given only a brief outline of some of the possibilities to convert a "condemned" Sewage area into a major human settlement. When additional data become available it is possible to revise and improve the basic ideas presented in this paper. Specifically the following issues have been highlighted in this paper:

1. Need for a technical assessment of the problem by converting the problem from a political issue to a technical one.
2. Need for multiple agencies engaged in social policy and planning to come together and develop a common perspective for the development of the project.
3. Emphasises that a human settlement project is viable only if employment generating facilities are also concurrently planned.
4. Suggests ideas for integrating the residential requirements with that of transportation.

5. Stresses that balance of eco-system should be maintained.
6. Suggests that a definite time frame should be pre-determined for the various stages of project implementation and roles of individual agencies responsible for the various phases should be established.
7. States that this project is likely to represent a possible major solution to the problems of proliferation of slums and urban poverty facing Ahmedabad City.

In a democratic society it is the responsibility of bureaucracy to identify and evaluate potential opportunities to tackle social problems and present possible solutions to the political machinery for evolving appropriate policies and administrative actions. Such a bureaucratic response is a pre-condition to mobilise effectively the "political will" for the speedy design and implementation of major projects for the benefit of the society.

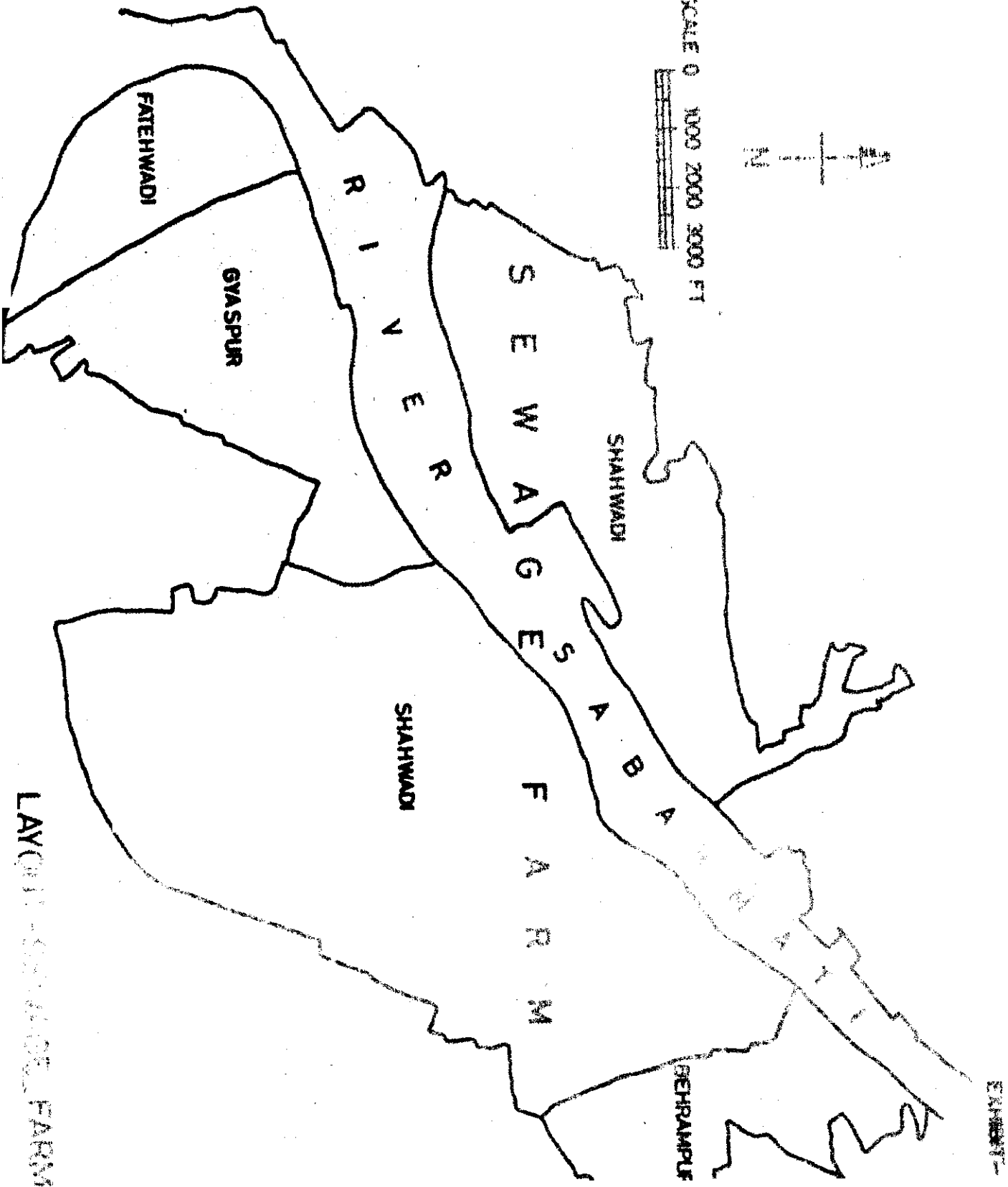
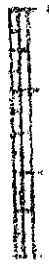
Acknowledgement

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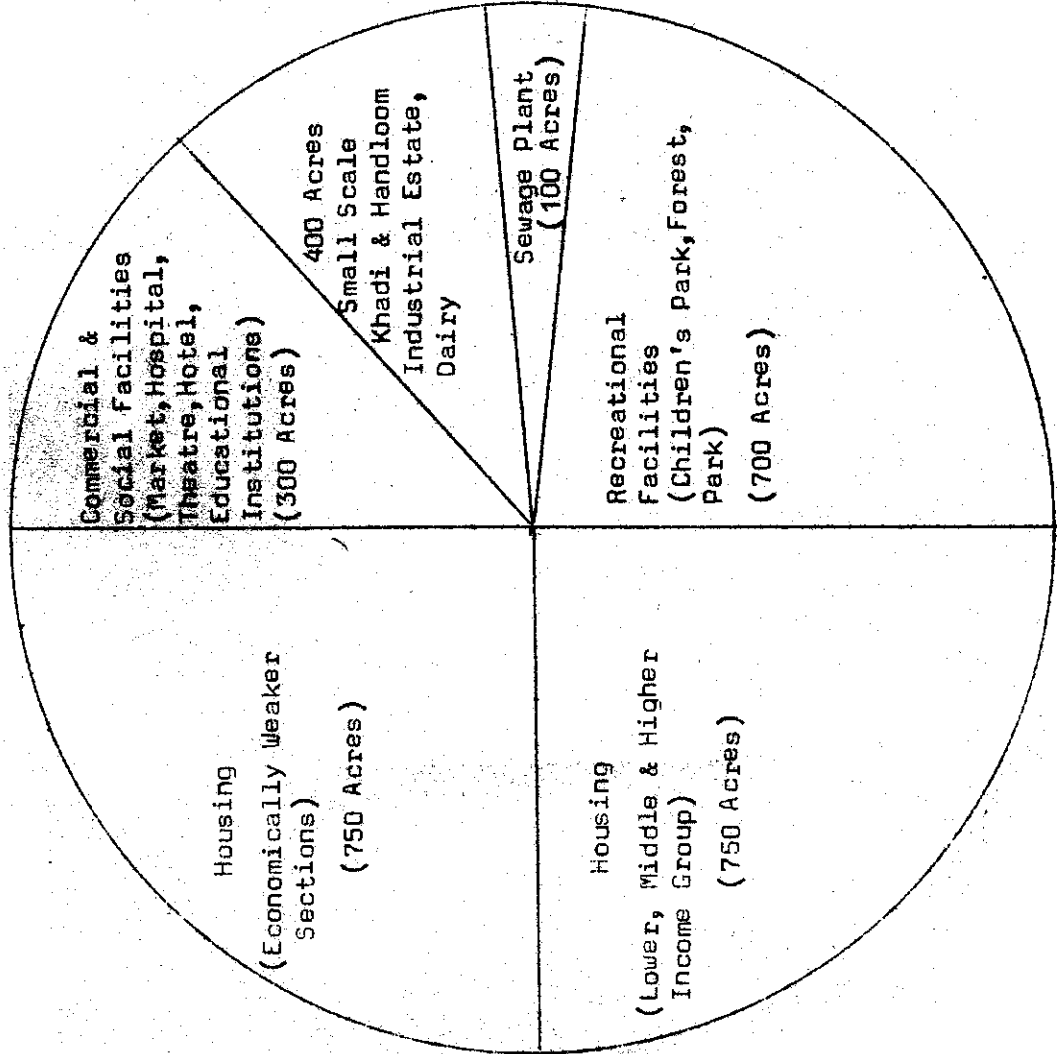


LAYOUT - SEWAGE FARM

EXHIBIT -

Exhibit 2

SEWAGE FARM (3000 ACRES)



SABBARMAATI RIVER

GYASPUR
SHAHWADI
AREA

Small Scale,
Khadi & Handloom
Industrial Area

Extension
300 Acres.