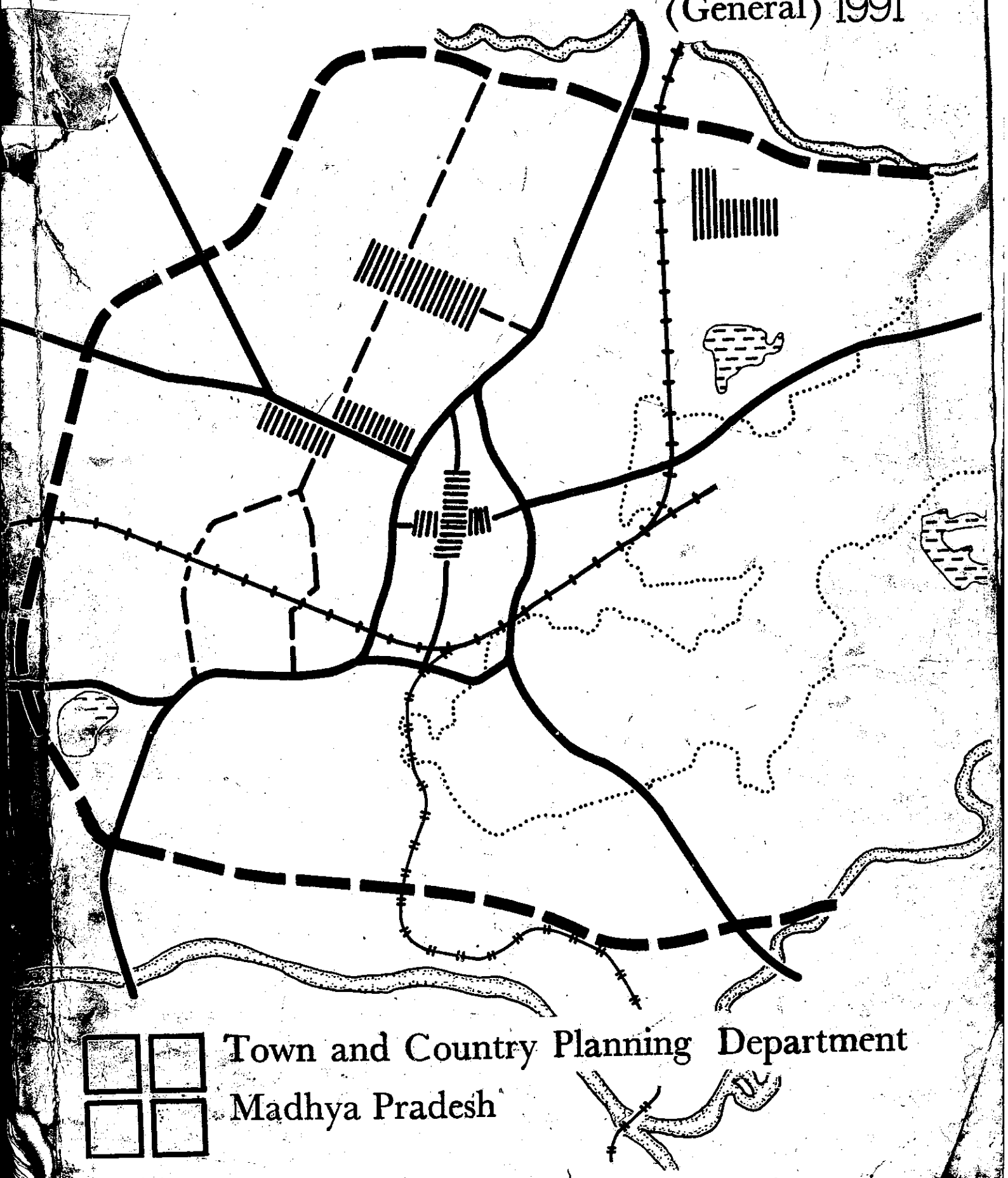
JABALPUR DEVELOPMENT PLAN

(General) 1991



Town and Country Planning Department

Madhya Pradesh

JABALPUR
DEVELOPMENT PLAN

Published under :
MADHYA PRADESH NAGAR TATHA GRAM NIVESH ADHINIYAM, 1973

TOWN AND COUNTRY PLANNING MADHYA PRADESH

PREFACE

Unlike many cities of its size, Jabalpur is suffering from many peculiarities often conflicting with each other. The city supports a complex of highly specialised industries, yet the people are using the same old means of transportation-cycle and cycle-rickshaw, and despite the use of latest technological methods in production of goods and services, it continues to remain a 'cycle city'.

The city can boast of a marvellous scenic beauty in Bhedaghat and interesting landscape in other parts of the city and yet it has most squalid slums in Kanchghar, Karipathar, etc. The outskirts of the city are adorned by holy river Narmada, but within the city, Omti nullah, an open sewer remains a constant danger to public health. Again in Cantonment Board area bungalows are set in large open land, yet the major population of the city lives in extremely crowded and congested areas with narrow lanes. These are only a few examples of peculiarities and problems from which the city suffers.

The Development Plan finalised after exhaustive studies carried out by various technical cells, viz., socio-economic, traffic and transportation, landscape, central cell, aerial survey, development plan section, regional office, offers solution to the problems of the city. Some proposals are corrective in nature which may involve some demolition, but by and large the proposals attempt to guide the future growth as well as constructional activities in the existing city.

The plan is for a population of 11 lakhs and covers a period of 15 years upto the year 1991. Some aspects such as services, road network, amenities have been planned for a longer period as the city has to function efficiently even beyond the plan period.

The report is divided in two parts: Part 1 consisting of chapters 1 to 8 makes an appraisal of the existing problems of the city while Part II consisting of Chapters 9 to 16 spells out various proposals. A separate Chapter No. 14 is devoted to landscape, water bodies and recreational aspects. The chapter covers enforcement and implementation which is the logical culmination of process of planning.

The implementation of the plan will cost nearly Rs. 68 crores. The funds will be generated through the development of new areas with a seed capital of nearly two crores. On the basis of objections and suggestions received the Development Plan for Jabalpur is now finalised. The plan now sets process of developing the city of Jabalpur on a planned basis. The screen of the plan would depend upon the active public co-operation in its implementation.

We look forward for the active co-operation and participation of the citizens of Jabalpur for whom this plan has been prepared.

K. KAPLISH
Chief Town Planner
&
Additional Director,
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M. P. Bhopal.

ACKNOWLEDGEMENT

The Department gratefully acknowledges the unreserved co-operation extended by Municipal Corporation and Town Improvement Trust, Jabalpur, in completion of Development Plan for Jabalpur. The Department also received valuable suggestions and assistance from various Government and Semi-Government organisations, particularly, Department of Census, Public Health Engineering, Public Works, Education, Commerce and Industries, Information and Publicity, Central Railways, Regional Transport Authority, State Road Transport Corporation, M. P. Electricity Board, M. P. Housing Board, District Gazetteer, Commissioner and Collector, Jabalpur. The Police Department and Home Guard collaborated in organising a Traffic Survey. We also gratefully acknowledge the work done by the Government Central Printing Press, Bhopal, for printing excellent coloured and other maps which form an important part of the Development Plan.

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CHAPTER 1

INTRODUCTION AND CITY GROWTH

1.1 LOCATION

Jabalpur, the largest centre of specialised industries in the State is also emerging as an educational centre in diversified field of study. It is situated almost in the centre of State, although not as effectively inter-linked with various parts of the State and the country. Its cardinal points are 23° 10′ N latitude and 79° 57′ E longitude with altitude of 393 metres above mean sea level.

Jabalpur is linked by National Highway No. 7 inter-connecting Nagpur and Varanasi. The State Highways, mainly Jabalpur-Damoh, Jabalpur-Dindori, Jabalpur-Amarkantak, Jabalpur-Mandla-Bilaspur and Jabalpur-Narsimhapur, which are further proposed to be linked with Bhopal, have generating points from Jabalpur.

Situated on Bombay-Calcutta Trunk route via Allahabad, it is Railway Divisional Headquarters. It is also linked with Balaghat and Gondia by meter guage rail link. It is well-linked by broad guage rail link with Indore via Bhopal and Bilaspur via Katni, important urban centres in the West and East of Madhya Pradesh respectively. Presently the city does not appear on the air map but in near future, it is likely to have air communications with important cities in Madhya Pradesh as well as in India.

1.2 PLANNING AREA

City is a growing organism. It is observed that during the rapid expansion of Jabalpur, particularly, during the last twenty years, villages situated on the fringe of the city now form part of the main city. The process of merging of rural settlements with urban area continues. Development in and around these settlements, therefore, needs to be controlled so that it fits in the envisaged development pattern of the city. Besides this, it is also necessary that villages be also developed properly so as to provide facilities and amenities for better life and more meaningful interaction between the Urban centre and rural centres in its immediate vicinity villages around this growing urban centre are, therefore, included in the Planning Area of Jabalpur for effective development:

Planning area for Jabalpur, notified under sub-section (i) of Section 13 of Madhya Pradesh Nagar Tatha Gram Nivesh Adhiniyam, 1973 (No. 23 of 1973), vide notification No. 3192/F-1-87/XXXIII/73, dated 13-12-1973. The limits of the planning area was extended under sub-section (ii) of Section 13 vide notification No. 114/F-1-87/XXXIII/73, dated 15-1-75. After the publication of draft Development Plan of Jabalpur, these limits have been reduced under sub-section (ii) of Section 13 of the same Adhiniyam vide No. 4367-5911/XXXII/78, dated 21-11-78. Therefore the

present limits of Jabalpur Planning Area are given in the following schedule.

SCHEDULE

Limits of Jabalpur Planning Area

North-East—Suhagi, Chanti, Hathna, Khairi, Bilpura, Mohania, Manegaon, Maharajpur, Imalia, Piparia, Richhai, Madai, Dumna, Chakdehi, Umaria, Piparia, Sonpur, Kandra Kheda, Keolari, Lamti, northern eastern limit of Piparia village.

East-South—Paraswara and upto the eastern-southern limit of Jamtara village.

South-West—Tewar, Pindarai, Kugwan, Vikrampur, Andhua, Bahdan, Paraswara and upto southern-western limit of village Padua, Chitapur, Hinota, Piparia, Kunda.

West-North—Mohania, Simaria, Basha, Kachnari, Raigwan, Nanda, Nandi-Ronshwara, Karmeta, Raksa, Rivjha, Oria, Kathonda, Amkhera, Kuwari, Khiriya Kalan, Khajari, Gurda and upto the western and northern limit of Khiriya Khurd.

Total area covered within Planning Area is 245.2 Sq. Km. (94.32 Sq. miles), details of which are as follows :—

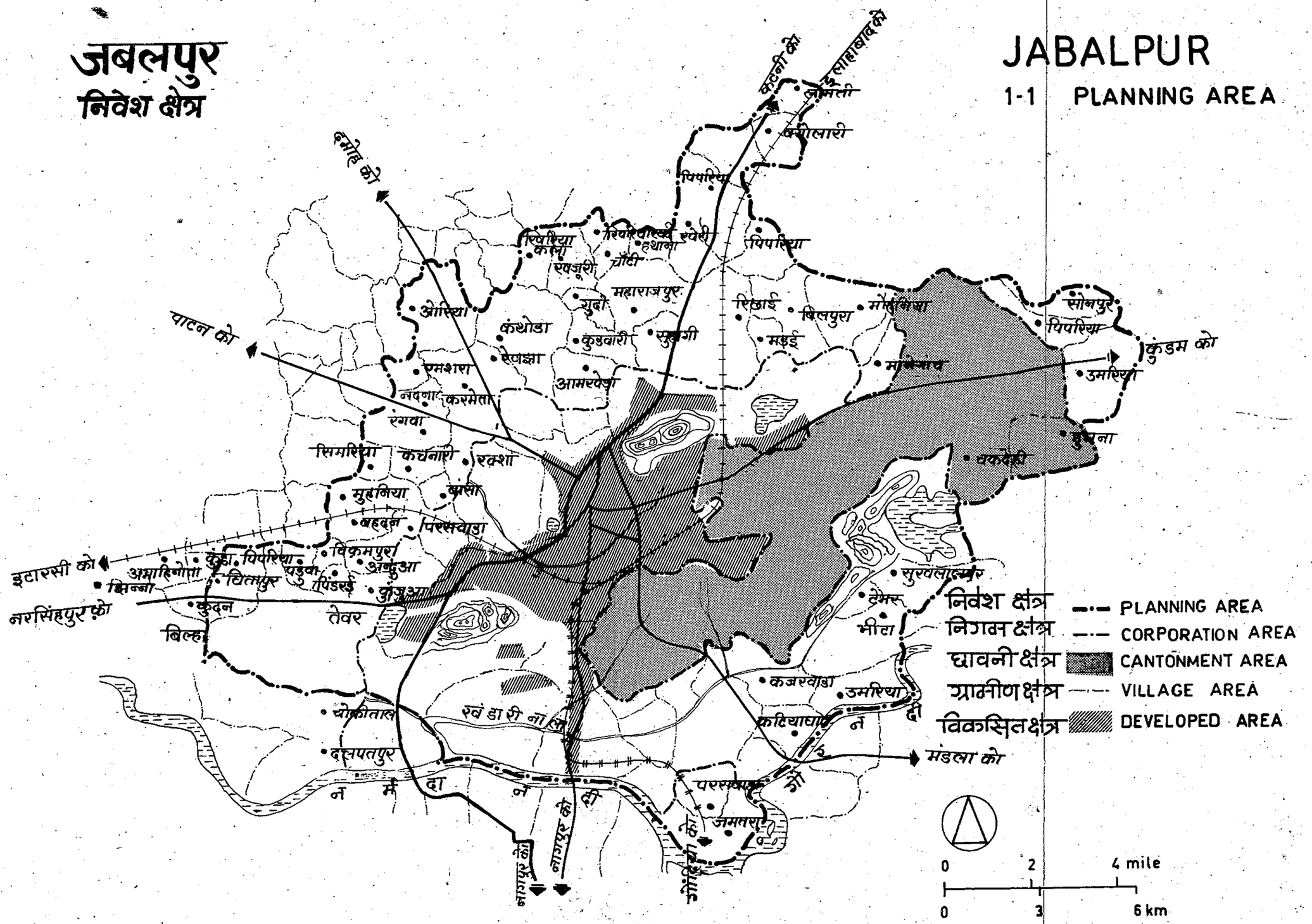
Various villages included in the Planning Area are given in the table below :—

JABALPUR : PLANNING AREA 1-T.1

Sr.No.	Name of Village	Area	
		Hectares	Acres
(1)	(2)	(3)	(4)
1	Paraswara	147.5	364.5
2	Jamtara	506.5	1251.6
3	Suhagi	260.8	644.4
4	Chanti	124.6	307.9
5	Hathna	111.8	276.2
6	Kheri	170.2	420.6
7	Bilpura	255.8	632.1
8	Mohaniya	340.2	840.8
9	Manegaon	152.6	377.0
10	Maharajpur	409.4	1011.7
11	Imaliya	202.2	499.6
12	Pipariya	172.8	427.0
13	Richhai	567.7	1402.9
14	Madai	175.6	434.0

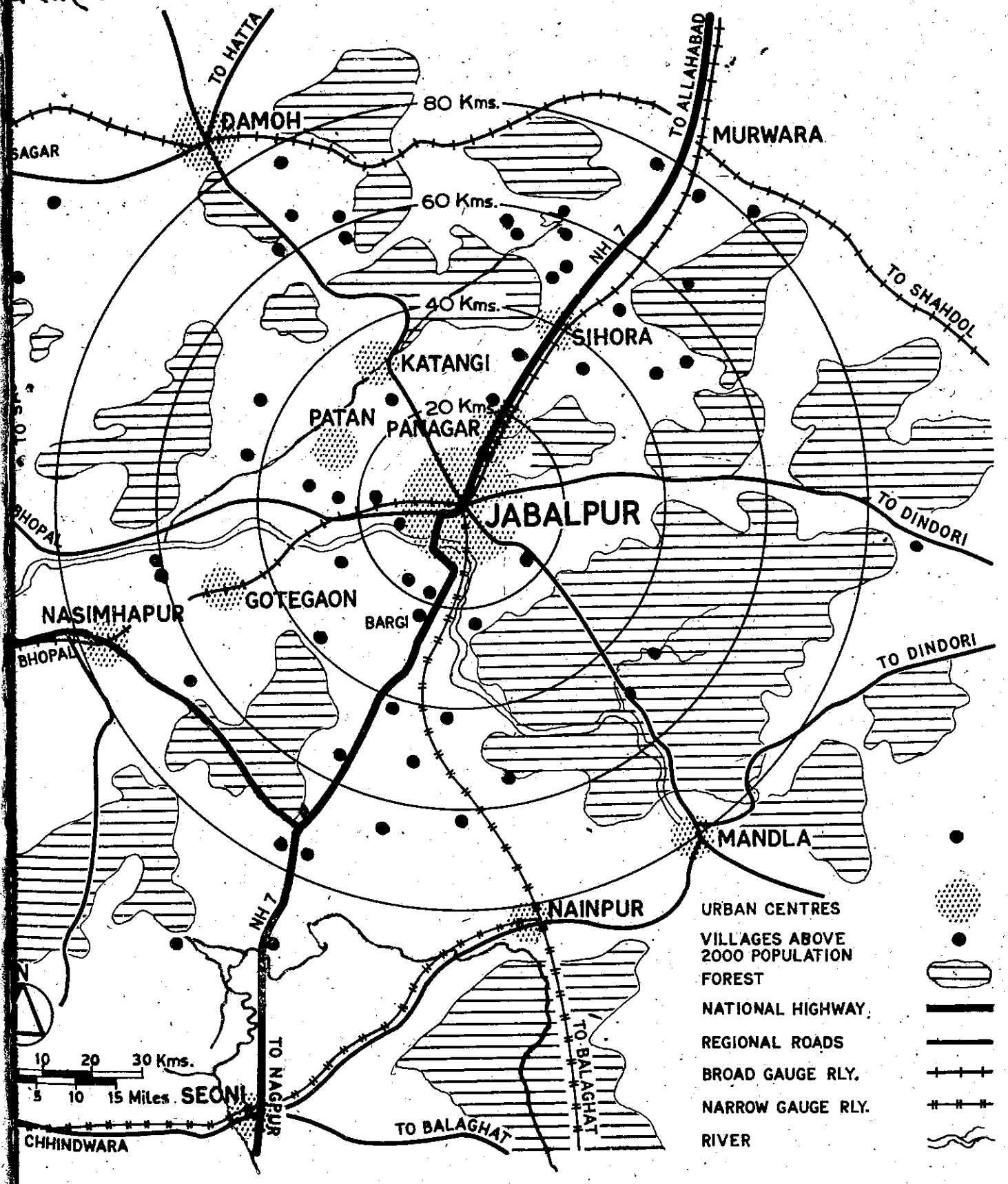
जबलपुर
निवेश क्षेत्र

JABALPUR
1-1 PLANNING AREA



जबलपुर
बसाहट

JABALPUR
1-2 SETTLEMENT PATTERN



(1)	(2)	(3)	(4)
15	Dumna	270.0	667.0
16	Chakdehi	372.0	919.3
17	Umariya	338.8	837.2
18	Pipariya	416.8	1030.1
19	Sonpur	79.4	196.3
20	Kandrakheda	189.9	469.3
21	Kewalari	120.1	296.8
22	Lamti	118.2	292.2
23	Pipariya	186.0	459.7
24	Tewar	1105.5	2731.7
25	Pindaria	80.6	199.2
26	Kungwa	149.0	368.0
27	Vikrampur	58.0	143.3
28	Andhua	156.5	386.9
29	Bahdan	272.3	673.1
30	Paraswada	76.4	188.9
31	Pandua	131.4	324.5
32	Chitapur	103.0	254.4
33	Hinota Bamruha	116.3	287.6
34	Pipariya	110.0	272.0
35	Kunda	43.4	107.3
36	Mohaniya	86.5	213.7
37	Simariya	98.6	243.7
38	Basha	93.4	230.7
39	Kachnari	139.9	345.6
40	Raksha	95.4	235.9
41	Raigawan	277.5	685.8
42	Nadna	57.8	142.7
43	Nandni Rosha	106.3	262.7
44	Karmeta	414.3	1023.9
45	Rawajha	122.1	301.6
46	Oriya	414.4	1024.0
47	Kanthoda	578.3	1428.8
48	Amakheda	291.7	720.7
49	Kudwari	164.5	406.4
50	Khiriya Kalan	173.8	429.4
51	Khajuri	223.2	551.5
52	Gurda	104.3	257.8
53	Khiriya Khurd	63.9	157.8
	(A) Total	11597.2	28657.8
	(B) Jabalpur M.C.	12920.0	31926.5
	Total Planning Area (A+B)	24517.2	60584.3

Notes.—1. The whole State has been divided into 10 planning Regions for the purpose of preparation of Regional Development Plans. Jabalpur Forest Resource Region is one of the 10 Planning Regions in the State.

2. Area shown in column 3 is as per census record.

1.3 REGIONAL LINKAGE AND IMPORTANCE

Jabalpur is the largest and most important city of "Jabalpur Forest Resource Region" notified under section 4 of Madhya Pradesh Nagar Tatha Gram Nivesh Adhiniyam, 1973 vide No. F-69 2610/73, dated 22-10-73, The region comprises five districts viz. Jabalpur, Sagar, Mandla, Damoh and Narsimhapur. Two out of eleven class I towns of the State are located in this region. Jabalpur occupies an important place in the region for trade, commerce and industries. The mandis in Jabalpur receive agricultural produces such as food grains, pulses, oils and other commodities for commercial transactions. The city also functions as distribution centre for agricultural implements, fertilisers, engineering goods, iron and steel, cement, mineral oils, provisions, kiranas and medicines. The city exports timber and other forest produce, ready-made garments, coarse handloom cloth and bidies.

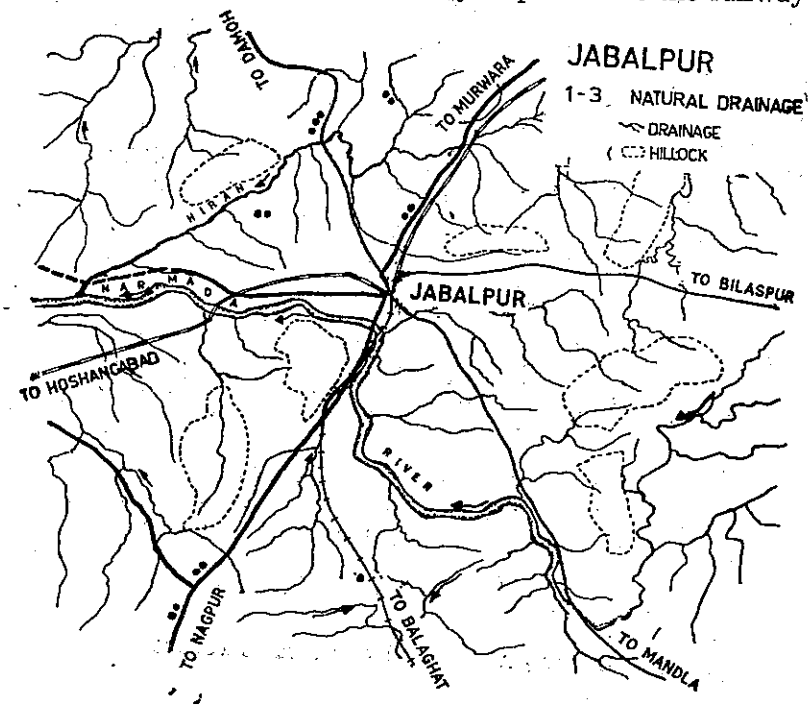
1.4 PHYSICAL FEATURES

1.41 TOPOGRAPHY

The topography of Jabalpur is unique. The city is surrounded by low, rocky and barren hillocks. Some of which form a barrier for continuous development of urban form and restrict inter-links between various parts of the city. Kariapather hillocks to the north-east, Sita Pahad and Kandhari hills to the east, Madan Mahal hills and rock outcrops to the south-west. Plains are situated towards west and north-west. Railway line girdling the city like a "horse shoe" had its due influence in the growth of urban form. The main water reservoirs of Khandari and Pariyat are located to the north-east direction of the city.

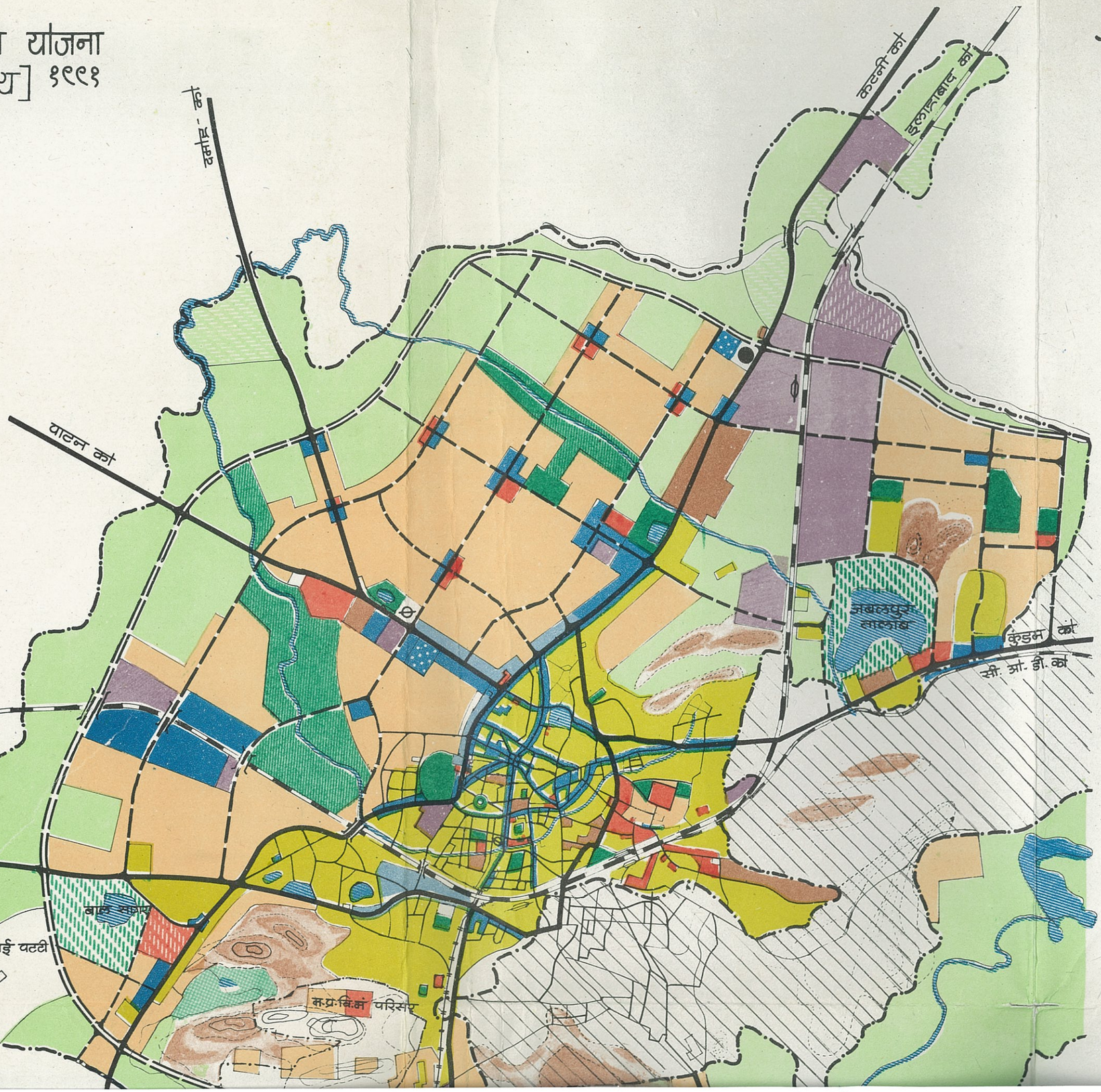
1.42 NATURAL DRAINAGE

The peculiar topography of the city provides an excellent natural drainage pattern. The central ridge, that is just parellel to the railway horse shoe



विकास योजना [सामान्य] १९९१

JABALPUR: DEVELOPMENT PLAN [GENERAL] 1991



आवासीय	RESIDENTIAL
वर्तमान	EXISTING
प्रस्तावित	PROPOSED
वाणिज्यिक	COMMERCIAL
सामान्य	GENERAL
मन्डी	MANDI
मिश्रित उपयोग	MIXED USE
औद्योगिक	INDUSTRIAL
भारी उद्योग	HEAVY
लघु उद्योग	LIGHT
प्रदूषित उद्योग	OBNOXIOUS
ईंट भट्टे	BRICK KLINS
सार्वजनिक एवं अर्ध सार्व.	PUBLIC & SEMI-PUBLIC
प्रशासकीय सामाजिक एवं सांस्कृतिक	ADMINISTRATIVE, SOCIAL & CULTURAL
शैक्षणिक	EDUCATIONAL
स्वास्थ्य	HEALTH
अमोद-प्रमोद	RECREATIONAL
उद्यान	PARK
यातायात	TRANSPORTATION
वर्तमान मार्ग	EXISTING ROAD
प्रस्तावित मार्ग	PROPOSED ROAD
यातायात केंद्र	TERMINAL CENTRES
वाहन स्थानक	BUS STAND
रेलवे स्टेशन	RAILWAY STATION
अन्य	OTHERS
मार्केट गार्डनिंग	MARKET GARDENING
दुग्ध योजना	DAIRY FARM
क्षेत्रीय उद्यान	REGIONAL PARK
उपवन	WOOD LAND

यातन को

इटारसी को

नरसिंहपुर को

हवाई पट्टी

आई स्कूल

म.प्र.वि.मं. परिसर

जबलपुर तालाब

कुडम को

सी. आ. डी. को

जलपुर

नर्मदा नदी

खण्डारी नाला

गौर नदी

मण्डला को

जमतरा

गाडरिया को

मन्डी		MANDI
मिश्रित उपयोग		MIXED USE
औद्योगिक		INDUSTRIAL
भारी उद्योग		HEAVY
लघु उद्योग		LIGHT
प्रदूषित उद्योग		OBNOXIOUS
ईंट भट्टे		BRICK KLINS
सार्वजनिक एवं अर्ध सार्व.		PUBLIC & SEMI-PU
प्रशासकीय सामाजिक एवं सांस्कृतिक		ADMINISTRATIVE, SOCIAL & CULTURA
शैक्षणिक		EDUCATIONAL
स्वास्थ्य		HEALTH
अमोद-प्रमोद		RECREATIONAL
उद्यान		PARK
यातायात		TRANSPORTATION
वर्तमान मार्ग		EXISTING ROAD
प्रस्तावित मार्ग		PROPOSED ROAD
यातायात केंद्र		TERMINAL CENTRE
वाहन स्थानक		BUS STAND
रेलवे स्टेशन		RAILWAY STATION
अन्य		OTHERS
मार्केट गार्डनिंग		MARKET GARDENING
दुग्ध योजना		DAIRY FARM
क्षेत्रीय उद्यान		REGIONAL PARK
उपवन		WOOD LAND
वाटर फ्रंट डेवलपमेंट		WATER FRONT DEVEL
प्राणी संग्रहालय एवं वनस्पति उद्यान		ZOOLOGICAL AND BOTANICAL GARDEN
जलाशय		WATER BODIES
कृषि भूमि		AGRICULTURAL LAN

2640 feet 0 1/2 1 2 mile

नगर तथा ग्राम निवेश मध्यप्रद
भोपाल

which begins from the dwarf hills in the east and runs to the west. The drainage of the city is divided into two distinct parts i.e. northern portion and the southern portion. The northern plain gradually slopes from east to north-west while the southern part of the town slopes towards the south. The storm water of the central city is channelised through Motinala and Omtinala which passes through the city and ultimately discharges into Pariat river, which ultimately merges with Hiran river, a tributory of river Narmada at the down-stream of river. During the rainy season, the low-lying areas of Madan Mahal, Wright Town, Napier Town and West Niwargung often get flooded due to the back-waters of Omtinala. This is evidently due to the seasonal bunding on the down-stream of Omtinala coupled with silting of the channels during the rainy season. Consequently the sewage and storm water get stagnated resulting in unhygienic conditions and pose a serious threat to the public health environmental conditions. This problem needs special attention and it could be solved by preventing-bunding operations and widening and deepening of Omtinala channelising the required discharge into river Partiat. The southern side is drained off by Khandhari nullah which discharges into river Narmada towards south-west. There is no problem of drainage on this side.

In context to regional natural drainage in the vicinity of Jabalpur, river Pariat forms the northern boundary of Planning Area which flows from east to west. This river can take the discharge from water polluting industries after treatment of effluent as this river is not source of water supply to any major human settlement on the down-stream side. River Gaur Narmada forms the southern boundary of Planning Area and flows east to west.

1.43 CLIMATE

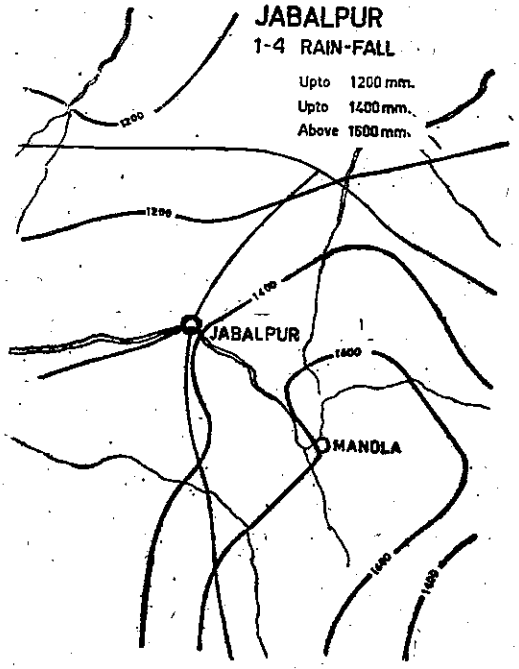
The climate of Jabalpur can be divided into three distinct seasons, viz., the rainy season lasting from mid-June to September, the winter from November to February and summer from March to mid-June. The month of October witnesses the transition from rainy to winter season.

1.44 TEMPERATURE

Jabalpur experiences extreme temperature, hot in summers and cold in winters. The day temperature begins to rise from March (33.7°) onwards and reaches the maximum in May which is the hottest month with the temperature of 41.7°C. The heat is coupled with oppressive hot-gust blowing during the day. The day temperature is highest in May but the night temperature in the month of June is comparatively higher than that of May. From December, the day temperature begins to drop considerably and the temperature in January touches the lowest (25.8°C) whereas the night temperature drops down to 9.8°C in the month of December. During the winter months, cold waves get severe due to sweeping northern winds. The highest maximum ever-recorded day temperature (46.7°C) was on 25 May, 1924. The lowest minimum night temperature ever-recorded was zero degree on 2 December, 1905.

1.45 RAINFALL

The rains usually break in the 3rd week of June, the maximum rainy days, however, occur only in the month of July and August. By the end of September, the rainy days become less frequent and the rains generally stop by early October. The average number of rainy days is 69 and the average rainfall is 1386 mm.



JABALPUR : RAINFALL (IN M.M.) 1-T.2

Month	Year			
	1960	1965	1970	1972
(1)	(2)	(3)	(4)	(5)
January	55.4	0.4	40.4	0.0
February	0.0	1.0	31.7	11.6
March	20.4	12.3	45.7	0.0
April	10.2	16.0	15.4	9.0
May	0.0	2.4	7.2	1.7
June	78.1	162.2	219.2	65.6
July	441.6	219.6	219.7	275.5
August	573.7	344.1	596.5	1003.6
September	19.3	215.0	..	61.3
October	97.2	4.6	9.6	13.0
November	0.0	0.7	0.0	40.6
December	4.3	4.6	0.0	4.5

1. Annual Rainfall-1300.2/983.2
2. Rain days 69/51.

Observations: Maximum Rainfall 1003.6 M.M. during August, 1972. Average Rainfall 1368 M.M.

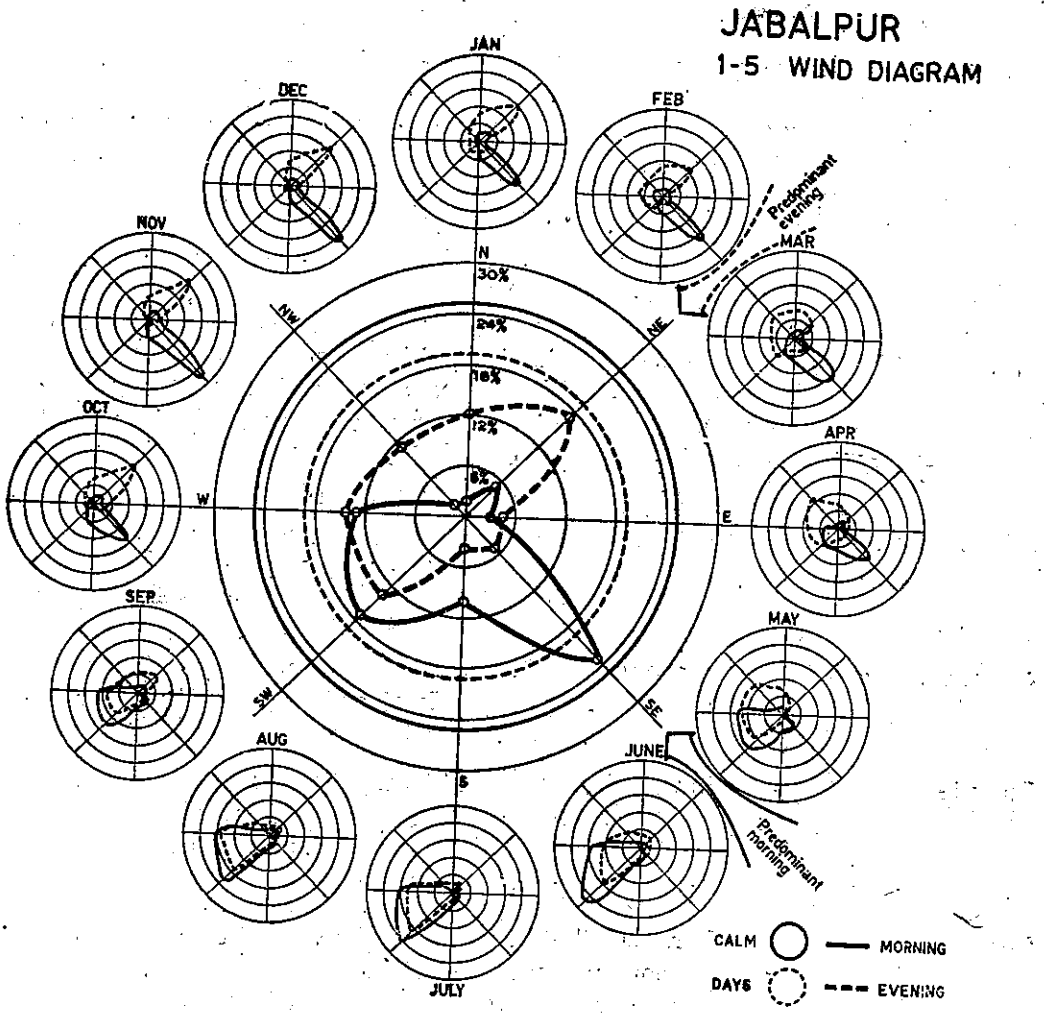
Source: Meteorological Department.

1.46 WIND DIRECTION

Winds are controlled by the shifting pressure belts. They are predominantly from south-west during the monsoon months. In the post-monsoon and winter, southernly and south-easterly winds prevail in the morning

while in the afternoon winds blow from directions between east and north. In the summer months, winds blow from directions between south-east and north-west through south and west.

Except during the monsoon seasons, wind speed is generally light to moderate. In the monsoon months, winds are stronger and, on a few occasions, reach the velocity at 40 to 50 k.m. per hour. In view of above observations, obnoxious industries can be located on the northern side of the city.



1.47 CLOUDNESS

Clouds are accumulated by the winds prevailing in the late summer and monsoon period when heavily clouded to overcast conditions prevail, sky is normally clear or lightly clouded in the dry period of the year.

1.48 HUMIDITY

During the summer months, the air is very dry with the relative humidity as low as 15 to 20 per cent in the afternoon. During the monsoon, high humidity prevail. In the post-monsoon and winter months, the air is moderately humid.

1.49 SPECIAL WEATHER PHENOMENON

Depressions originating in the Bay of Bengal and passing westwards cause wide spread rain accompanied with dusty winds during the monsoon season. Except in November and December, thunder-storms occur throughout the year, their frequency being highest in June. The thunder-storms of the summer months are accompanied with squalls. Destructive hail-storms occur occassionally in the winter and early summer months. Fog may occur on two or three days only during the winter season.

1.5 MINERAL RESOURCES AND BUILDING MATERIALS

The study area is endowed with unique gifts of nature-"the rich mineral deposits and forests". In the study area, only Jabalpur district possesses variety of minerals which have potential economic values. It consists of variety of deposits and includes granite stone, soft clays, economic minerals like Bauxite, Manganese, Coal and Ceramic sand etc.

The mineral deposits in study area have been found towards north-east, while area towards south of Narmada consists of forests in the districts of Seoni, Narsinghpur, Chhindwara and Mandla. The following table given on the next page enlists the type of minerals and their places of occurances recorded within Jabalpur District.

JABALPUR : ECONOMIC MINERALS 1-T.3

Name of Mineral (1)	Location (2)
Copper & Lead	Sleemnabad, Niwar Area, Suncheri, Imalia, Pondi, Angawan, Matai and Sejha. The other occurances are Nawalis Deori.
Bauxite	In the hills south of Katni (Murwara), Niwar and Dundi. A very high-grade bauxite deposits are located in the Katni. Niwar area and can be used in chemical industries.
Coal	Lameta Ghat, Jabalpur. Though the quality is poor but could be used for brick burning. Also located in Katni tahsil but in thin seams.
Dolomite	Ample supply is available at many localities among the Bijawar formations as at Bhedaghat Sleemnabad (somewhat impure variety).
Felspar	Used for pottery purposes is available near Singrampur, Lametaghat.
Glass Sarid	Lametaghat.
Fuller's Earth	Katni-Lower Vindhyan Rocks.
Gold	Gosalpur (Bijawar formation) Sleemnabad.
Silver	Found in Copper and Lead ores of Sleemnabad, Imalia.

(1)	(2)
Iron	North-Eastern portion of the Jabalpur District. Bijawar ores in Khamati and Bajairaghavgarh near Katni. Other principal iron ore localities are Agaria, Bijori, Dharampur, Gosalpur, Bhadara, Jhisi, Kalwara, Murwara, Pilongi, Pirehta, Kantari and Gangai.
Manganese	Gosalpur, Lora (north-east of Sihora, Bijawar series) Kasai hill, Darshani, Mansakar, Ghogra, Sakri, Bhataden, Dharampura and Nonsar.
Ochre : (for paint)	Jauli, Katni.
Lime Stone (About 65% of the State's).	Katni (Rohtas stage of lower Vindhyas) Tikuri (This quarry is of good quality having 80 to 96%).
Output is produced in this Distt.	Of Calcium Carbonate (Kymore range, Kachhia. gawan).
Building Stones—	
(a) Pink Granite	Near Jabalpur.
(b) Lime stones & Dolomite.	Bijawar (Dolomatic Marbles) Bhedaghat Katni, Durienpur, Kheri, Niwar.
(c) Sand Stone	Katanga, Panagar, Sihora.
(d) Black Basalt/ Trap.	Jillehri Ghat, Bhita.
Quartz	Lameta, Jabalpur Rocks.
Flint	Near Bhedaghat.
Soap Stone	North of Narmada (Adjacent to the marble rocks) Lalpur, Dhundara, Gwari, Bheraghat, Rithari, Khamaria, Bhaganwara, Manhera, Bhijhota, Uchehra, etc.
Semi-Precious Stones	Bed of Narmada river near Bheraghat, Amehata, Lameta (Jabalpur).
Porcelein clay	Near Jabalpur, Lameta, Polipather.
(a) Alluvial Clays for brick.	Badanpur, Ranjhi, Betla.
(b) White clay	Jabalpur Chhota Simla hill, hill, ridge-east of Jabalpur city. Polipather, Bhaganwara, Jharela, Mohagawan, Bhijbujia, Saliya, Hardua.

Jabalpur receives Timber (Teak) from Seoni, Mandla and Chhindwara districts and Sal from Mandla, Balaghat and also from Raipur District.

Considering the above mentioned economic minerals and forest resources, Jabalpur appears to be a potential place for location of mineral and wood-based industries. The area towards Katni, taking advantage of Rail and National Highway, appears to be suitable for the purpose.

The entire area inclusive of Jabalpur city being the mineral bearing area, calls for a judicious utilisation of the land 'surface and underground areas so as ensure that the extraction operations do not result in misuse of depreciation of the quality of urbanisable land of urban space and environment defacing of valuable landscape, scenic and recreational potential spots like Bheraghat, Madan Mahal, area around Supatal and Deotal, hills of Geological-Archaeological importance. Indiscriminate use of land in excavating clay for brick making, falling within the urbanised and urbanisable limits like Badanpur, Kanchanpur, Bhadpura and Ranjhi needs to be controlled. At the same time suitable areas need to be earmarked where extractive industries could come up and the mineral deposits could be properly utilised.

1.51 SOIL CHARACTERISTICS

Jabalpur has variety of soils, formed by the decomposition of fragmented quarts, felspar and silica, which are mixed with alumina, iron, magnesia, lime and the alkali, the proportions being determined by the nature of the parent rock. The entire area is hilly. Slopes differ in grade from 2 per cent to 30 per cent. In this area it observed that nearly 75 to 80 per cent. of the top suit has been washed away at many places and the land was rendered too poor for cultivation.

1.6 HISTORICAL BACKGROUND

A historical review of Jabalpur reveals that the settlement owes its cultural heritage to Kalchuri Dynesty during Rani Durgawati regime, endured the rigid grip of Maratha rule and subsequently atrocities of early British rule. Transformation of settlement into a city with local-self-rights took place during the later part of British rule which was followed by an inspiring impact of independence movement.

It is said Jabalpur assumed the name after the name of "Jawalli Pattanam" dedicated to the Jawalli sage. However, derivation of name Jabalpur from Arabic word 'Jabal' meaning a hill or mountain, appears to be more convineing.

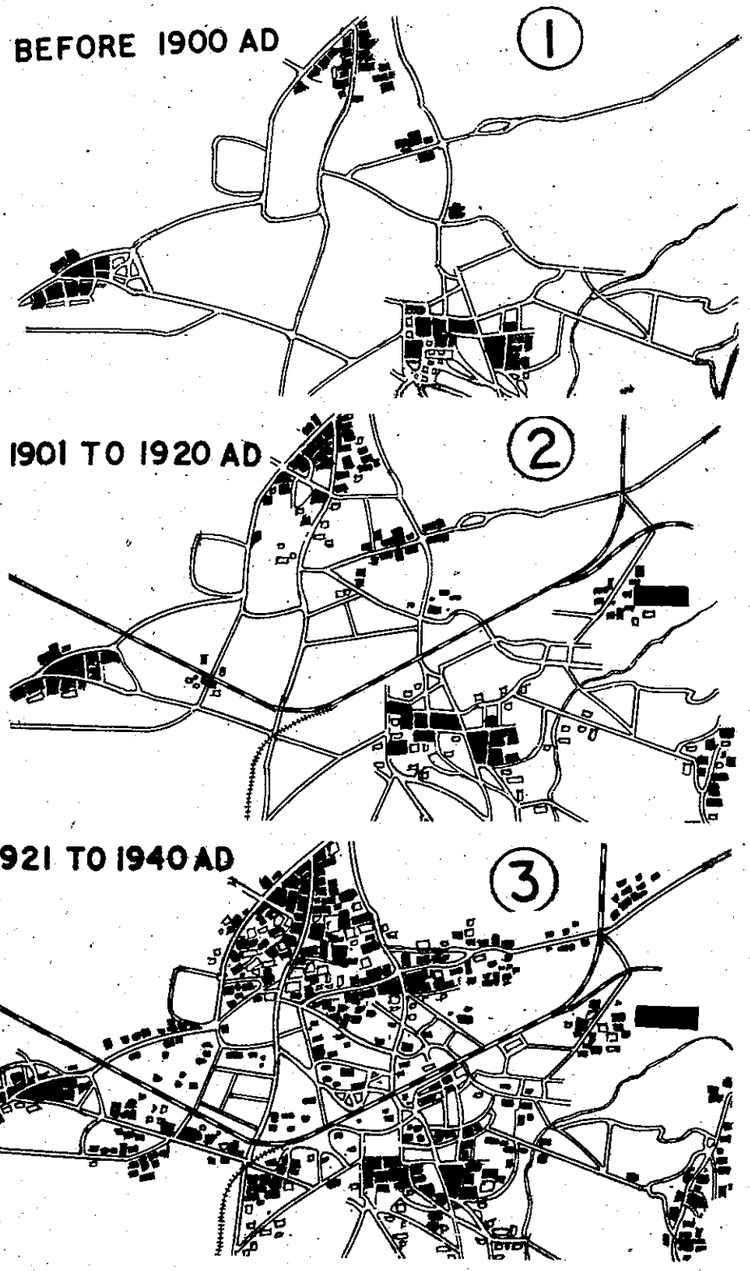
The early history reveals that "Tripuri" village located at 6 miles from Jabalpur city enjoyed a status of capital during Kalchuri Dynesty which was at its zenith in 300 B.C. Subsequently during the Gond Dynesty 'Garh'a,, which now forms a part of the city, attained the status of capital. Later the city assumed the status of a Divisional Headquarter of the central province during the early British Rule. During later part of 19th century, Jabalpur cantonment was established. This was followed by establishment of Municipal Corporation in 1951. Gradually with the establishment of Telegraph Workshop, Provincial High Court, Defence Establishment and educational institutions, the city attained a status of most important city of the Mahakoshal Region.

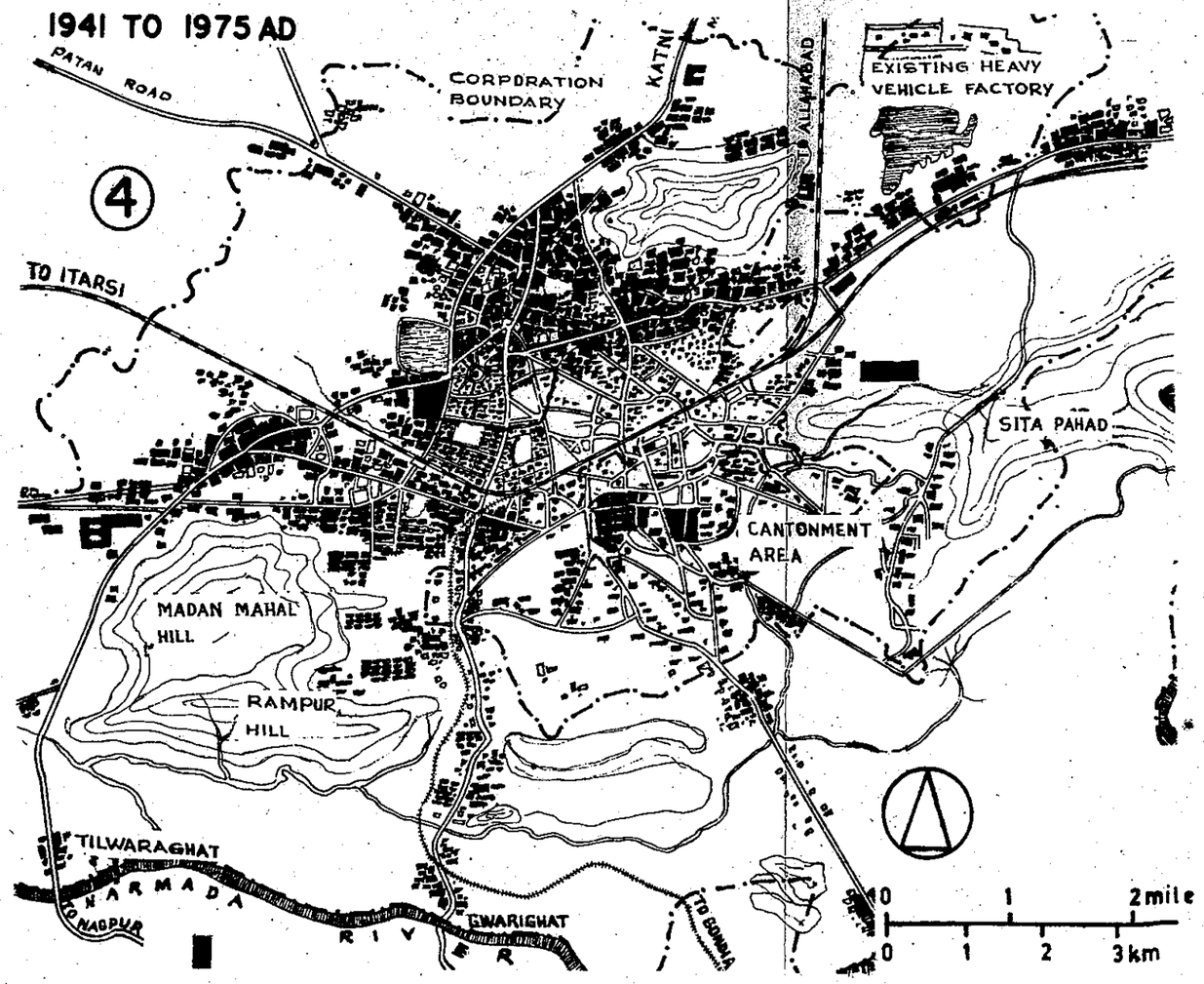
1.61 SEQUENCE OF CITY DEVELOPMENT

During the last two decades of 19th Century, Jabalpur assumed the trinuclear urban form with specific communities development at old Millonigunj and Hanumantal localities, Garha and cantonment to the

JABALPUR

1-6 SEQUENCE OF GROWTH





south of Railway. These localities have different characteristics both social and economical. The Millonigunj and Hanumantal assumed the character of Commercial Centre habited by business community and cantonment for military estblishment and Garha occupied by serfs. Physically these three nuclear developments were divided by railway 'horse shoe', yet they have distinct inter-communicating links. The population recorded prior to 1910 for the trinuclear complex was little less than one lakh (90316). The significant developments were establishment of Railway station in 1870, establishment of Cantonment Board in 1876 and the location of High Court in 1889.

Gun Carriage Factory in 1904, Madan Mahal Railway station and narrow gauge rail line between Jabalpur and Gondia followed these developments. The intensity of development along the links between Millonigunj and Cantonment area substantially increased. The High Court and District Offices were located on these links between old Jabalpur and Cantonment.

The establishment of Municipal Council in 1914 and the establishment of Victoria Memorial Hospital in 1933 together with provision of other civic amenities were important events in the growth of the city. These services united the trinuclear community into one functional urban form. During these decades the city grew at a faster rate.

During the period 1941 to 1971, Jabalpur had numerous developments which contributed to the physical, social, economical and cultural needs of the city. Napier Town and Wright Town areas were planned and established in 1941. The areas were well-planned and controlled by specified rules of sub-division of lands and coverage restrictions. The establishment of Telegraph workshop in 1942. Ordinance Factory at Khamaria in 1943 and Madhya Pradesh Electricity Board Headquarters in 1957, provided increasing employment opportunities. The establishment of Engineering College in 1947 followed by Veterinary College in 1948, Medical College in 1956, and Home Science College in 1960 had not only catered to the educational needs of the city population but also served the needs of the region. The long cherished aspiration for establishment of Jabalpur University, was fulfilled during recent years. The establishment of Shahid Smarak in 1956 catered to the social and cultural needs of the city.

1.7 SPECIAL FEATURES

From the point of view of archaeological remains, the Garha locality situated on Jabalpur-Nagpur Road is very important. It is now under the jurisdiction of Jabalpur Corporation. Garha had enjoyed the statues of a capital of the Gond Rulers of Garha Mandla for nearly 500 years. The area has remains of Madan Mahal, the pleasure place of the 10th Gond King Madan Singh, constructed around 1100 A.D. It is very plain and simple structure without any ornamentation. It stands now like watch tower on the summit of a hill poised on two gigantic hills, the upper part on one side over-hangs the base and commands a panoramic view over the rich valley below.

To the West of Mahal lies Ganga Sagar tank and a little further away is the vast expanse of Bal Sagar. A number of temples erected by the Gond Kings in the locality reminds the past.

Near Deotal, an annual fair is held in the month of August-September. In the midst of Deotal there exists a spring believed to contain certain medicinal properties.

The Tilwaraghat locality is 9:6 kms. from Jabalpur on the Nagpur Road. It is situated on the bank of river Narmada. There is an old Tilwadeshwar temple. In 1939, this place was the venue of the open session of the Congress, ever remembered as Tripuri Congress.

Besides these remains of archaeological importance, these are some large tanks in the city having historical association. Among them figures the Ranital built by Rani Durgawati. The Charital built by Rani's maid servant and the Adhartal built by the minister of Rani.

1.71 BHERAGHAT

Bheraghat, a small village of Jabalpur tahsil situated on the bank of the river Narmada has tremendous scenic value and has potentials for development as an important attraction for tourists. It is famous for its marble rocks. It lies at a distance of about 21 kms. from Jabalpur and is approachable by road. At this place the mighty river Narmada is reduced to one-third of its width by deep and wonderful gorge with almost vertical wall like banks. The water forces its way through the graceful and majestic marble rocks for nearly 1.5 km. The gushing water viewed from the top at 30 meter high close marbal rock banks like a silver stream. The gushing water takes a straight plunge at 'Dhuandhar' producing a fine a transport misty screen. Lower down the clear water river provides an exciting boating opportunities. Besides being a place of scenic beauty it also has religious importance, an it is the meeting place or confluence of two rivers, Narmada and Bawanganga. The Vaidyanath or Gouri Shankar Temple at Bhedaghat is also very famous. It has a very peculiar shape. The objects of worship at the main temple are five idols of Shiva and Durga. In a circular form there are statues of sixty-four yoginis because of which it is also known as Chaunsath Yogini temple. On the Karatika Purnima an annual fair is held which lasts for three to four days.

CHAPTER 2

POPULATION STUDY

A human settlement is like a living organism particularly in its growth pattern. It influences and is also influenced by the neighbouring settlements. The socio-economic interaction between the adjoining settlements establishes a functional system. A study of growth pattern of Jabalpur in relation to other urban centres in neighbouring areas is, therefore, of great significance. It will include population changes in study area, growth trends, age-sex structure, family structure, migrational trends, etc. An analysis of these factors in relation to the city functions will also help in the assessment of various city needs in respect of housing, commerce and industries, amenities, recreation, etc.

2.1 POPULATION CHANGES IN STUDY AREA

Jabalpur city is the nerve centre of the study area which comprises of Damoh and Narsinghpur districts of Bundelkhand and Seoni and Jabalpur districts of Gondwana. Study area for the purpose of analysis of population changes has been limited to these districts because of cultural affinity & economic linkages which these districts have in common. The other districts of Sagar and Mandla though included in the Jabalpur Region have not been included in study area because these two districts have different cultural background and economic characteristics. Jabalpur, the cultural seat of Mahakoshal, represents a true characteristics of Bundelkhand and Gondwana in customs, traditions, cultural and social life of the people.

2.11 ANALYSIS OF CHANGES

The study area had a total population of 16.10 lakhs in the year 1901, which increased to 34.47 lakhs in 1971, recording an increase of 114.10 per cent. in the past seven decades, while increase of 400% in urban than the total growth. The district of Jabalpur has also recorded higher urban growth (332%) during this period. The table below brings out interesting features about population changes in the district of Jabalpur and the neighbouring districts.

JABALPUR : POPULATION GROWTH IN STUDY AREA

(Percentage Decade Variation)

2-T. 1

State/District	1961–71	1951–61	1941–51	1931–41	1921–31	1911–21	1901–11
1	2	3	4	5	6	7	8
Madhya Pradesh							
Total	28.7	24.2	8.7	12.3	11.4	—1.4	15.3
Rural	25.7	20.9	6.0	10.5	10.4	—2.3	17.8
Urban	46.6	47.7	33.3	32.8	23.0	—10.9	—11.0
Study Area							
Total	29.2	21.1	5.7	10.3	6.2	—7.2	12.5
Rural	26.7	17.5	1.7	10.5	5:1	—8.0	12.7
Urban	33.9	34.3	30.8	30.8	7.4	—10.9	9.4
Jabalpur							
Total	32.4	21.8	15.0	17.7	3.7	—0.1	9.6
Rural	25.1	7.3	6.8	12.7	1.7	—1.5	8.7
Urban	44.6	58.2	42.3	38.1	12.8	—7.4	14.1
Damoh							
Total	30.8	20.6	4.1	12.0	6.4	—13.8	16.7
Rural	29.2	21.9	—0.8	10.7	4.8	—14.0	16.2
Urban	27.5	26.2	37.9	29.3	35.5	—10.2	27.6
Seoni							
Total	28.1	20.7	2.5	7.5	12.9	—11.9	20.7
Rural	27.1	20.6	1.6	16.6	12.4	—12.1	20.8
Urban	43.9	21.0	21.6	27.9	—25.9	—7.7	16.6
Narsimhapur							
Total	26.0	21.6	1.2	4.2	2.0	—3.0	3.2
Rural	25.4	20.3	—0.8	2.3	1.6	—4.5	5.2
Urban	37.5	31.9	21.7	28.0	7.2	—18.5	—20.7

JABALPUR : URBAN CONTENT IN STUDY AREA

(Percentage of Urban Population to Total Population)

2-T.2

	1971	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9
Madhya Pradesh	16.3	14.3	12.0	9.8	8.3	7.5	6.7	8.6
Study Area	25.3	22.9	18.5	14.3	11.9	10.9	9.5	9.8
Jabalpur	40.5	37.1	28.5	23.0	19.6	18.1	16.3	16.1
Damoh	13.77	12.7	12.2	7.8	6.7	5.3	5.1	4.6
Seoni	6.5	5.7	5.7	4.8	4.0	3.6	3.5	3.6
Narsim-hapur.	14.8	11.8	10.9	9.1	7.4	7.0	5.7	7.4

Source : Compiled from Census Reports.

The recently declared policy of the Government to encourage industrialisation of backawrd districts is likely to affect the trend of urbanisation of the districts in study area particularly Damoh and Seoni districts. The surplus labour force in rural areas obviously migrates to urban centres where employment opportunities are available. The national plan policy has provided for absorption of 2/3 of additional working force in agricultural sector, this assumption is likely to be reviewed in view of the national urbanisation policy being formulated by the Govt. of India. However, in the mean time, assuming reasonable rate of absorption of labour force in agricultural sector, it will be necessary to provide employment in sectors other than agriculture which means the migratory trends in urban centres shall have to be anticipated.

2.12 URBANISATION

The urban content in study area is more than two and half times than that of the State. Seoni is the least urbanised district whereas Jabalpur has highest urban content. The rise in the urban content in the study area is relatively higher than that of the State. The urban content of Jabalpur district in 1971 is nearly double (40.5%) than the urban content of the study area. This change is likely to continue with marginal increase in view of the accelerated industrialisation offering employment opportunities.

JABALPUR ; URBAN CONCENTRATION IN STUDY AREA

(Number of Urban Centres) 2-T.3

State/District		1971	1961	1951	1941	1931	1921	1211	1901
1	2	3	4	5	6	7	8	9	10
Madhya Pradesh	Total	232	210	203	178	150	124	120	127
	Class I	11	8	5	3	3	3	1	1
	Class II	11	5	5	7	3	..	1	3
	Others	210	197	193	168	144	121	116	123
Study Area	Total	15	14	10	9	8	8	8	8
	Class I	1	1	1	1	1	1	1	..
	Class II	2	..	..	..	..	..	..	1
	Others	12	13	9	8	7	7	7	7
Jabalpur	Total	7	6	3	3	3	3	3	3
	Class I	1	1	1	1	1	1	1	..
	Class II	1	..	..	..	..	..	..	1
	Others	5	5	2	2	2	2	2	2
Damoh	Total	2	2	2	1	1	1	1	1
	Class I	..	..	..	..	..	..	..	..
	Class II	1	..	..	..	..	..	..	..
	Others	1	2	2	1	1	1	1	1
Seoni	Total	3	1	1	1	1	1	1	1
	Class I	..	..	..	..	..	..	..	..
	Class II	..	..	..	..	..	..	..	..
	Others	2	1	1	1	1	1	1	1
Narsimhapur	Total	4	4	4	3	3	3	3	3
	Class I	..	..	..	..	..	..	..	..
	Class II	..	..	..	..	..	..	..	..
	Others	4	4	4	4	3	3	3	3

Source : Census of India 1961 & 71.

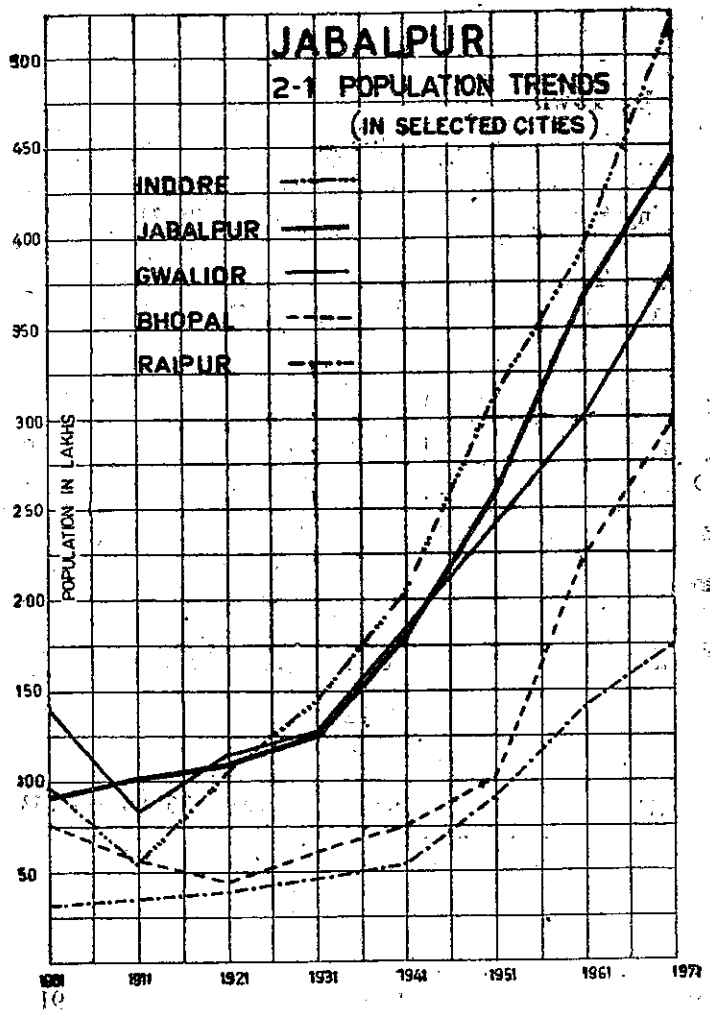
The above table highlights urban concentration in study area. The study area has 15 urban centres out of which only 3 (one Class I and two

Class II) are of large size. Seven urban centres including one Class I and one Class II cities are located in Jabalpur district.

2.2 POPULATION CHANGES IN THE CITY

2.21 POPULATION GROWTH

Since 1901, the population of Jabalpur U. A. has increased six-fold. The increase has been at lower rate during the first three decades (1901-1931). The reasons for this slower rate of increase in population are epidemics, as well as famine and devastating floods, causing extensive damage to life and property. The other cities like Indore, Gwalior and Bhopal also registered sharp decrease during the same period.



2.22 GROWTH OF URBAN CENTRES

The position of growth of Urban Centres reveals the increasing trend of population growth of each individual town as studied for the last three

Decades. The date in this regard are given in the following table.

JABALPUR : POPULATION GROWTH OF URBAN CENTRES IN STUDY AREA 2-T.4

Sr. No.	Name of Town	Population as per 1971 census (in lakhsi	Percentage Decade Variation (1941–1951–61 1961-71)			Functional Category
1	2	3	4	5	6	7
Class I Town						
1.	Jabalpur (U.A.)	5.35	+44.11	+42.81	+45.73	Industry-cum-Service.
Class II Town						
1.	Damoh	0.59	+37.95	+26.22	+27.51	Industry
2.	Murwara	0.55	+37.57	+36.26	+18.83	Industry-cum-Service-cum-Trade and Commerce.
Class III Town						
1.	Seoni	0.38	+21.65	+20.98	+26.83	Service-cum-Commerce.
2.	Narsinghpur	0.26	+10.91	+25.31	+42.43	Service-cum-Industry.
Class IV Town.						
1.	Gadarwara	0.19	+25.61	+15.32	+27.08	Industry-cum-Service.
2.	Sihora	0.18	..	..	+29.53	Do.
3.	Kymore	0.14	..	..	+14.29	Industry
4.	Kareli	0.12	+47.49	+94.95	+43.55	Trade & Commerce-cum-primary activities-cum Service
5.	Hatta	0.12	..	+36.75	+32.73	Industry
6.	Panagar	0.12	..	..	+58.59	Industry-cum-Primary activities.
7.	Gotegaon (Chhota Chhindwara)	0.11	+26.94	+36 .98	+38.53	Srvice cum-Trade & coemmerce-cum-Industry.
Class V Town.						
1.	Katangi	0.08	..	..	+36.35	Industry.
2	Patan	0.07	..	..	+29.91	Industry-cum-Primary Activities.
Class VI Town						
1.	Dungaria Chhapara	0.05	..	..	+21.25	..

Source :—Census report, 1971.

Panagar, which emerged as a Town after the census operation of 1961 recorded higher percentage increase during 1961-71. In case of Jabalpur, the decennial growth rate during 1961-71 has marginally comparatively increased than that of 1951-61. Thus, it is observed that the impact on Jabalpur seems to have remained constant.

Amongst Class II towns viz. Damoh and Murwara, the growth rate of population of II towns viz. Damoh and Murwara, the growth rate of increased during 1951-61 and 1961-71.

Out of Class III towns viz. Seoni and Narsinghpur, the growth of population of Murwara is decreasing and that of Damoh is slightly 1951-61 as well as 1961-71 even when compared with Class II towns. Amongst Class IV Towns, the increase in the population of Gadarwara, Sihora, Kymore and Kareli is noticeably large. Kymore registered increase as a consequence of the Cement Factory whereas Katangi has developed as a consequence of increasing traffic between Jabalpur and Bhopal due to linkage by road to capital of the State.

In Class V and Class VI Towns, the growth was some what below normal. The analysis indicates that the urbanisation is a consequence of increasing industrial potentialities. Development of urban centres by provision of infrastructure does not seem to have received attention. In order to provide impetus for agriculture development and distribution and processing of agricultural products, it will be necessary to develop urban centres of various orders in the whole region.

It is also observed from the last table that Jabalpur being only a Class I town of the region is industry-cum-service town. Amongst Class II and Class III towns the functional category are industry-cum-service and service-cum-commerce while most of the Class IV towns are trade & commerce-cum-primary activities-cum-service towns.

The table reveals that the total growth of population in the study area is closely in pace with the total growth of population of the State. The urban growth in study area is, however, at a lower rate than the State. While the urban growth in Jabalpur district is identical to the urban growth in the State. In the study area, the urban growth is very much pronounced in Jabalpur district and so is the case with the urban centres. But this has not been found in the remaining districts either in population growth or in the significant increase in urban centres. Jabalpur being the largest city still has main attraction for migrants, followed by Katni (Murwara) and Damoh. Within a period of 70 years (1901 to 1971) the number of urban centres in the study area has increased almost to an extent of two-fold. In Jabalpur district also the number of urban centres is doubled. These centres are evenly distributed in a linear pattern along transportation axis.

JABALPUR : POPULATION CHANGES

2. T. 5

Year	City Population in lakhs (U. A.)	Percentage Decade Variation			
		Jabalpur	Indore	Gwalior	Bhopal
1	2	3	4	5	6
1901	90316	—	—	—	—
1911	100651	+11.44	—44.64	—39.07	—27.03
1921	108793	+ 8.09	+94.52	+34.60	—19.77
1931	124382	+14.33	+35.33	+11.67	+35.36
1941	178339	+43.38	+42.29	+43.75	+23.25
1951	256998	+44.11	+52.61	+32.38	+36.03
1961	367014	+42.81	+27.05	+24.43	+117.87
1971	534845	+45.73	+42.03	+35.12	+72.62

Source : Census of India, 1971.

The population increased sharply during the decade (1931-1941) showing the percentage decade variation of 43.38 as against 14.33 in 1931. From 1931 onwards the population increased steadily. The increase has been more steady and often higher than other urban centres of the State. This is attributed to constant increase in industrial and commercial activities creating more employment opportunities. During the last census period (1961-1971), the percentage-decennial increase was at the increased rate of 45.73% as compared to the preceding decade. The trend is likely to continue for sometime.

The following table illustrates population growth of Jabalpur city (M. C.) from 1901 to 1971 (excluding cantonment and Khamaria Ordinance Factory) compared with major cities in Madhya Pradesh.

JABALPUR : COMPARATIVE POPULATION DATA FOR MAJOR CITIES

(Municipal Corporation)

2. T. 6

Year	Population of Jabalpur	Percentage Decade Variation				
		Jabalpur	Bhopal	Indore	Gwalior	Raipur
1	2	3	4	5	6	7
1901	90316	—	—	—	—	—
1911	100651	+11.44	—27.03	—44.64	—39.07	+1003
1921	108793	+ 8.09	—19.77	+94.52	+34.60	+ 8.51
1931	104317	— 4.11	+35.36	+35.33	+11.67	+18.40
1941	140227	+34.42	+23.25	+42.92	+43.75	+39.82
1951	203659	+45.24	+36.03	+52.61	+32.38	+41.50
1961	295375	+45.03	+81.15	+27.05	+24.43	+55.66
1971	442481	+49.80	+60.77	+37.59	+28.01	+47.35

Source : Census of India, 1971.

On comparing the growth of popluation of the city with similar other cities in the State, it is found that except Bhopal, no other city has registered higher increase in populatoin than Jabalpur city. The increase in Bhopal is due to the establishment of the State capital and Bharat Heavy Electricals. But the cities like Indore, Gwalior and Ujjain have shown less increase during the decade. This leads to the conclusion that under normal conditions, Jabalpur city has registered more increase in population as compared with similar other cities in the State.

2.23 SEX RATIO

Under demographic studies. sex composition of a city deserves special attention as it has a bearing on socio-economic aspect of city life. The cities of India have a higher proportion of male population, and Jabalpur is no exception to it. In fact, all growing urban centres suffer from unbalanced sex ratio and drab social and cultural life. Uncertainty of employment of immigrating working force coupled with acute housing shortage induces migration of male members in the initial stages.

JABALPUR : SEX RATIO VARIATION

Females per one thousand males)

2-T-7

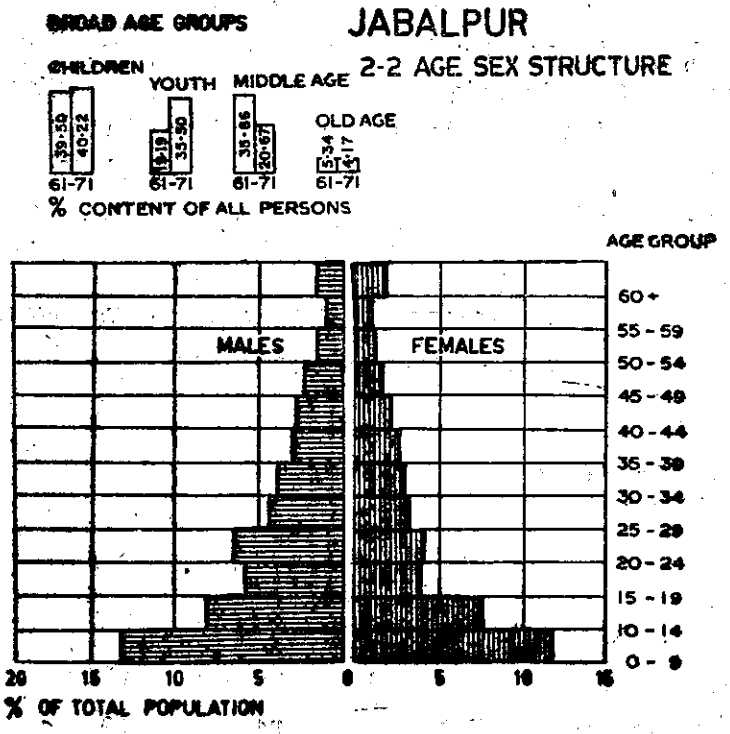
Name of the City/ State	1971	1961	1951	1941	1931
1	2	3	4	5	6
Jaabalpur U. A.	815	809	832	732	825
Jabalpur M. C.	853	845	897	857	843
Indore U. A.	839	851	854	766	731
Indore M. C.	865	851	854	... 766	731
Madhya Pradesh (Urban)	868	896	910	882	869

Source : Census of India, 1971.

The above table reveals that the Municipal areas contain higher female proportion than the urban agglomeration. The immigrating working force normally find accommodation in fringe areas. Sex ratio changes in the city as compared to the State as a whole have reflected interesting results. Sex ratio for Jabalpur remained lower than that of State's urban average.

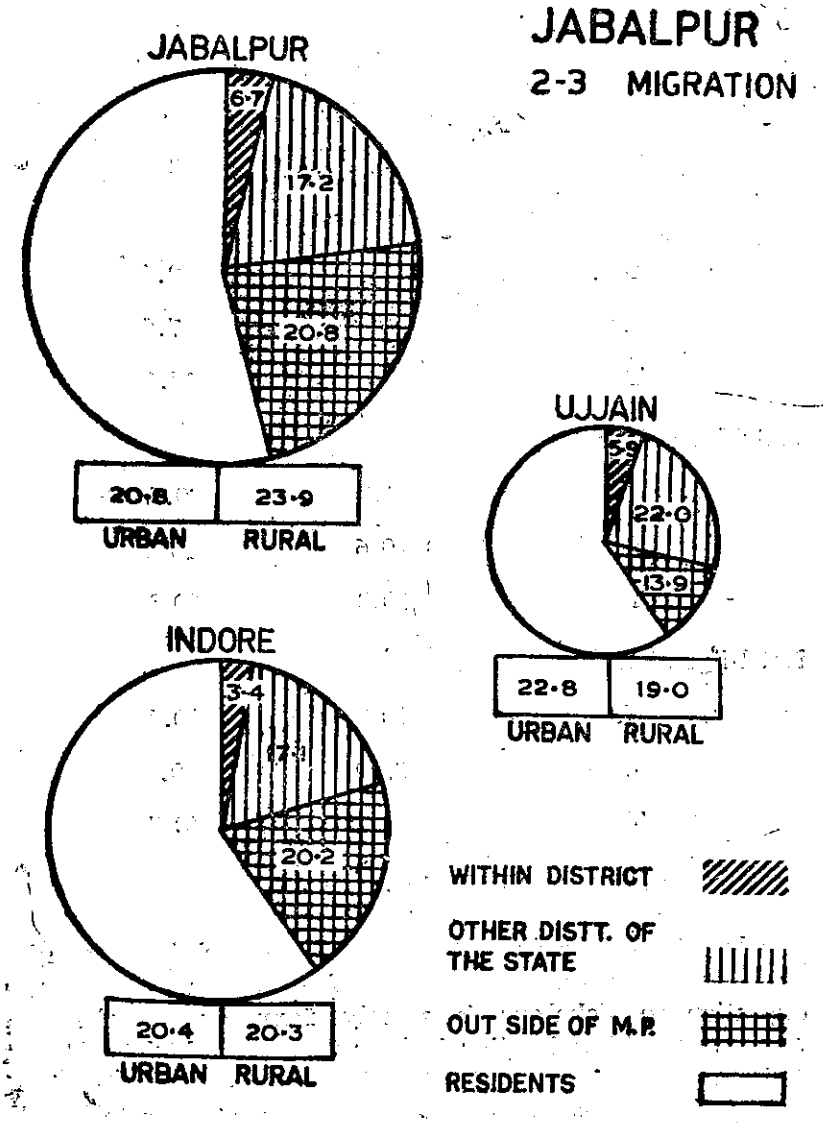
2.24. AGE—SEX STRUCTURE

The study of broad-age groups, 0-14, 15-34, 35-59 and 60+ roughly correspond to children, young persons, middle-aged and old persons. A comparative study of 1961 and 1971 figures indicates that there has been a slight increase in percentage of young person, which indicates migrants for availing job opportunities. As per 1971 records, it is revealed that 39.5% of the population belong to the child-age group (0-14), 35% to young-age group (15-34) (mostly in educational persuits and self-earning), 20% to middle-age group (35-59) and 5.5% belong to old-age group which consist of mostly retired and dependent persons.



2.25 MIGRATION

The study of migration to city is an essential aspect of planning. The component of migration alongwith natural increase has great significance in population changes. The phenomenon of migration manifests itself most vivdly in the urban areas, where it accounts for the bulk of population increase. The causes of migration from the rural to the urban areas are described as due to "Push and Pull factors". In estimating the future population of the city which is subject to special stress of immigration has to be throughly evaluated. Unfortunately the latest census on migration is not available. The quantitative measurement of



migration is really very difficult, particularly its break up into immigration. The data on migration for Jabalpur city for 1971 census are not available. However, the data based on 1961 census are available which have been compiled in the following table :—

JABALPUR: MIGRATION FROM URBAN AND RURAL AREAS (Percentage)
2-T.8

Migration From	To Jabalpur City	Comparision With Other Cities	
		Indore	Ujjain
Within District			
Urban	2.1	1.2	1.8
Rural	4.6	2.2	4.1
Total	6.7	3.4	5.9
Other District of State			
Urban	7.5	9.6	13.9
Rural	9.7	7.5	8.1
Total	17.2	17.1	22.0
Outside Madhya Pradesh			
Urban	11.2	9.6	7.1
Rural	9.6	10.6	6.8
Total	20.8	20.2	13.9
Net Migration			
Urban	20.8	20.4	22.8
Rural	23.9	20.3	19.0
Total	44.7	40.7	41.8

Source : Census of India, 1961.

The last table reveals that 44.7% of the total population have migrated to the city. In other words 2 out of every 5 persons are migrants. The migration to Jabalpur is mainly from outside the State. A small percentage of immigration is from the same district. Nearly half of the immigration is from outside the State. Migration to the city is more from urban areas as compared to rural areas. Comparing with Indore and Ujjain, the table reveals that Jabalpur recorded more or less the same rate of migration as that of Indore and has, however, recorded less migration as compared to Ujjain. Migration from rural areas to all the three towns is almost equal.

CHAPTER 3

ECONOMIC PROFILE

The ultimate goal of planning is to achieve a better standard of living for every citizen. This can be achieved to a great extent through an optimum utilization of economic resources. An analysis of economic resources, thus, becomes an important requisite for planning a city. The analysis of the economy of Jabalpur city reveals that it is primarily an industrial-cum-commercial town, although there are considerable employment potentialities in other service sectors also. The city has a considerable influence not only on the hinterland but also on the country as a whole, mainly owing to the defence establishment and location of Post and Telegraph Workshop. The Heavy Vehicles Factory employing nearly 10,000 workers is engaged in the production of winder range of auto-vehicles which caters to the needs of various public and private sectors. Jabalpur is situated advantageously at such a place which has considerable possibilities of industrial and commercial development.

3.1 CHANGES IN URBAN ECONOMIC STRUCTURE IN JABALPUR REGION

The economic strucure of urban centres of the region is often affected by a change in the region's economy. The extent to which an urban centre is affected due to these economic changes depends upon locational aspect with advantageous transport linkages, and inter-communication with other centres. Economic changes are reflected to some extent in changes in occupational pattern which is compiled in the following table :—

JABALPUR : CHANGES IN URBAN ECONOMIC STRUCTURE IN JABALPUR REGION 3-T.1

S. No.	Category of Workers	Percentage Increase/Decrease 1961-71			
		Jabalpur City	Other Urban centres of Jabalpur Region	Jabalpur Region (Urban)	Madhya Pradesh (Urban)
(1)	(2)	(3)	(4)	(5)	(6)
1.	PRIMARY	—13.0	52.7	36.1	26.6
2.	SECONDARY	9.1	4.7	6.2	2.0
	(a) Manufacturing Industry	28.8	35.7	32.8	25.1
	(b) Household Industry	—3.0	—15.7	—12.6	—18.6
	(c) Construction	—35.6	—4.9	—19.5	—32.8

(1) (2)	(3)	(4)	(5)	(6)
3. TERTIARY	26.8	20.6	22.9	25.9
(a) Trade and Commerce	31.7	25.6	27.9	32.1
(b) Transport and Storage	20.6	28.1	24.5	36.5
(c) Services	27.2	16.1	19.9	19.8
Total	17.2	18.0	17.7	17.9

Sources : Compiled from Census Report.

The above table reveals an optimistic picture of industrial growth in Jabalpur and other centres of Jabalpur region which comprises the districts of Jabalpur, Damoh, Sagar, Narsimhpur and Mandla. In case of manufacturing industries there has been an increase of 32.8% in Jabalpur region as a whole which is higher than the figure of 25.1% for Madhya Pradesh (Urban) Analysing further, it is revealed that in other urban centres of region excluding Jabalpur city the increase has been to the extent of 35.7%. However, the increase in Jabalpur has been 28.8%. The employment of workers engaged in trade and commerce has been 27.9% in Jabalpur region as a whole which is lower then the figure of urban areas in the State which 32.1%, when compared with other centres of Jabalpur region it is found that Jabalpur registered an increase of 31.7% as against the figure of 25.6% for other urban centres of the region. The growth in trade and commerce activities of Jabalpur city is more than the other urban centres and the region as a whole. It leads to conclusion, therefore, that Jabalpur has emerged as a most important and fast-growing centre of trade and commerce and industrial activity in the whole region.

3.11 EMPLOYMENT AND OCCUPATIONAL STRUCTURE

(a) Employment Structure: The qualitative nature of workers living in the city is reflected by the National classification of occupation by profession. In this connection the data for 1961 (since 1971 data is not yet available) has been analysed which indicates that the craftsmen and production process workers formed 44.1% of the total workers which is higher than the percentage of Raipur (39.7%). But this percentage is slightly lower when compared with Indore and Ujjain which shared nearly half of the total workers in this category. This shows that Jabalpur is a production centre. The next category is that of administrative, executive, managerial clerical and other related workers which shared a percentage of 21.4% which is more than that of Raipur (12.5%), Indore (13.1%) and Ujjain (10.4%). This reflects the administrative character of the town. The third category of sales workers employed 9.6% which is lower than Raipur (16.9%). The fourth category comprising professional, technical and related workers accounted for only 5.7% which is lower than Raipur, Indore and Ujjain in whose cases the percentages are 6.5, 8.1 and 7.5 respectively. However, these data are based on 1961 census. In 1971, there is considerable increase in tertiary sector and hence this will reflect

directly in the percentage for 1971 which can safely be anticipated as on par with similar cities in Madhya Pradesh like Raipur, Indore and Ujjain.

(b) Occupational Pattern : The sector-wise analysis of occupational pattern facilitates to assess the land requirements and related infrastructure in context to the Development Plan.

The ratio of workers to the total population has gone down from 327 in 1961 to 285 in 1971 per 1000 population. The data for the two census years are not strictly comparable because of the change in definition of worker. However, broadly speaking the decrease may be attributed to the lack of employment opportunities, under employment improvement in educational facilities etc. The occupational structure in broad categories of workers and economic sectors for the years 1961 and 1971 is given in the following table :—

JABALPUR : CHANGES IN OCCUPATIONAL STRUCTURE

3-T.2

S. No.	Category	No. of Workers		Distribution of 1000 Workers		Workers per 1000 Persons	
		1961	1971	1961	1971	1961	1971
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Primary Sector							
I.	Cultivator	3602	2192	37	19	12	6
II.	Agricultural Labourer	1188	4202	13	28	4	8
III.	Mining Quarrying live-stock	2038	1329	21	9	7	2
Total (Primary Sector)		6828	8455	71	56	23	16
Secondary Sector							
IV.	Household Industry	12241	12172	126	80	42	23
V.	Manufacturing	19866	38647	205	254	67	72
VI.	Construction	5423	4084	56	27	18	8
Total (Secondary Sector)		37530	54913	387	361	127	103
Tertiary Sector							
VII.	Trade and Commerce	13984	20212	144	133	47	38
VIII.	Transport and Storage	12791	17013	132	112	43	32
IX.	Service	25798	51474	266	338	87	96
Total (Tertiary Sector)		52573	88699	542	583	177	166
GRAND TOTAL		96931	152067	1000	1000	327	285

Source : Census of India 1961, 1971

The above table reveals that the number of workers per 1000 workers in primary sector has gone down from 71 in 1961 to 56 in 1971. A similar trend is apparent in the case of secondary sector as a whole, where the figures for 1961 and 1971 stand at 387 and 361 respectively but the ratio of workers in manufacturing has in fact increased from 67 to 72 per thousand persons. This reveals changing character of industrial activity. The respective figures in case of tertiary sector show that the number per 1000 workers has increased from 542 to 587 which shows the marginal increase in this sector in normal condition.

The following table shows a comparative picture of all Class I towns and urban areas of India and Madhya Pradesh :

JABALPUR : OCCUPATIONAL PATTERN OF CLASS I TOWNS

3-T.3

S. No.	City/Town	Tertiary Sector	Secondary Sector	Primary Sector	Participation Rate
(1)	(2)	(3)	(4)	(5)	(6)
1	India (Urban)	54.9	31.3	13.8	29.4
2	M. P. (Urban)	54.1	29.0	15.9	28.1
3	Bhopal	64.0	32.8	3.2	28.7
4	Indore	58.4	39.4	2.2	26.2
5	Gwalior	56.2	36.3	7.5	26.0
6	Raipur	68.3	23.1	8.6	29.1
7	Ujjain	52.1	40.0	7.9	25.7
8	Sagar	51.3	40.5	7.7	36.4
9	Jabalpur	58.3	36.1	5.6	28.5
10	Ratlam	68.1	26.9	5.0	25.2
11	Burhanpur	37.5	49.9	12.6	27.3
12	Bilaspur	66.3	18.1	15.6	29.9
13	Durg-Bhilai	40.6	52.3	7.1	30.7

Source : Census of India.

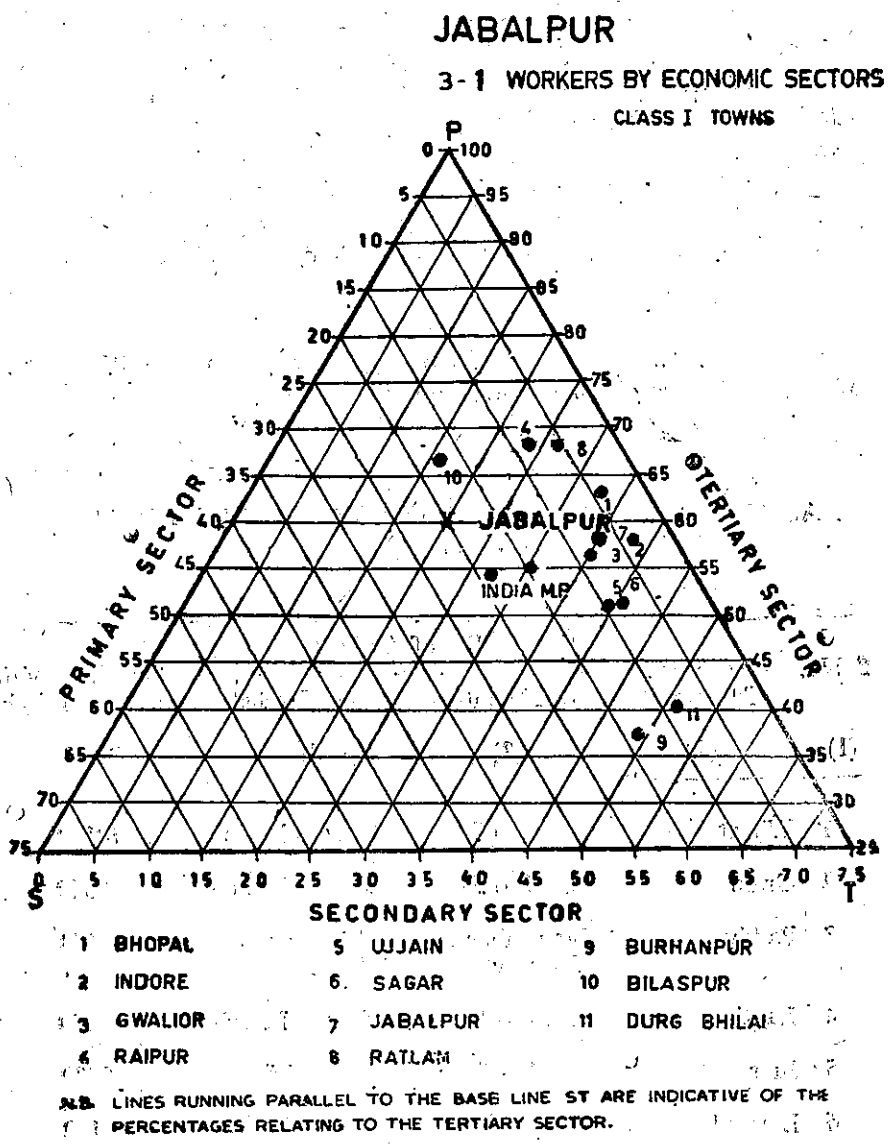
TERTIARY SECTOR

The above table reveals that Jabalpur occupies sixth place with regard to percentage of workers in tertiary sector.

It also shows that the workers content in tertiary sector is more in the case of divisional headquarters towns. Ratlam is the only exception where the percentage stands at 68.1. This is so because Ratlam is the

divisional headquarters of the Western Railways, though not an administrative headquarters.

In other words, the administrative divisional headquarters towns are basically service-cum-commercial towns.



Secondary Sector

In this respect also Jabalpur occupies sixth place (36.1%) amongst Class I cities of the State. Durg-Bhilai with 52.3% workers engaged in secondary sector tops the list with Burhanpur (49.9%) closely following it. Since nearly half of the workers engaged in secondary sector, these two are basically industrial towns.

PRIMARY SECTOR

The primary sector occupies the lowest position in Class I towns. The percentages range between 2.2 in case of Indore and 15.6 in case of Bilaspur. In Jabalpur 5.6% of workers are engaged in primary sector.

3.2 WHOLESALE TRADE

3.21 *Wholesale Trade in Agriculture Produce*

One of the activities of the city is the wholesale trade in Agriculture. The Agriculture produce is brought by the cultivators from hinterland and small traders from the primary markets for sale in the city. A part of this is consumed by the urban population whereas the surplus is exported to other places. For assessing the quantum of agricultural produce coming into the city, the only authentic information is available from the arrivals in the Krishi Upaj Mandi which has started functioning very recently. The regulated markets not only ensure appropriate return to the cultivators but also provides a good index of wholesale trading in agriculture commodities. However, overall arrivals may be higher than the reported one.

The data in respect of arrivals of agricultural commodities for a period of 6 months are given in the following table :

JABALPUR : QUANTITY AND VALUE OF ARRIVALS IN THE MARKET
(APRIL 75 to SEPTEMBER, 75) 3-T.4

S. No.	Name of Commodity	Seasonality of Arrivals		Quantity (in tonnes)	Value (Rs. in lakhs)
		Peak Months	Lean Months		
(1)	(2)	(3)	(4)	(5)	(6)
1	Wheat	April to June	July to March	10120	202.40
2	Grain	April to June	July to March	7340	146.80
3	Paddy	November to January.	February to June.	150	1.50
4	Lantil	April to June	July to March	2460	240.00
5	Juar	April to June	July to March	2430	48.00
6	Linseed	April to June	July to March	2150	43.00
7	Niger	November to January.	February to June.	1040	21.40
8	Mustard	December to March.	January to June.	1400	36.00
9	Sesamum	December to March.	January to June.	300	7.50
	Total	..	..	..	746.60

Source : Joint Director, Agriculture, Jabalpur.

The previous table shows that wheat worth an estimated value of Rs. 202.40 lakhs comes in the market in a big quantity. This is so because Jabalpur advantageously situated in the most fertile land known as haveli plains. The second comes Lantila commercial crop. The table also shows that the other commercial crops linseed, niger, mustard and sesamum arrive in good quantities.

Jabalpur will continue to play a major role in the region in respect of wholesale trade in agriculture can be seen from the following table :

JABALPUR ; PROJECTED ARRIVALS IN THE MARKET (1975-76)

3.T.5

S. No.	Market Year	Projected Arrivals @2% compound increase per year (in '000 quintals)	Value of arrivals in lakh rupees @ Rs. 200 per quintal.
(1)	(2)	(3)	(4)
1	1975-76	56100	1122.00
2	1976-77	57222	1144.00
3	1977-78	58366	1167.32
4	1978-79	59533	1190.66
5	1979-80	60723	1214.46
6	1980-81	61937	1238.74
7	1981-82	63275	1265.50
8	1982-83	64540	1290.80
9	1983-84	65830	1346.60
10	1984-85	67146	1342.92
11	1985-86	68489	1369.75
12	1986-87	69858	1397.60
13	1987-88	71255	1425.10
14	1988-89	72680	1453.68
15	1989-90	74133	1482.66

Source : Joint Director, Agriculture, Jabalpur.

The foregoing analysis leads to the inevitable conclusion that the agricultural production is likely to be considerably incresaed. In other words, the various agricultural programmes are going to boost up agricultural production which ultimately can be properly utilized through the establishment of agro-based industries.

3.22 Wholesale Trade in Other Commodities

The movement of commodities gives an idea of the trade pattern of the city.

(a) Imports :—The following table shows the import of various commodities for the year 1975-76.

JABALPUR : IMPORTS OF COMMODITIES, (1975-76) 3-T-6

S. No.	Commodity	Quantum Received in Thousand quintals (Rail borne)
(1)	(2)	(3)
1	General Goods	662.6
2	Food grain and pulses	460.7
3	Vegetable Oil	366.6
4	Coal	351.7
5	Military Stores	242.6
6	Cement	219.7
7	Salt	136.7
8	Sugar	98.0
9	Rubber Goods	50.8
10	Others	30.2
11	Fertilizers	20.0
12	Oil Seed	6.5
13	Tobacco	3.4

Source : Superintendent of Railways, Jabalpur.

The above table shows that the important commodities of imports are food grains and pulses, coal, vegetable oil, general goods, cement, and military stores.

It may not be possible to project the future trend in this regard as it depends upon the factors e.g. income elasticity preference, per capita income etc. But it is worth mentioning that many of the items which are imported from outside can be produced in the city itself. This calls for a rapid industrialisation for which Jabalpur is ideally suited due to advantageous location and trend of consumption not only in context to the city but the region as a whole.

(b) Exports :—The data for export of commodities for the year 1975-76 presented in the following table shows that timber, food grains and pulses, oil, oilseed and oil cake, fire-bricks and fire-clay are the major items of export.

JABALPUR : EXPORT OF COMMODITIES (1975-76) 3-T.7

S. No.	Commodity	Quantum despatched in thousand quintals (Rail borne)
(1)	(2)	(3)
1	Timber	423.1
2	Food grain & Pulses	140.6
3	Oil, Oil Seed & Oil cake	88.3
4	Fire-bricks, Fire-clay etc.	65.8
5	Military Stores	58.1
6	Coal	46.7
7	Others	45.0
8	General Goods	41.2
9	Electric Goods	40.0
10	Railway Material	31.4
11	Iron Material	26.3
12	Hide and Skin	9.6
13	Bamboos	8.7
14	Rubber Goods	8.4
15	Harra	7.5
16	Bidi and Bidi leaves	3.3

Source : Superintendent of Railways, Jabalpur.

The above figures show the export of commodities from Jabalpur and Madan Mahal Railway Stations. The export of commodities is further likely to boost up in consonance with diversified industrial base at an accelarated rate. The forest and agro-based industries are to be encouraged.

3.3 CONSTRUCTION ACTIVITY

The construction activity is a striking index for gauging the development pace of the city. The data presented in the following table show the number of buildings constructed and the approximate involvement in buildings activity in Jabalpur city.

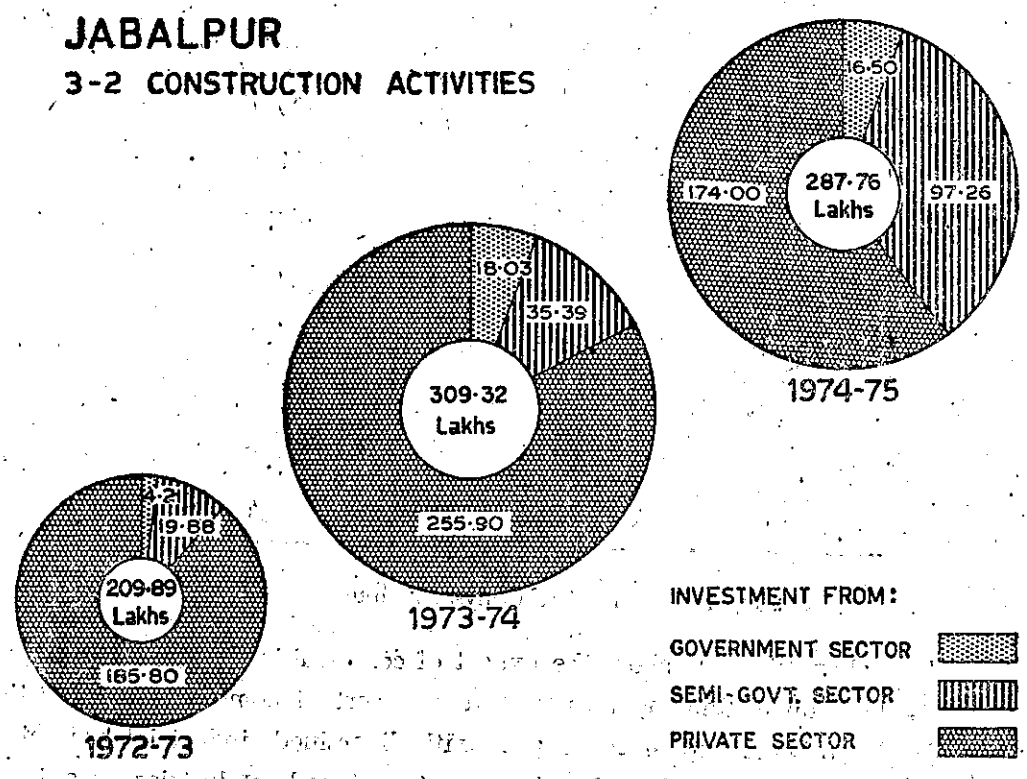
JABALPUR : CONSTRUCTION ACTIVITY (INVESTMENT IN LAKHS/RS.)

3-T.8

S. No.	Sector	1972-73		1973-74		1974-75	
		No.	Investment	No.	Investment	No.	Investment
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Government	30	4.21	73	18.03	64	16.50
2	Semi-Govt.	178	19.88	175	36.39	527	97.26
3	Private	743	185.80	853	255.90	580	174.00

Source :—Compiled by Town & Country Planning Department.

The above table reveals that the construction activities have considerably increased in 1974-75 as compared to the preceding years. In private



sector the construction activity in 1973-74 is more (853 units) as compared with 580 units in 1974-75. But, even in spite of this fact there is a considerable increase in bulk-building activities in 1974-75 due to the fact that the rate of building construction in private sector had positively increased in consonance with the Government policies. In future, the trends in building activities are likely to increase.

The investment input in building construction activities in 1974-75 was to the tune of Rs. 287.76 lakhs as against Rs. 209.89 lakhs in 1972-73. The trend is likely to continue in future and the financial outlay in public sector is likely to be at higher rate. The various programmes being spelled out to provide housing in the urban sector will necessarily induce more investment in this activity.

3.4 BANKING

The economic development is closely related with the banking activity. It is an important index of economic development. Morever, the increase in deposits give an indication for the feasibility of raising necessary investment in the development activities. The data given below show the number of banks along with their deposits and advances :—

JABALPUR : DEPOSITS AND ADVANCES BY SCHEDULED BANKS
(Rs. in lakhs)

3-T.9

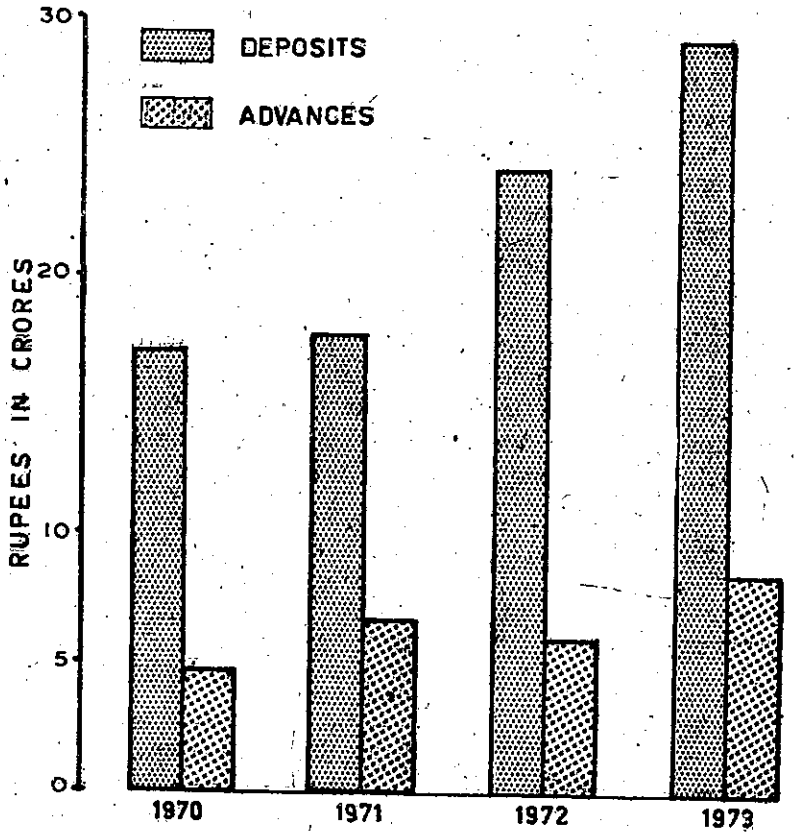
Year	No. of Banks/ Branches		Deposits		Advances	
	Jabalpur	Raipur	Jabalpur	Raipur	Jabalpur	Raipur
1970	20	10	1701	635	464	430
1971	23	13	1753	798	665	447
1972	25	15	2406	862	588	556
1973	30	15	2915	1144	841	609

Source : Statistical tables relating to Banking in India, issued by Reserve Bank of India.

The above table shows that the deposits and advances have registered a considerable increase during the period of four years which means that the saving capacity has increased although some increase may be attributed to change in banking habits. Any way, the continued efforts in mobilizing the savings will pave the way for raising capital required for ecnomic development of the city. When compared with Raipur, it is found that Jabalpur has twice the number of Banks than that of Raipur. The deposits are almost three times whereas the advances are only one and half times. This indicates that investment trends in

JABALPUR

3-3 DEPOSITS & ADVANCES BY SCHEDULED BANKS



Jabalpur are tradtionally conservative. These trends with new orientation of enterprenuer and investment pattern are likely to increase economic activities.

3.5 RECEIPTS FROM SALES TAX

A study of receipt from sales tax gives an idea of the level of trade and commerce as well as the purchasing capacity of the city dwellers to some extent. It also gives an insight into economic conditions of the people. The receipts from sales tax have increased from Rs. 381.56 lakhs in 1971 to Rs. 721.18 lakhs in 1975-76. The collections for 1976-77 for which the target has been fixed at Rs. 940.00 lakhs are likely to increase because of the turn over and entry taxes which are levied due to abolition of Octroi. Motor parts, some products of small scale industries

electrical and luxury goods, foreign liquor, grossery, auto parts, motor cars etc. contribute major share to sales tax proceeds. The sales tax collections when compared with Raipur are found to be more in 1972-73. The total collections were Rs. 321.31 lakhs which rose to Rs. 374.93 lakhs in 1973-74 and further rose to Rs. 454.62 lakhs in 1974.75.

3.6 MUNICIPAL FINANCES

The income and expenditure pattern of a local body is an other indicator of assessing the economy of an urban centre. Jabalpur is one of the oldest municipality in the State as it came into existence in 1864 and attained the status of Municipal Corporation on 1st June, 1950. During its long life of more than a century it has a chequered history and has added many feathers to its cap. The income of Jabalpur Corporation has increased from Rs. 104.64 lakhs in 1965-66 to Rs. 221.90 lakhs in 1974-75 registering an increase of more than 113% during the decade. But the expenditure has recorded an increase of 185% from Rs. 71.36 lakhs in 1965-66 to Rs. 203.10 lakhs in 1974-75 during the same period. The table given below gives the income and expenditure data of the Municipal Corporation :—

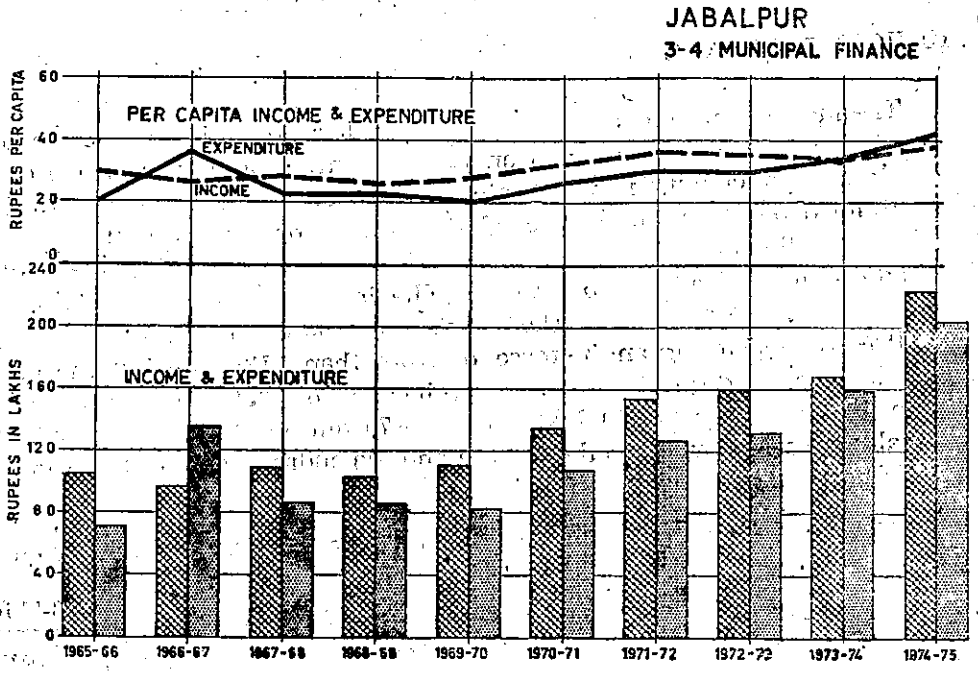
JABALPUR : INCOME AND EXPENDITURE OF MUNICIPAL CORPORATION

3-T.10

Year	INCOME		EXPENDITURE	
	Total Income (Rs. in lakhs)	Per Capita (income in Rs.)	Total Expdt. (Rs. in lakhs)	Per Capita Expdt.
(1)	(2)	(3)	(4)	(5)
1965-66	104.64	29	71.36	20
1966-67	95.70	26	135.15	36
1967-68	108.98	28	85.72	22
1968-69	103.00	26	84.71	22
1969-70	110.03	27	81.94	20
1970-71	137.12	33	107.24	26
1971-72	154.08	36	126.89	30
1972-73	159.58	35	131.45	29
1973-74	168.25	34	159.08	34
1974-75	221.90	42	203.10	38

Source.—Municipal Corporation, Jabalpur

The per capita income and expenditure have also increased. The former has increased from Rs. 29.00 in 1965-66 to Rs. 42.00 in 1974-75, while the latter has risen from Rs. 20.00 to Rs. 38.00.



JABALPUR: REVENUE AND EXPENDITURE PATTERN OF MUNICIPAL CORPORATION 3-T.11

S. No. Item	70-71	71-72	72-73	73-74	74-75
A-Income	137.12	154.08	159.58	168.25	221.90
1. Octroi	78.14	87.81	97.71	105.38	138.46
2. Registration	33.45	32.80	18.71	35.89	42.96
3. Lease	5.98	8.81	14.03	6.65	7.02
4. Other	19.55	24.66	29.13	20.33	33.46
B—Expenditure	107.24	126.89	131.45	159.08	203.10
1. Water Supply	10.56	12.01	12.22	14.52	17.29
2. Drainage	5.11	7.73	8.87	9.64	10.24
3. Sanitation	63.14	72.21	70.79	74.69	110.33
4. Education	7.41	10.76	8.90	12.10	12.05
5. Other	21.02	24.18	30.67	48.13	53.29

Source.—Municipal Corporation, Jabalpur.

The income and expenditure as analysed in the above table shows that octroi has been a major source of revenue followed by registration. On expenditure side sanitation took the largest share. The financial resources of the Corporation include conservancy tax, professional tax, registration fees, vehicle tax, sales proceeds of lands and the revenue from markets, slaughter houses and commercial undertakings.

3.7 INDUSTRIAL INVESTMENT

The industrial investment in the city has been at the tune of Rs. 360.61 lakhs in 1975-76 excluding defence industries which clearly shows that there has been considerable increase in the industrial activities in the city. The establishment of industrial estate and the creation of favourable industrial climate will induce the enterpreneurs for establishing the industries which will pave the way for a better and diversified industrial base.

The major industrial activities of the city include ancillary, engineering industries, power loom industry, Bidi industry.

3.71 POWER LOOM INDUSTRY

Jabalpur occupies second place after Burhanpur with regard to power-looms in the State. Nearly 2000 power looms are working. In 1969-70 there were 631 weavers who invested nearly Rs. 7000/- in the industry. But during the year 1975-76 the number of weavers rose to more than 1000 with a total investment of Rs. 85000/-. The information regarding the business activity of handloom industry shows that during 1973-74 the total sales proceeds amounted to Rs. 16.13 lakhs. They produce lungi, towels, latha, bed-sheets and other household products etc.

3.72 BIDI INDUSTRY

The bidi industry is not only the major industry of the city but of the region as whole. It has an important bearing on the economy of the city. The industry is carried out at the house of the worker himself and members of the household also work in making bidies. The raw materials consisting of leaves, tobacco and thread is supplied to the workers by the contractors. The remuneration is paid on the basis of number of bidies prepared. There are nearly 20,000 workers engaged in this industry which is mainly located in Garha, Motinala, Gorakhpur, Bagherapura, Ghamapur, Kariapathar, Hanumantal etc. As a matter of fact, this is a supplementary type of industry through which the income of the households is supplemented. On an average a household earns an income of about Rs. 10/- per day.

3.73. ECONOMIC OPPORTUNITIES

Nature has endowed upon Jabalpur and its environs valuable natural wealth of fertile agricultural land, forest and mineral resources with the considerable potentialities for development. The implementation of various economic programmes are playing important role in shaping

the development as well as the proper exploitation of the economic resources which have remained untapped so far. The various programmes and schemes undertaken to ameliorate the life of masses in all the spheres of the social and economic life, will go a long way in the prosperity of this area.

3.8 COMMUTERS

An urban centre normally draws working force from the surrounding areas. The hinterland for working force is often independent on the serge of the city. The influence area is an index of importance with regard to employment, trade and commerce, industry, services etc. According to a survey conducted by the Town & Country Planning Department nearly 17000 people commute for service and other purposes to the city from the surrounding areas through different means of transport The survey has further revealed that nearly 54% commute daily while 24%, 10% and 12% commute weekly, fortnightly and occasionally respectively. With regard to the purpose, it has been found that largest number of people (36.4%) commute to the city in connection with the service whereas 20.2% commute in search of employment on daily wages. The number of persons coming for business purposes occupies third place with 17.7%. The commuters for health services and education share the respective percentages of 8.5 and 9.2.

3.9 MAJOR CITY FUNCTIONS

Status, character and function are intangible values attached with each city. Activities of the citizens emerging from the city functions are manifested in physical development. What is significant is a harmonious blending of the functions and the 'Activity' which leads to a healthy and orderly development of the city reflecting its true personality and character.

3.91 Regional Centre of Trade and Commerce

The city has grown into big centre of collection and distribution of various commodities. Large mandis dealing in vorious commodities such as grain, cloth, hardware, glassware, timber, vegetable and fruit where wholesale transactions take place.

Activities in transport, storage and transhipment have also sprung up on old Mirzapur Road near Damoh Road junction and along with National Highway No. 7.

3.92 Industrial Centre

Rapidly expanding industries have also given to this city status of an important industrial centre. The establishment of ancillary industries providing component parts to Madhya Pradesh Electricity Board, Heavy Vehicles Factory and other defence manufacturing units have come to

stay with possibilities of future expansion. There are as many as 1100 manufacturing establishments producing goods like cloth and clothing, Iron and Steel, wood processing, building materials, transport equipments etc.

3.93 Educational Centre

Jabalpur has attained an important status of a regional as well as State-level educational centre. The city is privileged to have two universities *viz.* Jabalpur University and Jawaharlal Nehru Agriculture University. offering educational facility to the region and the State in large. The telecommunication training centre meets the training needs at National level.

3.94 Administrative Centre

Jabalpur is the seat of Divisional Headquarters, with administrative officers at divisional and district level. It is also the divisional headquarters of central railway and head office of Madhya Pradesh Electricity Board.

CHAPTER 4
PHYSICAL GROWTH AND EXISTING LAND-USE PATTERN

Evolution of human settlement is a continuous process. Significant historical events, important policies and administrative decisions, efforts for physical improvements leave imprints on the form and pattern of settlements. Jabalpur is no exception, in fact very distinct features such as cantonment and defence establishment are recognisable which even now continue to influence the growth of the city. The deposition of various land uses is related with the type of activity in different parts of the city. In order to conceive an integrated city structure for the second largest city of Madhya Pradesh, it is necessary to know existing land-use pattern and its inter-relationship. The study will enable to determine the future land dispositions.

4.1 PHYSICAL GROWTH TRENDS

Jabalpur city consists of three main urban units :—

(a) The main city—(Area within M.C. limit)
(b) Khamaria (Defence establishments)
(c) Cantonment (Defence residential area)

Although defence establishments do not form part of the planning area but they are very important units of the city. Their functioning has, therefore, been taken into account for study and planning wherever possible.

During the last decade of 19th century, the establishment of Railways, Cantonment Board and High Court as well as the Gun Carriage Factory in 1904, settlement of land under Nazul in 1923, had significant influence on the development of land-use pattern of Jabalpur. With the growth in population there was a craving need of acquiring more land for residential purposes. Gol Bazar and Napier Town localities were laid down in 1910-1911, Wright Town in 1923 and Madan Mahal extension in 1935. All these localities have been consciously planned and developed. These efforts contributed largely towards planned development in the past.

The establishment of Ordinance Factory and Engineering College along Kundam Road and Heavy Vehicles Factory on the northern side of the city has intensified development at Ranjhi, Gokalpur, Karondi localities.

The location of Agriculture University at Adhartal on National Highway No. 7 has opened new areas for development. Scheme No. 9 and Scheme No. 3 have been undertaken by Improvement Trust along this National Highway. Housing Board has also launched housing schemes along this axis. Location of new mandi, agro-based industries, truch stand, forwarding agencies etc. along Damoh Road has resulted in development in this direction also. Development of large areas has been undertaken by the Improvement Trust and Housing Board. Location of Medical College in the south-west corner of the city along with National Highway No. 7 gave impetus to growth in this direction. The Improvement Trust Scheme No. 2B and the Dhanwantrinagar by Housing Board are apparent symptoms of physical growth that has taken place recently owing to impetus given by Medical College. The establishment of the Headquarters of M. P. Electricity Board at Rampur on Gwarighat Road gave another direction for the growth, consequently the development of Hathital Colony of Housing Board, Scheme No. 2A by Town Improvement Trust and Shanker Nagar development have taken place recently. The establishment of Jabalpur University near A. O. C. School in Pachpedi has given rise to spot development and has encouraged sizable densification in Pachpedi area.

The growth of the city is multi-directional. Although, in some cases, it is only spot development while in other direction it has given a definite axis of growth. Surprisingly the most of the important development in recent years is not physically contiguous or even directly inter-related to each other *e.g.* Engineering College is located on the north-eastern corner of the city while the Medical College has been located in the south-western corner of the city, directly opposite to each other separated by nearly 20 km. Similarly Agricultural University is located in the south-east corner with no direct or convenient link between the two educational institutions. New mandi has come up on the western side of the city. The problems, particularly of inter relationship created by spotty and multi-directional growth will have to be tackled through future growth pattern.

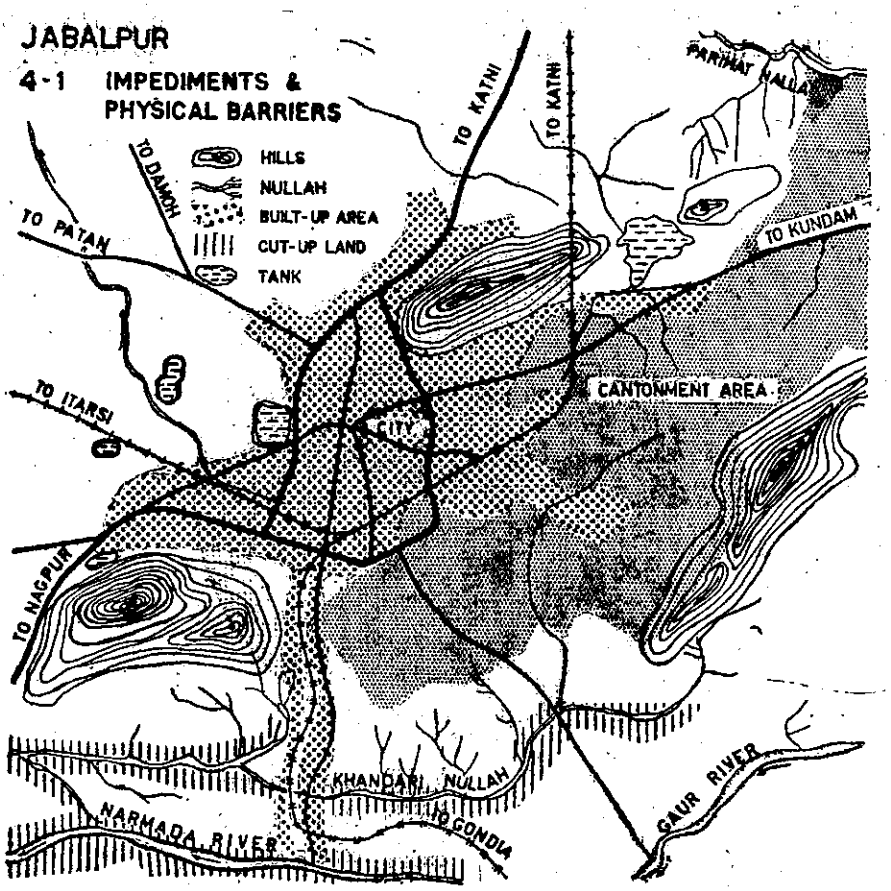
4.2. Physical Barriers

The physical growth of the city has been conditioned by :

(1) Topographic features ;
(2) The defence area in the crescent form in south-west.

The topographic features like Karia Pathar hills to the north-east, Sita Pahad and Khandari Nullah to the east, Madan Mahal hills and rock-

out-crops to the south have been responsible for arresting the continuous growth of the city and giving the city its present form.

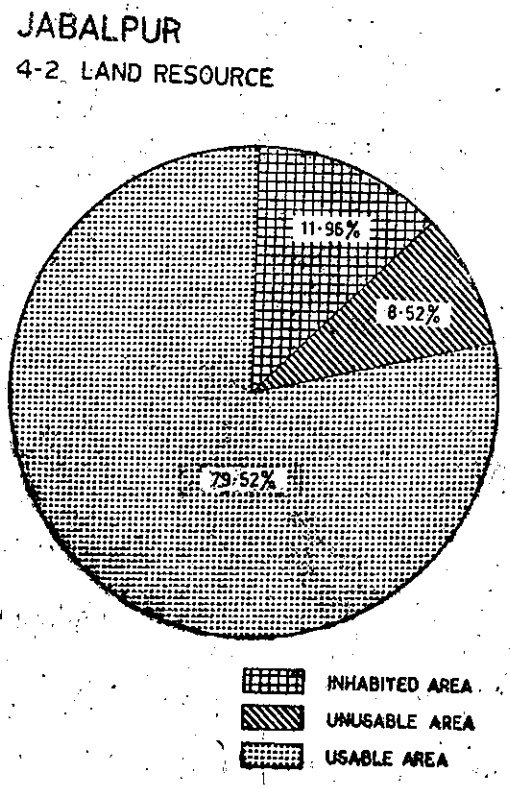


The defence area in the form of crescent starting from south and stretching to the east coupled with railway line horse shoe shape have forced the city to grow mostly on the northern side. This has also given rise to haphazard developments on the fringe of defence establishments and cantonment area.

4.3 LAND-USE ANALYSIS

The quality of urban life and functional efficiency of a city is dependent on proper disposition of activities, the inter-relationship it offers between the work centres, living areas and recreational areas. In order to conduct a systematic analysis of the problems regarding disposition of various activities expressed as land-use, the following method has been adopted. Land resources and uses of land have been studied broadly in respect of planning area, while detailed analysis has been done in respect of habited area within the planning area. Land uses within cantonment and defence establishment have been taken into consideration wherever necessary.

The total land included in Planning Area is 24517 hectares, out of this land the usable land is 19371 hectares. Which is 79% of the total land within the Planning Area. Unusable land within the Planning Area is



2117 hectares which is 8.63% of the total Planning Area. This includes the land under hills with rock outcrops and excessive slopes and extensive water bodies inclusive of water spread areas and areas liable to flooding. The inhabited area within the planning limits is 3029 hectares corresponding to 12.36%. The detailed information is contained in the table below:—

JABALPUR LAND RESOURCE 4-T.1

	Area in (hectares)	Percentage (hectares)
(1)	(2)	(3)
A. HABITATED AREA		
Within Municipal Corporation	2331	9.51
Outgrowth	698	2.85
Total	3029	12.36

(1)	(2)	(3)
B. UNUSABLE AREA		
1. Hills with rock outcrops and excessive slopes.	1087	4.43
2. Water bodies inclusive of	1030	4.20
Total	2117	8.63
C. USABLE LAND	19371	79.01
GRAND TOTAL	24517	100.00

Source : Field Surveys by Town & Country Planning Department.

.32 LAND–USE CLASSIFICATION

In order to understand the problems of land-use and to study quantum of land under various uses, the land-use has been classified into following 10 categories :—

1. Vacant
2. Residential
3. Commercial
4. Industrial
5. Transport & Communication
6. Public Utilities & Facilities
7. Public & Semi-Public Uses
8. Open Spaces
9. Agricultural land
10. Water Bodies

The same classification has also been adopted for the publication of existing land-use maps under Section 15 of Nagar Tatha Gram Nivesh Adhiniyam, 1973. This classification is also being adopted for Development Plan. It will facilitate a comparative study of existing land-uses and proposed land uses in the Development Plan. The following table gives quantum of land under various uses within Municipal limits and within habitated area.

JABALPUR : EXISTING LAND–USE PATTERN (1975) 4-T.2

(Area in hectares)

S.No.	Land use	Planning Area		Inhabited Area excluding Defence Area	
		Area	Percentage	Area	Percentage
(1)	(2)	(3)	(4)	(5)	(6)
1.	Residential	1503	6.1	1503	49.6
2.	Commercial	68	0.3	68	2.2
3.	Industrial	263	1.1	263	8.7
4.	Public & Semi-Public	458	1.9	458	15.1
5.	Public Utilities	53	0.2	53	1.8
6.	Recreation	39	0.2	39	1.3
7.	Transportation	645	2.6	645	21.3
8.	Vacant Land				
	(a) Usable	578	2.4	—	—
	(b) Unusable	1087	4.4	—	—
9.	Agricultural	18793	76.6	—	—
10.	Water Bodies	1030	4.2	—	—
	Total	24517.0	100.0	3029	100.0

Source : Field Survey conducted by Town & Country Planning Department.

4.33 EXISTING LAND-USE-PATTERN

A close perusal of table 4-T.2 reflects inadequacy of land for various uses. Area under residential use although appears to be high in percentage but actually there is shortage of housing because :—

(a) A large portion of existing housing area has low density.

(b) The plot efficiency in residential areas is less not in terms of coverage but in terms of floor area ratio.

Land under commercial and industrial uses is relatively low as, these functions are still in their formative stage. Looking to the needs of administrative buildings and allied institutions the land under public and

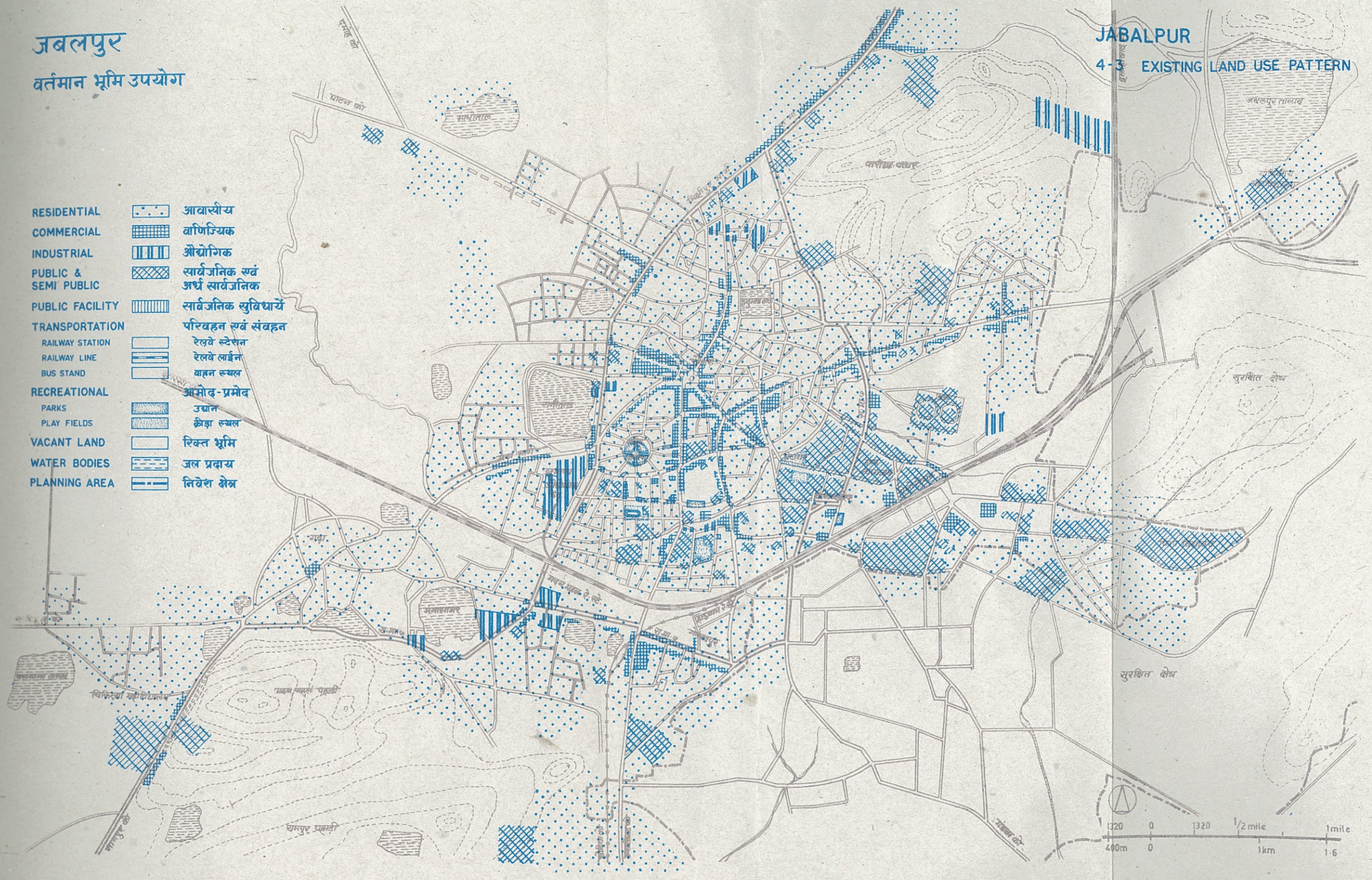
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JABALPUR

4-3 EXISTING LAND USE PATTERN

RESIDENTIAL		आवासीय
COMMERCIAL		वाणिज्यिक
INDUSTRIAL		औद्योगिक
PUBLIC & SEMI PUBLIC		सार्वजनिक एवं अर्ध सार्वजनिक
PUBLIC FACILITY		सार्वजनिक सुविधायें
TRANSPORTATION		परिवहन एवं संवहन
RAILWAY STATION		रेलवे स्टेशन
RAILWAY LINE		रेलवे लाईन
BUS STAND		वाहन स्थल
RECREATIONAL		आमोद-प्रमोद
PARKS		उद्यान
PLAY FIELDS		क्रीड़ा स्थल
VACANT LAND		रिक्त भूमि
WATER BODIES		जल प्रदाय
PLANNING AREA		नियोजन क्षेत्र



semi-public use is marginally at low side. The city also suffers extensively from inadequately developed recreational areas, although the land form and the environmental potentials for active recreational areas are available. It is necessary to utilise the qualitative aspect of environment for providing recreational areas at higher rate so as to meet the basic requirement of the city. Area under transportation is relatively satisfactory and is comparatively at higher side since Jabalpur is Divisional headquarters of Central Railway. However, the road capacities in terms of traffic volume it has to carry, needs to be improved.

Table 4-T.3 gives a comparative land-use analysis in respect of Jabalpur, Ujjain, Indore and Bhopal which is given in the following table :—

JABALPUR : COMPARATIVE LAND USE PATTERN

(Inhabited Area)

(Area in Hectare)

Land Use	Jabalpur		Ujjain		Indore		Bhopal	
	Area	Percentage	Area	Percentage	Area	Percentage	Area	Percentage
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Residential	1503	49.6	463	46.7	1194	46.5	1534	47.5
2. Commercial	68	2.2	39	3.9	146	5.7	65	1.9
3. Industrial	263	8.7	136	13.7	316	12.3	348	10.8
4. Public & Semi-Public	458	15.1	144	14.6	360	13.9	382	11.8
5. Public Utilities	53	1.8	17	1.7	51	2.0	160	4.9
6. Recreation	39	1.3	36	3.6	113	4.4	203	6.3
7. Transport	645	21.3	157	15.8	394	15.2	542	16.8
Total	3029	100	992	100	2574	100	3234	100

Source : Field survey by Town & Country Planning Department.

4.3.4 LAND-USE VARIATION

The land-use surveys undertaken by the Department at two spells, i.e. 1965 and 1975 enables to assess the land-use variation which has taken place.

The table below gives quantum of land-use for various purposes during that period :—

JABALPUR : LAND-USE VARIATION 4-T.4

(Inhabited Area)

S.No.	Land-Use	1965		1975	
		Area (Hectares)	Percentage	Area (Hectares)	Percentage
(1)	(2)	(3)	(4)	(5)	(6)
1.	Residential	1214	56.58	1503	49.6
2.	Commercial	62	2.91	68	2.2
3.	Industrial	97	4.53	263	8.7
4.	Public & Semi-Public	274	12.75	458	15.1
5.	Public Utilities	20	0.92	53	1.8
6.	Recreational	37	1.74	39	1.3
7.	Transportation	441	20.57	645	21.3
	Total	2145	100	3029	100

Source : Field survey by Town & Country Planning Department.

The table reveals that the pressure of growth of population has been higher on residential, industrial and transportation during this period and grew from its formative stage to relatively balanced land-use proportions. It is also seen that the city is gradually approaching towards more balanced land use proportions.

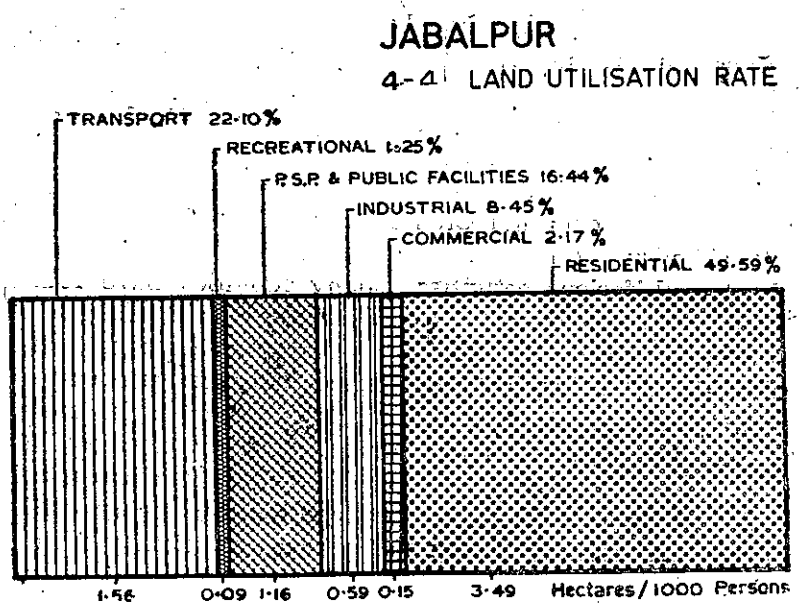
4.35 LAND UTILISATION RATES

In order to understand the intensity of use of land for various purposes, the proportion obtained in other similar cities, land utilisation rate has been worked out and given in the following table :—

JABALPUR: LAND UTILISATION RATES 4-T.5
(Inhabited Area)

S. No.	Land Uses	Comparative Land Utilisation (Hectare/1000 Persons)		
		Jabalpur	Bhopal	Indore
(1)	(2)	(3)	(4)	(5)
1.	Residential	3.40	3.41	1.98
2.	Commercial	0.15	0.14	0.24
3.	Industrial	0.59	0.78	0.55
4.	Public & Semi-Public	1.03	0.85	0.60
5.	Public Facilities	0.12	0.36	0.08
6.	Recreational	0.09	0.45	0.20
7.	Transportation & Communication.	1.46	1.20	0.64
	Total	6.84	7.19	4.29

Source: Field surveys, Town & Country Planning Department.



Urban spread of Jabalpur is at the rate of 5.84 hectares per 1,000 persons, the corresponding rate for Bhopal is more or less identical and the corresponding figure for Indore is 4.29 per 1,000 persons, this shows that

Jabalpur and Bhopal are developing at lower density than Indore. In view, of scarce urban land, cost of urban infrastructure, increase of distances between various activities and consequently cost of transportation, and intensive use of urban land should be encouraged to achieve compact urban growth.

Comparative figures for other various uses also reflect the inconsistancy of distribution of quantum of land under various uses. Higher and utilization rate can be achieved by vertical development particularly for residential areas. Apart from these facts, the city suffers from disparities in terms of densities, amenities and services. These inconsistencies, need to be minimized in the future development of city on the basis of Development Plan, which should spell out the proposals in this respect.

4.4 INTER-RELATIONSHIP OF DIFFERENT USES

The land-use pattern, which has presently emerged, is an outcome of successive decisions both conscious and unconscious, formal and informal taken during the past. The outcome is reflected through the existing land use pattern. Even a glance at the existing land-use map gives an impression that land-use pattern evolved till this date is more or less satisfactory. Large industries have been located at industrial area to the north-east direction. University and other educational institutions have been located to the east of the city. However, the location of Agriculture University could have been to the other convenient site at the southern end of the city. since the land presently occupied by Agriculture University could have been the ideal site for large scale industries between rail and road trunk lines. The specialised trade and commerce activities are presently concentrated around Fawara, even though there is apparent need for the suitable land for commercial purposes in Wright Town, Napier Town and Civil Lines areas, which are practically devoid of this facility. Like all other Indian cities, the city centre is the main hub of multifarious activities. Many activities have found their place in this hub even though they do not form compatible relationship with commercial, residential and other uses in the areas. Industries like Dal Mills, Oil Mills, Bakeries flatted industries are located right in the heart of the city. A proper place for establishment of these industries is needed. The saw mills and timber godowns are located at southern part of the city alongwith N.H. No. 7 but in close proximity of the residential areas. The essential requirements for saw mills and timber godowns are railway siding and proper accessibility from the regional roads.

4.5 INCOMPATIBLE LAND USES

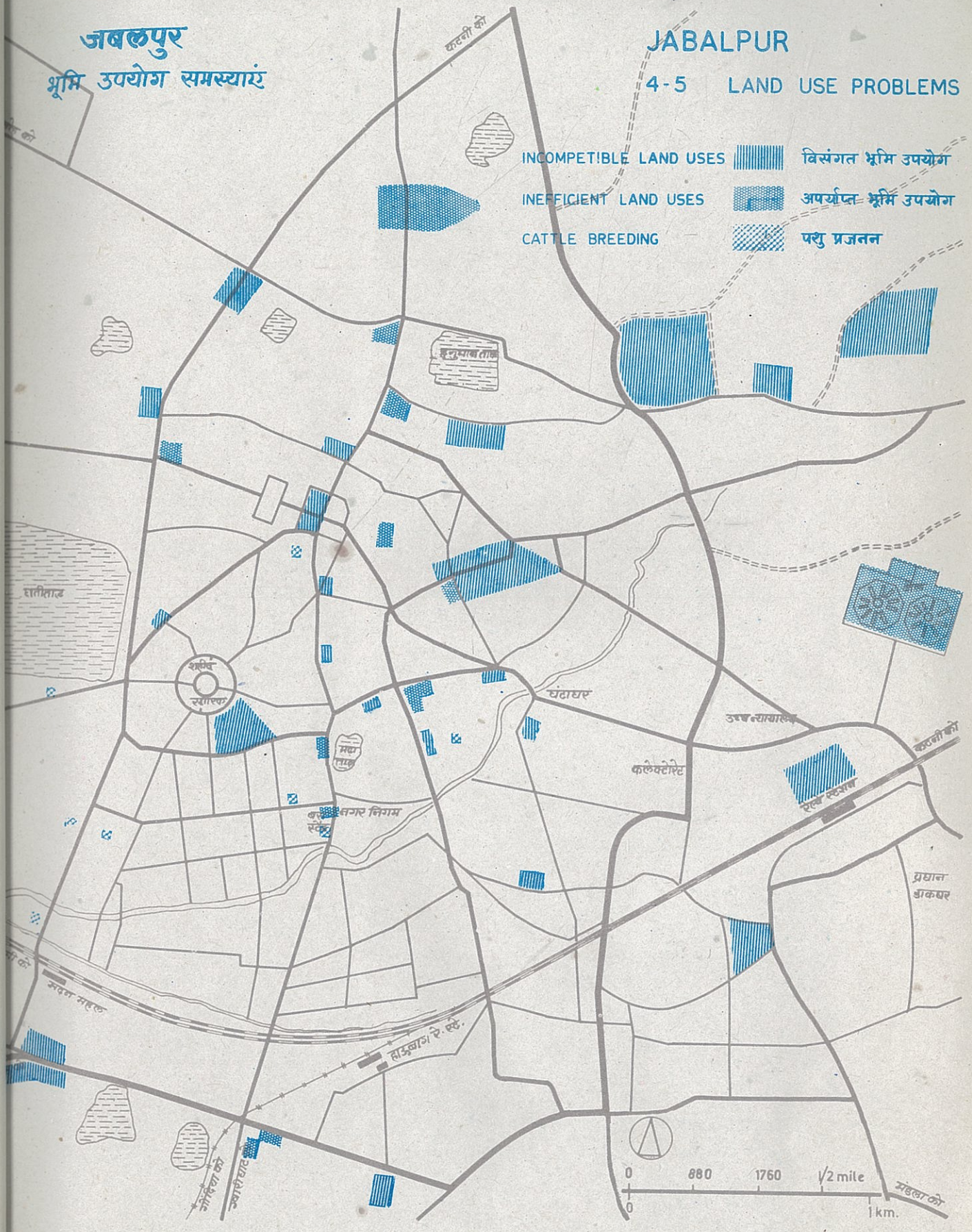
A detailed land-use survey together with studies in respect of traffic, living conditions etc. have reflected some land-use as incompatible use.

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The basic considerations for identifying these uses have been performance characteristics of land-uses, nature of industries and workshop, traffic hazards, incongruous nature of the use with the surrounding areas. These considerations have identified the following land-uses as incompatible :—

JABALPUR : INCOMPATABLE LAND-USES 4-T.6

No.	Description	Present Location	Nature of Nuisance
(1)	(2)	(3)	(4)
I.	**Residential**		
1.	Cattle Breeding and Dairies.	Gohalpur, Milloniganj, Cherital Road, Ranjhi, Wright Town, Napier, Town, Garha, Marhatal, Naya Mohalla, Ghamapur, Belbagh, Sarafa, Hanumantal, Gorakhpur & Madan Mahal.	Injurious to Public Health, Environmental Problems and Traffic hazards.
II.	**Commercial**		
1.	Grain Mandi	Niwarganj, Milloniganj, Gurandi.	Traffic hazards.
2.	Wholesale fruit and vebetable market and Godown.	Fawara-Niwarganj and Milloniganj.	Traffic hazards and environmental problems.
3.	Husk Godown	Near Ghamapur Kalari, Milloniganj.	Environmental problem.
4.	Kabadi Market	Gurandi	Traffic hazards.
5.	Bamboo and Balli Market.	Gurandi	Fire hazards.
6.	Liquor Godown	South Civil Lines	Incongruous to surroundings & Traffic problems.
7.	Tin Goods, furniture and Upholstery.	Bhartipur and Herdeo, Naya mohalla Near Coffee House.	Incongruous to surroundings & Traffic problems.
III.	**Industrial**		
1.	Printing Press	Sarafa, Ganjipura	Incongruous to surrounding uses.

(1)	(2)	(3)	(4)
2.	Scattered Repairs Workshops.	Bus stand, Madan Mahal, Marhatal Road between Karamchand Chowraha to Naudra Bridge, Corporation Road, Anjuman School compound.	Incongruous to surroundings.
3.	Oil Mills and Dal Mills	Galgala, Bhartipur, Naya Mohalla Millonigani, Cherital.	Environmental problems.
4.	Saw Miils	Madan Mahal, Mahanadda, Prem Nagar, Gorakhpur, Belgarh, Naya Mohalla.	Environmental problems.
5.	Ice Factory	South Civil Lines.	Environmental problems.
6.	Soap Factories	Napier Town, Garha Phatak Road, Naya Mohalla, Omti Road.	Environmental problems.
7.	Bidi Factories	Gol Bazar, Dixitpura, Hanumantal.	Environmental problems.
8.	Burn and Company.	Behind Gukuldas Dharamshala.	Environmental problems.
9.	Earthen Wares and Potteries.	Kumhar Mohalla, Gorakhpur, Kariapather, Thakkargram, Garha, Purwa.	Environmental problems.
10.	Slaughter House	West Belbagh, Motinalla, Madar Tekri.	Environmental problems.
11.	Soap Stone Factory.	Ghampur, Behind Bedi Nagar.	Environmental problems.
12.	Brick Manufacturing.	Madan Mahal Area Kanchanpur near (Ind. Estate) Manegaon, Mahaniya.	Environmental problems.
IV.	**Public Utilities**		
1.	Barbage disposal	Lema Garden.	Environmental problems.

(1)	(2)	(3)	(4)
2.	Cremation Ground	Hathital Chandalbhata, Devtal near Medical College.	Environmental problems and Incongruous to surroundings.
3.	Grave Yard ..	Nasia Bagh, Gohalpur and Sainaka.	Incongruous to surroundings.
V. Transportation			
1.	Truck Parking ..	Mirzapur Road near Damoh Naka, Madan Mahal, Near Income-Tax Chauraha, Gurandi Bazar.	Traffic problems.
2.	M.P.S.R.T.C. Depot	Ranital (Agha Khan Chowk) Bus Stand.	Incongruous to surroundings.

4.6 INEFFICIENT LAND USES

Some of the Government offices, educational institutions and other uses are functioning at places which are not suitable for these activities. Moreover, in some cases the land which is at present utilised by them can be utilised with much more efficiency for other uses. The land-use, which come under this category is as follows:

JABALPUR : INEFFICIENT LAND-USES 4-T.7

No.	Description	Present Location
(1)	(2)	(3)
I. Commercial		
1.	Grain Godowns	Jawahar Mandi, F. C. I. godowns at Agha Chowk.
2.	Vegetable Market	Gorakhpur, near Gurudwara, Milloniganj, Garha Road near Telegraph Workshop.
II. Public and Semi-Public		
1.	Govt. and Private Offices	Wright Town and Napier Town.
2.	Central Jail	North Civil Lines.
3.	Isolation Hospital	Old Mirzapur Road near Damoh Naka
4.	Garib Khana	Damoh Road.
5.	Ayurvedic College and Hospital.	Gorakhpur
6.	Veterinary College ..	South Civil Lines.

CHAPTER 5

HOUSING

Housing forms the largest component in the city structure. It makes significant impact on the social and economic life of the city. It can make or mar the total-city image and its social and cultural life. Incidently Jabalpur has the privilege of having some comparatively better residential development in Wright Town, Napier Town, South Civil Lines and North Civil Lines areas, occupied by higher and middle-income groups only. On the other hand, the city has worst slums in areas like Lalmati, Ghamapur, Kanchghar, Motinala and Kariapather etc. occupied by economically weaker section of society. The city has absorbed the strain in this context and has accommodated the migrated labour and low-wage earners engaged in industrial establishments and construction work.

Unfortunately, the housing condition in Jabalpur city is extremely unsatisfactory and becoming more and more acute every day due to the reasons attributed to the phenomenal growth of population and rapid urbanisation. The present condition of housing coupled with acute housing deficit has become a serious problem in the recent decade. The rate of construction of houses has not been able to keep pace with the rate of urbanisation and has resulted in creation of slums and congestion in residential areas. Thus overall density of Jabalpur city, particularly, in some localities has gone up. In many areas there are no vacant spaces. The congestion is further aggravated by the mixed land-use.

5.1 LIVING CONDITIONS

Living conditions of residential areas are inter-related with the environmental aspect of the city life. In order to understand and identify the problems of these areas, it is essential to examine the living conditions of these areas both qualitatively as well as quantitatively. The qualitative aspect of living environment covers study of living areas in terms of structural conditions, standards of services, relationship of housing areas and work centres, availability of amenities like education, health and recreation, availability of services like water supply, drainage and transport facilities, while quantitative aspect covers tenure status, housing shortage, residential density, occupancy rate etc.

5.11 RESIDENTIAL DENSITY

Cities normally have highest residential density in the central area. This phenomenon is the result of intermixing of land-use in the central area particularly commercial activities with residential use. Normally major commercial activities such as shops, banks etc. are carried out along main roads on the ground floor (some time offices are located on the first floor) while the upper floors are used for residential purpose. Residential houses are located in the rear of the main commercial streets.

Analysis of residential densities[1] has revealed an overall net residential density of approximately 322 persons per hectare which is rather high when viewed with type of development. The highest residential density of 1887 persons per hectare is recorded in ward No. 4 (Thakkar Gram) and the lowest density is 67 persons per hectare in ward No. 46. (Khandari).

The next table gives an overall picture of residential density ranges in the city.

Note.—1. Density has been calculated with ward 'residential area' and population as unit. Ward residential area (=) ward area (—) under non-residential use, major roads, major open spaces, water bodies, residential density ward population divided by ward residential area.

JABALPUR : RESIDENTIAL DENSITY PATTERN 5–T. 1

Density ranges persons per hectare	Ward	Locality	Population	Residential area (in hect.)	Population Percentage	Area percentage
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		High (above 750)				
Above 850	1, 2, 4, 8, 11, 13, 14, 15, 16, 17, 19, 34	Cherital, Miloniganj, Thakkergram, Lalmati, Shitla Mai, Belbagh, Bhantaliya, Motinala, S-Miloniganj, Hanumantal, Sarafa, Omti.	111572	100.62	26.18	7.33
751 to 850	12, 22	E-Belbagh S-Motinala	8983	11.31	2.11	0.82
		Medium-High (557 to 750)				
651 to 750	3, 24, 36, 38, 45	Gohalpur, Garahfatak, Kanchghar, Marhatal, Howbagh.	52133	73.13	12.23	5.33
551 to 650	10, 21, 26, 28, 31, 32, 33,	Kariapathar, Niwarganj, Garha, Madanmahal, Dwarkanagar, Ganjipura, Bhartipur.	62398	106.24	14.64	7.74
		Medium (351–550)				
451 to 550	9, 18, 23, 27,	Ghamapur, Kotwali, Lordganj, Rani Durgawati.	33769	69.51	7.91	5.06
401 to 450	20	Upraingani	9148	21.81	2.15	1.59
351 to 400	25, 44	Kamala Nehru Nagar, Gorakhpur.	20426	54.15	4.80	3.94
		Medium-low (251–350)				
301 to 350	.. ..	.. .. ..	..	..	..	..
251 to 300	6, 30, 40. 42	Gokalpur, Gol Bazar, Narsinghward, Tripuri	38257	141.01	8.97	10.28
		Low (Below 250)				
Below 250	5, 7, 29, 35, 37, 39, 41, 43, 46	Adhartal, Ranjhi, Wright Town, Civil Lines, Napier Town, Shankar Shah Nagar, Gwarighat, Khanpari.	89538	795.01	21.00	57.91
		Total ..	426224	1372.79	100.00	100.00

Source : Town & Country Planning Deptt., M. P.

The previous table also indicates residential density ranges in various localities. The density analysis reveals that nearly 21.22% of the residential area is under high and medium-high density ranges covering nearly 55.16% of total population. Medium density range covers nearly 20.87% of total area accommodating 23.83% of total population. Low-density area accounts for 57.91% of total area covering 21% of total population. It will be desirable to increase the density in some of the low-density areas.

The following table gives word-wise densities :—

JABALPUR : RESIDENTIAL DENSITY (WARD-WISE) 5-T.2

Ward No.	Total Area (in hectares)	Residential Area (in hectares)	Population	Residential Density persons per hectare.
(1)	(2)	(3)	(4)	(5)
1.	894.33	9.30	10912	1173
2.	191.90	6.06	7277	1201
3.	27.07	11.72	7844	669
4.	68.28	6.06	11434	1887
5.	836.28	84.02	8905	106
6.	300.15	34.75	9679	278
7.	195.94	69.05	14384	108
8.	24.24	8.09	9770	1208
9.	30.10	20.20	9351	463
10.	75.14	16.97	10003	589
11.	30.95	11.31	11069	977
12	28.64	11.31	8501	752
13.	12.52	6.07	7968	1312
14.	16.28	8.09	8020	991
15.	15.27	8.49	8240	970
16.	13.25	6.87	9687	1410
17.	17.53	9.27	8568	924
18.	20.04	16.17	7999	494
19.	14.26	11.31	10204	902
20.	30.06	21.81	9143	419
21.	26.06	16.16	9467	586

(1)	(2)	(3)	(4)	(5)
22.	15.68	11.31	8983	794
23.	23.55	16.97	7735	456
24.	62.22	12.52	8385	669
25.	323.20	26.27	9984	380
26.	465.61	12.12	7235	597
27.	130.90	16.17	8684	537
28.	175.74	17.78	10097	568
29.	77.49	41.21	7976	193
30.	57.35	34.35	9392	273
31.	18.54	10.50	6104	581
32.	27.88	10.91	6959	638
33.	29.29	21.80	12533	575
34.	15.15	9.70	8423	868
35.	219.17	59.39	13422	226
36.	27.87	8.48	6281	741
37.	282.80	133.30	10311	77
38.	22.20	15.36	11393	742
39.	205.03	122.82	8745	71
40.	110.09	41.21	10879	264
41.	1046.36	105.44	9841	93
42.	1007.43	25.70	8307	323
43.	2418.67	61.00	8001	131
44.	76.76	27.88	10442	374
45.	52.52	13.74	9729	708
46.	3041.33	118.78	7953	67
Total	12900.24	1322.79	4,26.224	322

Source : Town & Country Planning Department.

Note 2.—Residential Area (Col. 3) (=) Ward area (—) area under non-residential uses, major roads, water bodies and open spaces.

(5)

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456
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380
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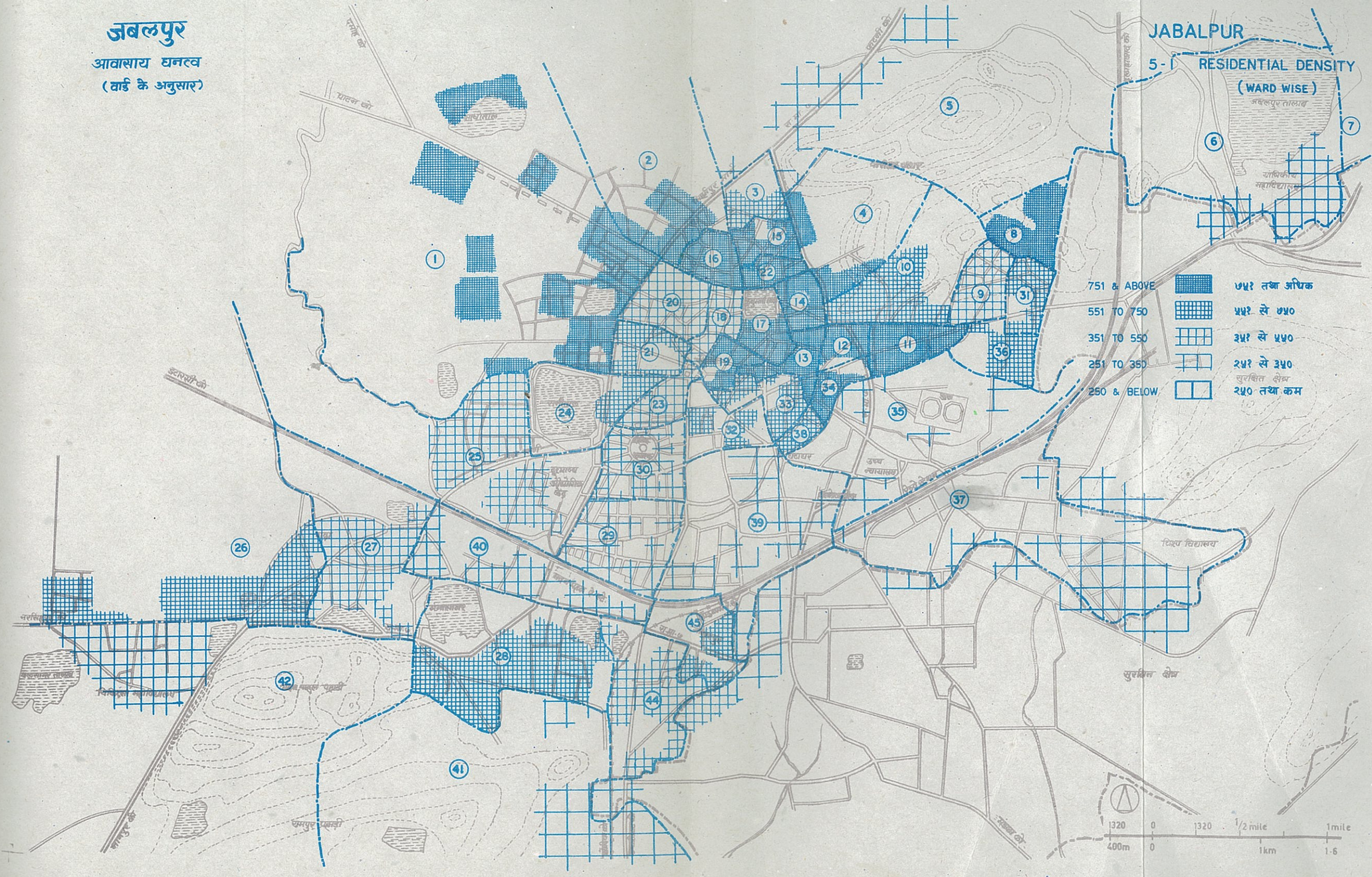
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5.12 TENURE STATUS

Almost no appreciable change has occured in tenure status during the census decade 1961-71. The proportion of rented houses in 1961 was 67.25% which has marginally reduced to 66% in 1971. However, the study of tenure status in various wards indicates that the higher percentage of owned houses exist in Garha, Kacchpura, Cherital, Gohalpur and Kariapather localities, mostly occupied by slum dwellers. Higher proportion of rented houses does occur in central area, a situation similar to other cities such as Bhopal, Indore, Ujjain and Raipur.

5.13 OCCUPANCY RATE

The rate of occupancy is an index of prevailing living conditions. It indicates number of persons per room which reflects the extent of overcrowding in a particular locality. From the table showing occupancy rate it appears that the increase in number of rooms has been 33% while the increase in population has been 44.3% during 1961-71 period. The increase in number of rooms apparently has been in proportion to increase in population during the same period.

JABALPUR : OCCUPANCY RATE AND OVER CROWDING

5. T. 3.

Household/ Population	Year	Total Household Population	Percentage of Household/Population Living in				
			1 Room	2 Rooms	3 Rooms	4 Rooms	5 or mor Rooms
1	2	3	4	5	6	7	8
Household	1961	63055	53.6	27.0	9.6	5.5	4.3
,,	1971	92782	42.5	32.2	12.9	6.1	6.3
Population	1961	295375	42.6	28.6	11.00	6.2	11 6
,,	1971	426224	32.8	32.8	15.6	8.3	10.5
Occupancy Rate (Persons per room)	1961	2.57	3.9	2.5	2.00	1.7	1.7
	1971	2.43	3.7	2·6	1.90	1.7	I.6

The above table indicates that nearly 42% households are living in one-room houses whereas one-third (32%) are living in two room dwelling units. As many as 3/4th of the total households are staying in the houses having only one and two rooms dwellings. 1/4th are living in bigger houses. When analysed on the basis of population, it is found that 65% of the total population are forced to live in houses having one and two rooms. The rest of the population is, however, enjoying better accommodation. Looking to the occupancy rate, it is found that the over all position with regard to number of persons per room has very nominal change.

It is evident from the following table that the number of persons living per residential occupied houses ranges between 4 to 8 persons per house. Ganjipura ward has an occupancy of more than 8 persons per room, while ward Nos. 3, 29 and 44 have occupancy rate of 7 persons per house, while ward Nos. 12, 13, 14, 15, 16, 19, 22, 23, 26, 27, 31, 33, 38, 40, 42, 45 and 46 indicate an occupancy of 6 persons per house. These areas are relatively more over-crowded.

JABALPUR : OCCUPANCY RATE 5-T.4

Ward No.	Number of Occupied Residential	Number of Household	Households per residential house	Persons per residential house
1	2	3	4	5
1.	2160	2420	1.12	5
2.	1361	1454	1.06	5
3.	1075	1201	1.11	7
4.	1904	2085	1.09	5
5.	1615	1972	1.21	5
6.	2075	2300	1.10	5
7.	3126	3456	1.10	4
8.	2075	2300	1.10	4
9.	1760	1972	1.12	5
10.	1947	2204	1.13	5
11.	1898	1917	1.01	5
12.	1321	1499	1.12	6
13.	1223	1306	1.06	6
14.	1323	1450	1.09	6
15.	1185	1267	1.07	6
16.	1620	1644	1.01	6
17.	1481	1551	1.04	5
18.	1358	1367	1.00	5
19.	1616	1703	1.05	6
20.	1668	1689	1.01	5
21.	1740	1764	1.01	5
22.	1223	1406	1.14	6

5.15

(1)	(2)	(3)	(4)	(5)
23.	1234	1317	1.05	6
24.	1832	1861	1.01	4
25	1995	2062	1.03	5
26	1100	1381	1.25	6
27	1424	1667	1.17	6
28	1715	2131	1.24	5
29	937	1491	1.59	7
30	1693	1836	1.08	5
31	889	1095	1.23	6
32	789	1247	1.58	8
33	1672	1856	1.11	6
34	1570	1613	1.02	5
35	2684	2797	1.04	5
36	1376	1430	1.03	4
37	1956	2109	1.07	5
38	1880	1929	1.02	6
39	1305	1696	1.29	6
40	1630	2762	1.08	6
41	1785	1901	1.06	5
42	1330	1620	1.22	6
43	1463	1768	1.20	5
44	1397	1932	1.38	7
45	1395	1889	1.35	6
46	1195	1465	1.22	6

Source : Census of India,1971.

5.15 STRUCTURAL CONDITION :

Data on structural condition available from Census reports based on 20% sample survey provide useful information about materials used for walls and roofs separately on the basis of information as given below. The structures have been classified into three categories i.e. kutcha, semi-pucca and pucca in good condition.

The table below gives classified data:

JABALPUR : STRUCTURAL CONDITION (PERCENTAGE) 5-T-5

Structure	Wall Material		Roof Material	
	1961	1971	1961	1971
(1)	(2)	(3)	(4)	(5)
Kutcha ..	37.44	33.65	1.73	1.00
Semi-Pucca ..	0.34	2.8	86.42	77.00
Pucca ...	62.22	63.6	11.85	22.00

Source : Census of India, 1971.

The above table indicates that the city has less number of houses with pucca roof material but as per wall material nearly 2/3 of the houses are pucca. However, there is improvement in the condition of houses during the last census period. Kutcha structures mostly in slum areas are to an extent of 33% of the total number of houses. It is revealed that the structures abotting on important commercial roads are subject to the process of renovation.

A deferred street scheme in such cases may prove to be very useful.

5.16 BASIC SERVICES AND AMENITIES :

WATER SUPPLY

The present water supply system could not be extended to many parts of the city including recently developed areas. Most of them have arranged their own water supply through surface wells or by other sources. In general the water supply is inadequate. This fact will have to be taken into account, while framing comprehensive water supply scheme for the city.

SEWERAGE

Sewerage disposal in developed areas and recently developed colonies is by means of septic tanks provided either separately by the developers or provided by individual land owners. The disposal of effluent is through open kutcha drains, which is most unhygienic and insanitary.

AMENITIES

At present most of the newly devloped areas are devoid of educational and health amenities. Open spaces, however, provided have not been developed and are not being used effectively.

STORM WATER DRAINAGE

Besides the problem of disposal of storm water in the city the problem create in the newly developed areas where proper drainage have not been provided needs special attention. Residential areas which are facing threats of flooding are mostly located near Omti nullah. This problem has been further aggravated due to siltage and bunding activities on the nullah by the agriculturists on the fringe of inhabited areas, resulting in flooding due to backwaters during the rainy season. The residential areas facing the problems of drainage and flooding are Wright Town, Napier Town, Madan Mahal, Agrawal Colony, P & T Colony, Yadav Colony and adjoining localities.

5.2 CLASSIFICATION OF RESIDENTIAL AREAS

Jabalpur, the foremost city of the region with historic background, naturally has many old localities. These localities today are devoid of basic amenities. Roads are narrow and zig-zag. There is hardly any organised open space in the areas. Most of the houses are almost unfit owing to poor and deterioting living conditions and are facing obscelence. These areas require redevelopment on urgent basis.

5.21 IMPROVEMENT AND DEVELOPMENT

Study of living conditions of residential areas based on criteria of structural conditions, age of structures, sanitary conditions, tenure status, occupancy rate have identified the following areas (excluding slum areas) which require special treatment by way of improvement or redevelopment. The wards which have been classified in parts as poor-living areas are 2, 7, 11, 13, 14, 16, 17, 26, 27, 28, 34 and 44.

The localities covered in these wards are as under :—

(a) Basod Mohalla in Sheetla Mai Ward, Part of Ranjhi.

(b) Bhantallaiya, Khermai.

(c) Part of Cherital and adjoining Trust Scheme No. 5.

(d) Garha, Purwa, part of Amanpur and part of Rani Durgawati Ward.

(e) Milloniganj, part of Sarafa, part of Galgala, Bhartipur, Lakadganj, part of Phootatal, Chhoti Omti, Naya Mohalla.

(f) Mahanadda in Madan Mahal, area behind Narsingh Mandir, Kumhar Mohalla in Gorakhpur.

5.22 URBAN VILLAGE

During the process of city expansion, the fringe villages have become part of urban area. These, however, do not fit in the total urban character and require improvement and re-development. Nine such

villages have become part and parcel of the urban area. The table below reveals that 9774 persons live in these urban villages covering nearly an area of 2405.93 hectares of habited area with 1952 houses.

JABALPUR : URBAN VILLAGES

5-T. 6

Sr. No.	Name of the Village	Area (in hectares)	No. of Houses	Population
(1)	(2)	(3)	(4)	(5)
1	Karmeta	414.35	201	1007
2	Raigawan	277.64	90	449
3	Amkhera	291.78	261	1307
4	Suhagi	260.87	236	1183
5	Maharajpur	409.60	358	1790
6	Kheri	170.26	63	316
7	Pipariya	172.90	48	240
8	Bilpura	255.90	305	1529
9	Manegaon	152.63	390	1953
	Total	2405.93	1952	9774

5.23 SLUMS AREAS

An area characterised mostly by over-crowding kutcha buildings, dilapidated structures, unhygienic conditions devoid of basic amenities, bad lay-outs, poor accessibility is is considered to be a slum area.

These areas generally house economically weaker section of the community who are often engaged in casual service occupations. Based on these considerations and the studies carried out under the living conditions. 11 residential areas having nearly 75,000 population have been identified as slums, which cover nearly 220 hectares of land. Maximum number of slums are situated at Lalmati, Ghamapur, Kanchghar, Kariapather, Thakkargram and Motinalla areas. Remaining slums are in north Millonigunj, Bhantalliya, Garha, part of Belbagh and Narsingh ward.

(a) Areas Along Kundam Road

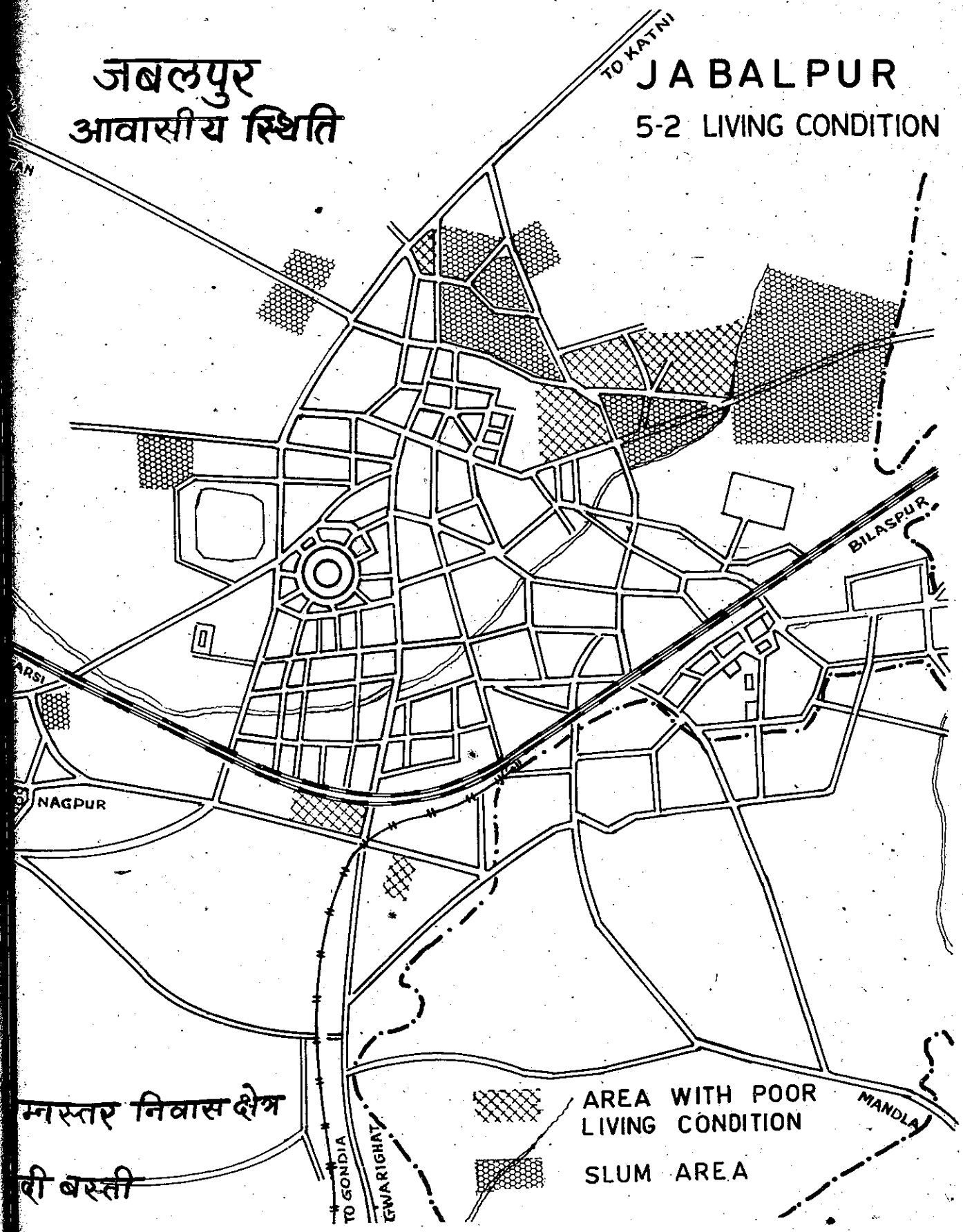
Ghamapur excluding Dwarka Nagar, Lalmati, Kanchghar, west Kariapather around Siddh Baba-Ki-Toriya.

(b) Areas between New Mirzapur Road and old Mirzapur Road

Thakkargram, north Motinalla, south Motinalla, Badhaiya Mohalla, behind Imambara along with old Mirzapur Road.

(c) Areas along Damoh Road

Kachhi Mohalla along Trust Scheme No. 9, areas adjoining Municipal quarters, Basti near Trust Scheme No. 5, areas near Cherital tank and sweepers colony.


जबलपुर
आवासीय स्थिति
JABALPUR
5-2 LIVING CONDITION
TO KATNI
BILASPUR
NAGPUR
TO GONDIA
GWARIGHAT
MANDLA
AREA WITH POOR LIVING CONDITION
SLUM AREA

(d) Interior slum areas in Garha and Purwa, Slum area to the west of Gangasagar Tank.

(e) Other scattered slum areas.

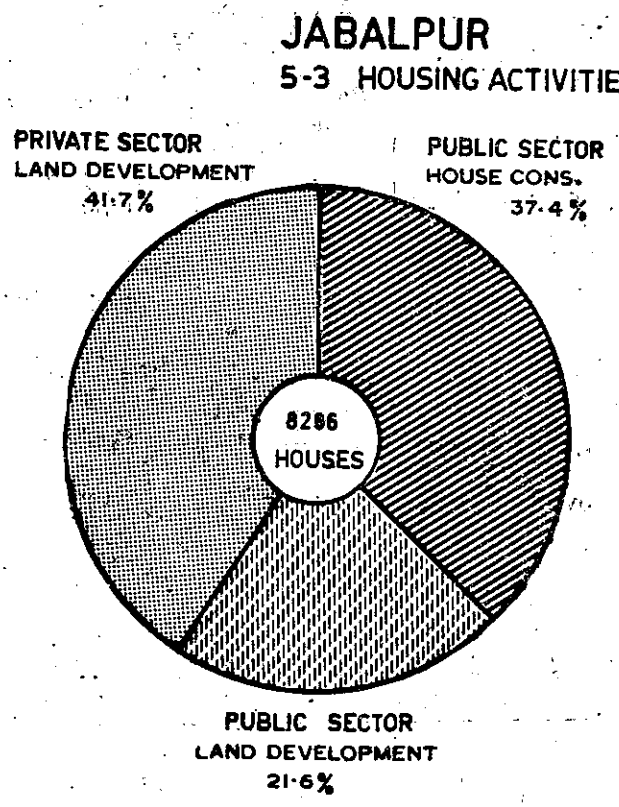
Area behind Narsingh Mandir, Kumhar Mohalla to the south of Gorakhpur Road.

5.3 HOUSING ACTIVITIES

Housing building activity is a continuous process of human settlement but it seldom keeps pace with the growth of population which ultimately creates housing shortage and congestion. The housing problem can be solved by combined efforts of Government, local bodies, Town Improvement Trust, Industrial enterpreneurs, Co-operative societies and individuals.

In the preparation of Jabalpur Development Plan, defence areas have been excluded. The fact remains that the defence establishments, which are located within the defence area are not able to provide 100% accommodation to their employees. This ultimately aggravates the housing demand of the main city.

Housing activity at Jabalpur has relatively been slow as compared to Bhopal and Indore. The State Government, Local Government and private colonizers have developed nearly 405 hectares of land for housing sites. Besides, developed plots have also been provided. This has eased



the problem to a certain extent, but has failed to meet the growing demand. Details of land development and house construction are given

in the following table : -T-7

Agencies	Description of Area	Houses		Vacant Plots	
		Area in Hectare	Unit	No.	Area in Hectare
(1)	(2)	(3)	(4)	(5)	(6)
I. Govt. and Semi Govt.					
1. Government ..	Katanga Quary Site, Gwarighat, Civil Lines, Shanker Shah Nagar, Beoharbagh.	1.59	425	...	..
2. Housing Board ..	Hathital, Bun and Com. perfect pottery, Medical College, Adhartal, Poliapathar Katanga.	67.45	2071	..	
3. M.P.E.B. ..	Rampur, Nayagaon, Badanpur.	10.00	484	700	28.00
4. Improvement Trust.	Ghamapur ..	1.60	120	..	..
Total		80.64	3100	700	28.00
Percentage		19.87	37.41	10.79	11.55
B. LAND DEVELOPMENT					
1. Improvement Trust	Medical College, Adhartal, Kacchpura, Damohnaka, square.	189.20	1389	..	21.01
2. Housing Board ..	Medical College	..	397	..	..
Total		189.20	1786	..	21.01
Percentage		46.62	21.56	..	8.68

(1)	(2)	(3)	(4)	(5)	(6)
II. Private Land Development Approved lay-Out Scheme					
1. Development Private Colonies.	Gwarighat, Napier Town Ranji, Garha, Bazargora, Adhertal, Cherital.	136.00	3400	2180	48.80
Total		136.00	3400	2180	48.80
Percentage		33.51	41.03	33.59	20.15
III. Undevelopd Approved Scheme					
1 Improvement Trust	Ranipur, Hinotiya Village	..	..	3610	144.40
Total		..	..	3610	144.40
Percentage		..	..	55.62	59.62
GRAND TOTAL ..		405.84	8286	6490	242.21
Percentage		100	100	100	100

It is observed from the table that the number of developed plots (2880) i.e. 39.90% of the total of 7366 are still lying vacant. The reason may be attributed to the rising prices of building materials and shortage of building hardwares which are further aggravated by tendency of speculation in building sites. This, however, is now being curbed by the recent Government policy to construct the house on the plot within reasonable period. The Urban Land Ceiling Act, 1976 which is applicable to Jabalpur will also bring down the tendency of speculation in urban and urbanisable land. The Housing Board has come forward with hire-purchase and rental accommodation schemes to ease the situation by constructing dwelling units in large numbers.

5.31 HOUSING SHORTAGE

Almost all the urban centres in the country have suffered due to time-lag between population increase and the rate of housing activity and allied services. Housing stock has, therefore, been successively falling short of actual requirement. Unlike many other cities, Jabalpur has been subjected to the strains because of the additional housing needs created due to the limited housing, provided in the defence and industrial

establishments, which are contiguous to the city. It is observed that the total number of families depending upon employment in defence establishment are approximately 42,000 while the housing provided in defence areas is to an extent of 17,000 dwelling units approximately. Thus, nearly 25,000 families have to find accommodation in other parts of the city.

In order to assess the housing shortage in Jabalpur, it is necessary to ascertain the present housing stock. Basic consideration in ascertaining the acceptable housing stock are as under :—

(a) The 1971 backlog calculated by using the census data works out to be 9791.

(b) Although as per general norms of habitability more than 33% of housing stock in respect of main city area will come under category of unacceptable houses, yet looking to the acute shortage of dwelling units and paying capacity of the citizens, it is considered necessary to treat most of the houses as acceptable for some more period assuming necessary repairs. Accordingly nearly 90% of the housing stock of main city area excluding slums are acceptable houses.

(c) 50% of kutcha houses and 100% pucca houses in slum areas considered accceptable although on normal norms of livability would render large bulk of houses as unacceptable.

(d) 50% of the houses of the urban villages are considered acceptable units.

JABALPUR; HOUSING SHORTAGE

S. No.	Description	Total	Dwelling units required
(1)	(2)	(3)	(4)
1	Backlog up to 1971	..	9791
2	Unacceptable Houses	...	
	(a) Slum Areas	... 17844 @ 50%	8922
	(d) City Areas	... 20037 @ 10%	.. 2000
	(c) Urban Villages	... 1952 @ 50%	976
	Total	..	21689
		Say	21700

The total requirement works out to nearly 21700 dwelling units. Nearly 75% of the total shortage is for low-income and economically weaker section of the society. Specific areas, therefore, should be reserved for this purpose in the Development Plan.

CHAPTER 6

COMMERCE AND INDUSTRIES

The rich agricultural and forest hinterland of Jabalpur with its inter-regional economic linkage to various towns and cities have been influencing the commercial and industrial activities in the city. The nature of commercial activities have been dependent on the produce of its hinterland. During the recent years non-agro-industries such as chemical synthetics, non-metallic industries have been established in Jabalpur, which have necessarily diversified the economic and social life of the city.

6.1 COMMERCIAL-CUM-SHOPPING AREAS

6.11 SPECIALISED MARKETS

The commercial activities have diffused along most of the main roads of the city, although the character of these activities is not similar. Markets for various commodities have flourished in groups along various roads such as Sarafa, Brasswares, Cloth, General, Shopping spread all along the main roads. Wholesale and retail transactions in various commodities take place in these areas.

Shopping is mainly in Bazar streets and chowks typical of Indian cities and specialised markets can be identified at the following places :

No.	Type	Location
1	Dry fruit and cereals and food(—) stuff	Fawara, Niwarganj.
2	Paints, hardwares, sanitarywares, stcel furnitures.	Link Road between Tularam Chowk to Karamchand Chauraha.
3	Plastic works, Glass works, Crockery, Photo framing.	Fawara, Andherdeo, Lordganj, Tularam Chowk, Gurandi.
4	Cutlery and electric goods	Lordganj road between Malviya chowk and lordganj police station.
5	Ready made clothes, hosiery ..	Lordganj and Andherdeo.
6	General Merchants ..	Andherdeo, Lordganj, Omti. Galgala, Gurandi.
7	Utensils	Road between Kamaniya Gate. up to Subhash Talkies.
8	Transport Agencies and General Insurance companies.	Baldeobagh, Milloniganj, Damoh, naka, Cherital road.
9	Gold and Silver ornaments and jewellers.	Sarafa
01	Banks and professional business offices	Niwarganj, Lordganj, Fawarat area, Napier Town, Wrigh Town, Tularam Chowk and road between Tularam Chowk and Karamchand Chowk, Kotwali Road.
11	Tin goods	Andherdeo.
12	Provisions	Niwarganj, Gorakhpur.
13	Cloth	Andherdeo, Fawara, Lordganj, Road, Omti, Gorakhpur.
14	Medicines	Fawara, Lordganj Road, Andherdeo Link road between Tularam Chowk to Karamchand chowk.
15	Cycle and Cycle parts ..	Omti
16	Auto spare parts	Wright Town, Napier Town, Bus stand, Madan Mahal Square Omti, Near Damoh Naka,
17	Leather Goods	Andherdeo.

Source : Field surveys by Town & Country Plannig Deptt.

जबलपुर

व्यापार एवं वाणिज्यिक

JABALPUR

6-1 TRADE & COMMERCE



6.12 WHOLESALE TRADE AND MANDIS

Wholesale markets are generally grouped at different places in the city. These markets are commodity wide, and are identified as follows:

(a) Vegetable and Fruit Market

The wholesale vegetable market is located in Niwarganj. The Fruit market is located near Fawara area with insufficient road widths and narrow lanes. This creates lot of congestion. Proper space, auctioning and parking facilities are not available in the market. It is the most congested area in the heart of the city. This being the only wholesale fruit and vegetable market, its location does not meet the requirements of even present trade activity. It is, therefore, necessary to shift the wholesale fruit and vegetable market to a new site. Retail fruit market near Fawara and vegetable market on Niwarganj Road, Gurandi, and Chota Fawara could, however, continue. The retail vegetable market near Subhash Talkies needs to be properly developed.

(b) Grain Market (Wholesale and Retail)

Retail and wholesale business in grain, pulses and other food-stuffs are situated in Jawahar Ganj Mandi, situated in Niwarganj Road. It is very close to the wholesale and retail vegetable market. This mandi not only caters to the needs of Jabalpur city but functions as a very important wholesale market for the region as a whole. Owing to a non-availability of auction space, the loading and unloading is done on the road-side which further adds to the congestion on the road. Godowns have invaded residential areas, even abutting on narrow lanes, which creates chaotic traffic conditions with mixed traffic. The area is generally subjected to worst traffic jams and road accidents. The grain-mandi functions are carried out in unorganised manner affecting the functional efficiency. Because of these problems, the wholesale grain market is being shifted to the appropriate site on Damoh Road where facilities of storage, auction sheds, parking spaces and linkages to regional roads are being provided. However, the retail market may continue in the same locality. The retail grain market at Gurandi and Chota Fawara should be re-planned.

(c) Hardware

The main hardware market is located between Karam Chand Chauraha and Tularam Chowk Road. This Road is also narrow and often creates traffic jams due to the blind corner. It may be possible to re-plan the road alignment so as to achieve functional efficiency.

(d) Cloth Market

The wholesale cloth market is located in Lordganj in Fawara area. Godown facilities are not available. Wholesale cloth shops are not grouped together, they are scattered. Owing to lack of space in this area for parking and traffic congestion.

(e) Wholesale General Merchant's Market

The wholesale general merchandise market is located in Galgala especially on the road from Tularam Chowk to Gurandi market. This area is known as Mukadamganj. This road is also very narrow and creates traffic problems.

6.13 CATEGORISED MARKETS

(a) Workshops and Repair Shops

Most of the workshops are located in Wright Town near Bus Stand. There are a number of shops dealing in spare parts. Some repair shops are also located near Super Market area, Madan Mahal and Cherital Road. Wright Town is very well laid out residential area but workshops and repair shops are spoiling environment of this area. It is essential to provide new sites for these activities with adequate open spaces and parking facilities.

(b) Kabadi Market

The kabadi market at Gurandi is one of the most unorganised market with approaches from narrow lanes and alleys, through the blighted areas. The market is located within the heart of the city and as such the organised planned development of this market shall not only achieve the long-cherished desire of the trading community, but shall turn into a sound financial asset to the Municipal Corporation.

It would be necessary that sufficient land at proper places with adequate accessibility be provided for wholesale trade including warehousing, vegetable market and kabadi market.

(c) Forwarding Agencies

Jabalpur being a very important centre of Trade and Commerce in the region, has well-organised forwarding agencies. Most of these forwarding agencies are clustered on Cherital Road near Damoh Naka. During peak traffic hours, there is lot of congestion on this road as the trucks are often parked on the road-side and loading and unloading is also done there. It would, therefore, be desirable to shift these forwarding agencies to new sites, where parking and storage facilities could be available.

6.14 RETAIL TRADE

The retail shopping is mostly distributed along main roads, particularly the roads generating from Fawara, specially Milloniganj Road, Andherdeo link between Karamchand Chauraha and Tularam Chowk, Ghamapur Chowk Chauraha and roads a round Omti Chauraha. The retail market centre on Gorakhpur Road and Sadar Market meets the requirement of the respective localities. It is very essential to provide an organised retail market in Madan Mahal area. The people living in these areas have either to go to Goraklipur market or to the city for their retail

purchases. Recently Jabalpur Improvement Trust have constructed composite buildings and have provided shops on the ground floor. Wright Town, Napier Town and South Civil Lines areas have inadequate retail shopping facilities, which needs to be considered while formulating the proposals. It would be a economically sound proposal to undertake the development of retail shopping by development authorities so as to facilitate the needs of the locality.

6.15 GROWTH OF SHOPS AND COMMERCIAL ESTABLISHMENTS

The number of shops and commercial establishments have increased from 7158 in 1970 to 7687 in 1973. Out of the total establishments, shops account for 58.7 per cent. and commercial establishments account for 31.0 per cent. and other establishments account for only 10 per cent. It may be observed from the table showing the growth of shops and commercial establishments that during the period from 1970 to 1973, number of shops, commercial and other establishments have increased to the tune of 7.5 per cent.

JABALPUR : SHOPS AND COMMERCIAL ESTABLISHMENTS

6-T-2

Year	Shops	Commercial Establish-ments	Other Establish-ments	Total	No. of Estt. per 1000 population
(1)	(2)	(3)	(4)	(5)	(6)
1970	4402	1990	766	7158	20
1971	4515	2095	780	7390	17
1972	4443	2725	790	7458	17
1973	4509	2385	793	7687	18
	58.7%	31.0%	10.3%	100%	

6.16 CENTRES FOR RETAIL TRADE BANKS AND BUSINESS OFFICES.

Jabalpur lacks in organised shopping centres. Most of the wholesale market function as major retail marketing centres. The predominant centres for retail trade are Andherdeo, Fawara, Lordganj and Ganjipura main roads, Gorakhpur and Ghamapur. Bank and business offices are mostly situated in the area around Fawara. New retail markets need to be developed in order to relieve existing markets.

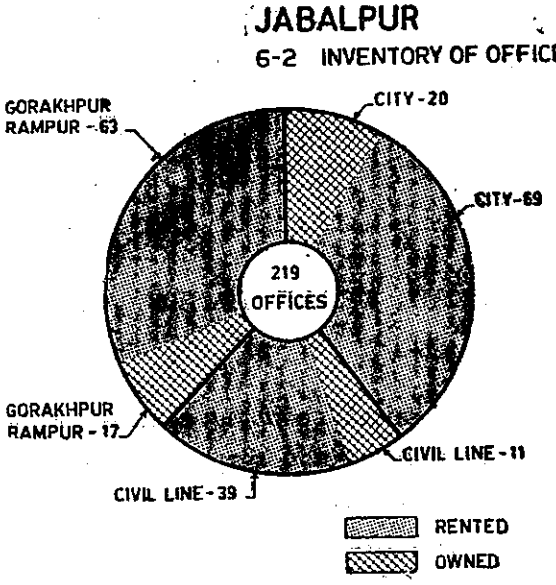
6.2 CINEMAS

Therere are 15 cinema houses which are located in different parts of the city. Out of these Jyoti, Anand, Vineet and Krishna talkies are satisfactorily planned. Adequate parking space is also available within cinema premises. In most of the remaining cinema premises, there is neither enough space for parking nor open space resulting traffic congestion on the road at the entire crowd comes out on the road at the change of overtimes. It is necessary to consider possibilities for improvement.

6.3 OFFICES

Jabalpur is Divisional Headquarter, as such divisional and district offices are located here. The office of Divisional Superintendent, Railways is also located in Jabalpur, employing nearly 20,000 persons. The headquarter of Madhya Pradesh Electricity Board is located in Jabalpur (Rampur) employing nearly 1600 persons. Jabalpur is seat of Madhya Pradesh High Court also. In addition to this, there are several State and Central Government offices such as Directorate of Employment and Training, Director, Telecommunication and Training, Director of State Forest Research Institute, Income Tax offices. Office of the Assistant Collector, Central Excise, Director Survey of India, Central Circle. Office of the Commandant General, Home Guards, Jabalpur University and Jawaharlal Nehru Agriculture University.

Municipal Corporation office is located in Napier Town. The present site of Municipal Corporation is located with proper accessibility and is centrally situated. The office of the Town Improvement Trust is also located in Wright Town.



The other State Govt. and Central Govt, offices are scattered in areas such as Wright Town Napier Town; Gorakhpur, Civil Lines and Madan Mahal. Most of these offices are housed in rented premises with inadequate floor space and are misfit for efficient functions of the office.

6.31 OFFICES IN RENTED BUILDINGS

Jabalpur has 219 State Govt. offices, out of which 171 are housed in rented buildings. Which works out to 79.1%. Most of the offices are located in Wright Town & Napier Town.

JABALPUR : OFFICES IN RENTED BUILDINGS 6-T.3

S. No.	Category	Number of Offices in Rented Buildings				
		City	Civil Lines	Gorakh-pur and Ram-pur	Others	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Central Government ..	13	3	3	16	35
2	State Government ..	39	31	8	24	102
3	State Quasi-Govt. ..	3	2	4	1	10
4	Central Quasi-Govt. ..	14	3	1	5	23
5	Local Bodies ..	..	..	..	1	1
	Total ..	69	39	16	47	171

Source:—Compiled from date received from Employment Exchange, Jabalpur.

6.32 HIERARCHICAL STRUCTURE OF OFFICES

Jabalpur has in all 219 offices of Central Govt., State Govt. and autonomous bodies. Most of the State Govt. offices are of district level. These offices are located in city area predominently in Wright Town, Napier Town and Civil Lines. This has seriously affected inter-relationship expected for efficient discharge of administrative functions.

The table below gives inventory of offices with hierarchical structure and location.

JABALPUR : INVENTORY OF OFFICES 6-T.4

States	City Area		Civil Lines		Gorakhpur and Rampur		other places	
	Location	No.	Location	No.	Location	No.	Location	No
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Central Govt. (44)	Napier Town	8	Near Rly. Stn.	1	Gwarighat	4	Cantonment	
	Wright Town	6	Panchpedi	2	Road		Katni Road	20
	Cherital	1	Behind High Co.	1			Ranjhi	
	Milloniganj	1						
Total (44)		16		4	..	4		20=44

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
State Govt. (131)	..	Wright Town	30	Near Rly. Stn.	8	Gorakhpur	Ranjhi	6
		Napier Town	18	Near Collec.	12	Gwarighat Road	10 Ghamapur	4
		Nibhar Ganj	1	Panchepedi	12		Nagpur Road	8
		Galgala	1	Near Rly. Hospital	8		Damoh Road	7
							Adhartal	6
Total (131)			50		40	10		31
State Quasi-Govt. (12)		Wright Town	4	Near Head Post Office	1	M. P. E. B. Rampur	3 Adhartal	1
		Napier Town		Behind Model H.S.	1	Gorakhpur	2	
Total (12)			4		2	5		1
Central Quasi-Govt. (30)		Wright Town	14	Civil Lines	4	Near Gorakhpur Post office	1 Adhartal	
		Napier Town					Ranjhi	
							Damoh Road	7
							Nagpur Road.	
Total (30)			18		4	1		7
Local Bodies(2)		Near Bus Stand.	1				Cantonment Board.	1
Total (2)			1					1
Grand Total (219)			89		50	20		60

Source:—Compiled from data received from Employment Exchange, Jabalpur and field Surveys conducted by Town and Country Planning Department.

6.4 *INDUSTRIES*

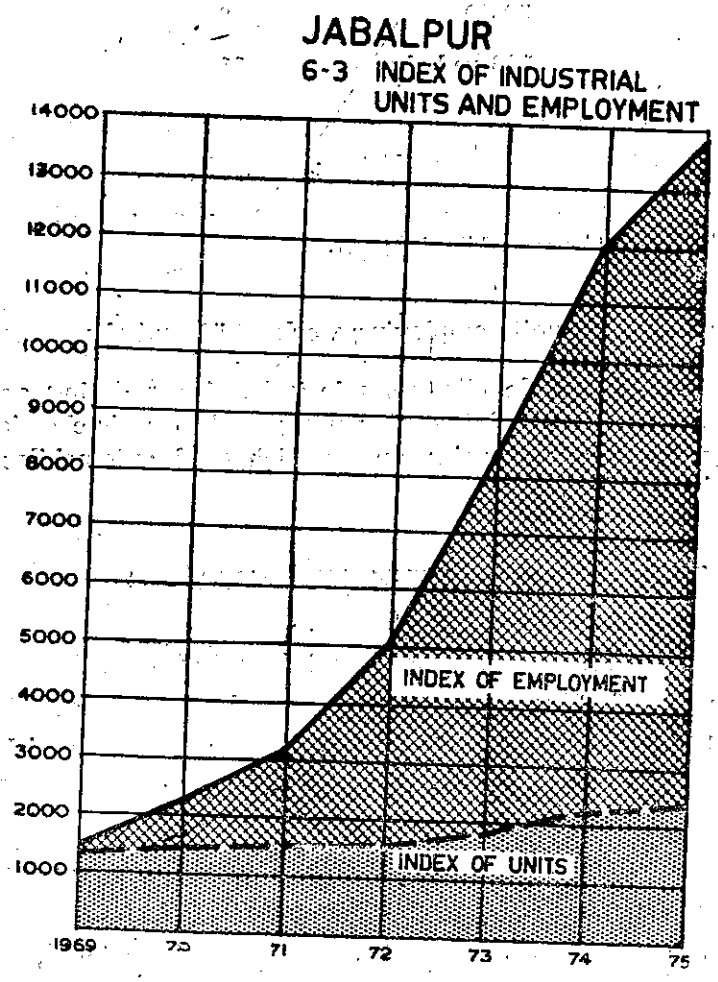
The industrial activities in Jabalpur started with the establishment of specialized defence industries. Later on handloom and bidi making industries of household nature came into existence in the third decade of the present century. As a matter of fact, the city began its industrial life in last 30 years. The establishment of Telegraph Workshop, ceramic industries, steel fabrication industry and Gilletine Factory is significant. Heavy Vehicle Factory has further boosted the industrial climate for establishment of ancilliary industries.

6.41 Growth of Industrial Establishments

The small and medium-size units started appearing in 1950. Their growth however, increased steadily after 1961. In 1961, there were 14 registered industrial units extending employment opportunities to 168 employees. The number of industrial units registered in 1973 were 1385 employing 8771 workers. It appears that some unregistered industries operating earlier might have registered after 1961.

6.42 Industrial Establishments by Employment

The city has very large number of unregistered industrial establishments. Census 1961 revealed that nearly 87% of the total establishments including unregistered establishments employed 6 to 49 workers and only 0.7% establishments employed more than 50 workers and above.



JABALPUR : INDUSTRIAL ESTABLISHMENT BY SIZE OF EMPLOYMENT

6-T-5

No.	No. of Workers Employed.	No. of Units	% of Total
(1)	(2)	(3)	(4)
1.	1	1156	39.3
2.	2-5	1401	47.7
3.	6-9	160	5.4
4.	10-19	127	4.3
5.	20-49	75	2.6
6.	50-99	9	0.3
7.	100 and above	11	0.4
	Total :	2939	100.0%

Source : Census of India, 1961.

Major industrial units employing workers 50 and above are as under :—

Production of edible oils, ceramic industries, printing and publishing industry, smithing, refining and rolling steel, organic chemical industries, sundry hardwares, repairs and servicing of automobiles and manufacturing of bidis.

6.43 INDUSTRIAL ESTABLISHMENT BY TYPE

It is revealed from the table given below that more than 25% establishments are of Textile Cotton Category i.e. Powerloom industry. The second highest percentage is for Food-Stuffs category which accounts for 21.17% of the total units. Units of wood and wooden products category come on third place with 13% of total industrial units. Beverage and tobacoo products units account for 11.26% of the total units. Categories under which there are less than 100 units include printing and publishing (3.66%) machinary and electrical equipments (2.39%), chemical and chemical products (1.65%), rubber and coal products (1.35%), leather and leather products (1.26%) and transport equipments (1.04%) etc.

JABALPUR, INDUSTRIAL ESTABLISHMENT BY TYPE

6-T-6

S. No.	Type (Major Group)	Total No.of Ind. Estt.	Percentage
(1)	(2)	(3)	(4)
1	Food- Stuffs ..	487	21.17
2	Beverages and Tobacco Products ..	259	11.26
3	Textile Mills ..	22	0.96
4	Textile Cotton ..	578	25.138
5	Wood and Wooden Products ..	317	13.75
6	Printing and Publishing ..	84	3.66
7	Leather and Leather Products ..	29	1.2
8	Rubber, Petroleum and Coal Products ..	31	1.3
9	Chemical and Chemical Products ..	38	1.65
10	Non- Metallic and Mineral Products ..	181	7.87
11	Machinery and Elect. Equipments ..	55	2.39
12	Transport Equipments ..	24	1.04
13	Mix. Manufacturing Industies ..	195	8.48
	Total ..	2300	100%

Source : Census of India 1961.

6.44. Industrial Establishments by Location

The industrial establishments, which are ancilliary to defence establishments are located in the industrial estate situated at Adhartal as well as the industrial area at Ricchai which is under development to the north-east of city. The aluminium factory is located in Gohalpur on old Mirzapur Road. Most of the other industries such as Oil Mills, Dal Mills, Floor Mills are located in Nivaganj, Cherital and Galgala localities, which are within the city centre or in close proximity to them.

The other large and medium size industries are located on N. H. No. 7 at Madan Mahal particularly the Timber processing and Saw Mills, Simplex Group of Industries manufacturing Steel Fabrication, chase building manufacturing of tiles and other ceramic products. The steel rolling plant. Shaw Linear Gelatine Factory are located on Shahpura Road.

The other major industrial unit is P & T Workshop, located on Garha Road. Small and medium-size units are scattered all over the city as is clear from the table given on the next page.

JABALPUR : INDUSTRIAL ESTABLISHMENT BY TYPE AND LOCATION

6-T-7

Ward No.	Total units	Food-stuffs	Beverages & Tobacco	Textile	Wood Products	Paper Products	Printing & Publishing	Leather Products	Rubber, Chemical Petrol.	Non-Metallic and Minerals.	Earthen Products	Basic Metals	Machinery	Transport Equipments	Misc. Industries
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	114	13	1	3	13	..	..	14	1	..	58	1	..	9	1
2	15	4	1	3	..	..	..	1	..	..	..	2	..	4	..
3	14	5	..	4	..	..	..	..	..	..	..	..	..	4	1
4	46	20	11	11	..	..	1	..	3	..	2	..	..	6	1
5	13	7	..	..	..	..	..	..	1	..	1	2	2	1	1
6	90	11	..	3	23	..	2	..	..	..	2	11	..	5	33
7	118	12	46	49	7	2	1	..	1	..	..	3	..	9	18
8	79	12	2	49	5	..	..	1	..	1	2	5	..	1	1
9	222	6	17	172	10	..	..	..	..	..	4	3	1	3	6
10	238	11	57	135	6	..	1	..	..	1	19	5	..	2	1
11	82	25	..	4	1	..	4	..	8	..	..	9	1	11	19
12	27	7	1	5	..	1	..	1	1	..	..	..	..	4	7
13	159	14	1	24	3	..	10	2	1	..	..	12	..	7	85
14	127	30	1	50	2	..	9	8	2	..	..	1	2	10	12
15	107	11	2	16	5	..	5	..	4	..	..	1	9	39	..
16	154	21	3	28	19	..	8	2	7	..	1	11	7	27	20
17	49	16	2	8	5	..	..	..	2	..	..	3	1	10	2
18	73	19	4	11	1	..	3	4	3	..	3	5	..	15	5
19	38	17	..	3	1	..	3	2	..	2	..	3	1	1	5
20	100	10	7	11	43	..	2	..	1	..	9	2	1	10	4
21	59	14	16	7	..	..	1	..	1	2	..	2	1	11	7
22	156	8	8	34	39	..	..	3	3	..	49	2	..	7	3
23	40	3	2	4	4	..	..	..	1	..	23	1	..	1	1
24	43	14	..	6	..	..	..	1	..	1	..	6	..	9	6
25	61	15	1	14	8	..	1	..	1	1	2	2	..	14	3
26	31	8	1	1	1	..	2	..	..	..	..	2	1	5	..
27	50	16	1	11	4	..	2	1	..	..	..	..	..	13	2
28	65	17	..	5	13	..	1	..	2	..	..	2	1	22	2
29	76	21	1	2	15	..	..	3	3	..	7	5	..	16	3
30	121	18	..	5	70	..	..	..	2	2	..	5	3	16	..
Total;	2357	405	145	478	298	3	56	43	47	8	182	121	30	292	249

6.45 Industrial Establishments by Performance Characteristics .

Suitability of location of an industrial unit is to be related to performance characteristics of that unit, although performance characteristics of some industries keep on changing owing to change in methods of production. The suitability has to be based on the present methods of production and its effects on the environment of surrounding area.

A study of performance characteristics of various units at Jabalpur has revealed that the following units located at their present site do not fit into the environment of that area. These units will, therefore, need relocation and shifting from the present sites. The development Plan has to spell out suitable sites for their relocation keeping in view the growth of ancilliary units also, which normally come up in proximity of such units. Most of the incompatible units listed below will have to be provided new sites in Development Plan.

JABALPUR : INCOMPATIBLE INDUSTRIAL TABLE UNITS.

6-T.8

S. No.	Present Location	Type of Industry
1	Madan Mahal , Gurandi, Belbagh, Gorakhpur	Timber and Bass Godowns
2	Madan Mahal, Gorakhpur	Saw Mills
3	Wright Town, Gurandi	Pather Godown.
4	Nimbharganj, Old Mirzapur Road (Cherital), Galgala, South-Milloni,ganj, and North Millonigunj, Naya Mahal (Omti). ..	Dal & Oil Mills
5	Old Mirzapur Road and Imaliya	Floor Mills (Maida Mills)
6	Napier Town, Marhatal, Garhaphatak, Okhri Road.	Soap Industries.
7	Mahartipur (Omti)	Distellary
8	Omti, Phutatal	Bakeries
9	Wright Town (Near Maharastra High School) Andherdeo.	Metal & Tin Smithy
10	Madan Mahal, Omti, Marhatal, Wright Town (Behind Bus Stand)	Vulcanising and tyre re-trading.

6.46 Industrial Infrastructure

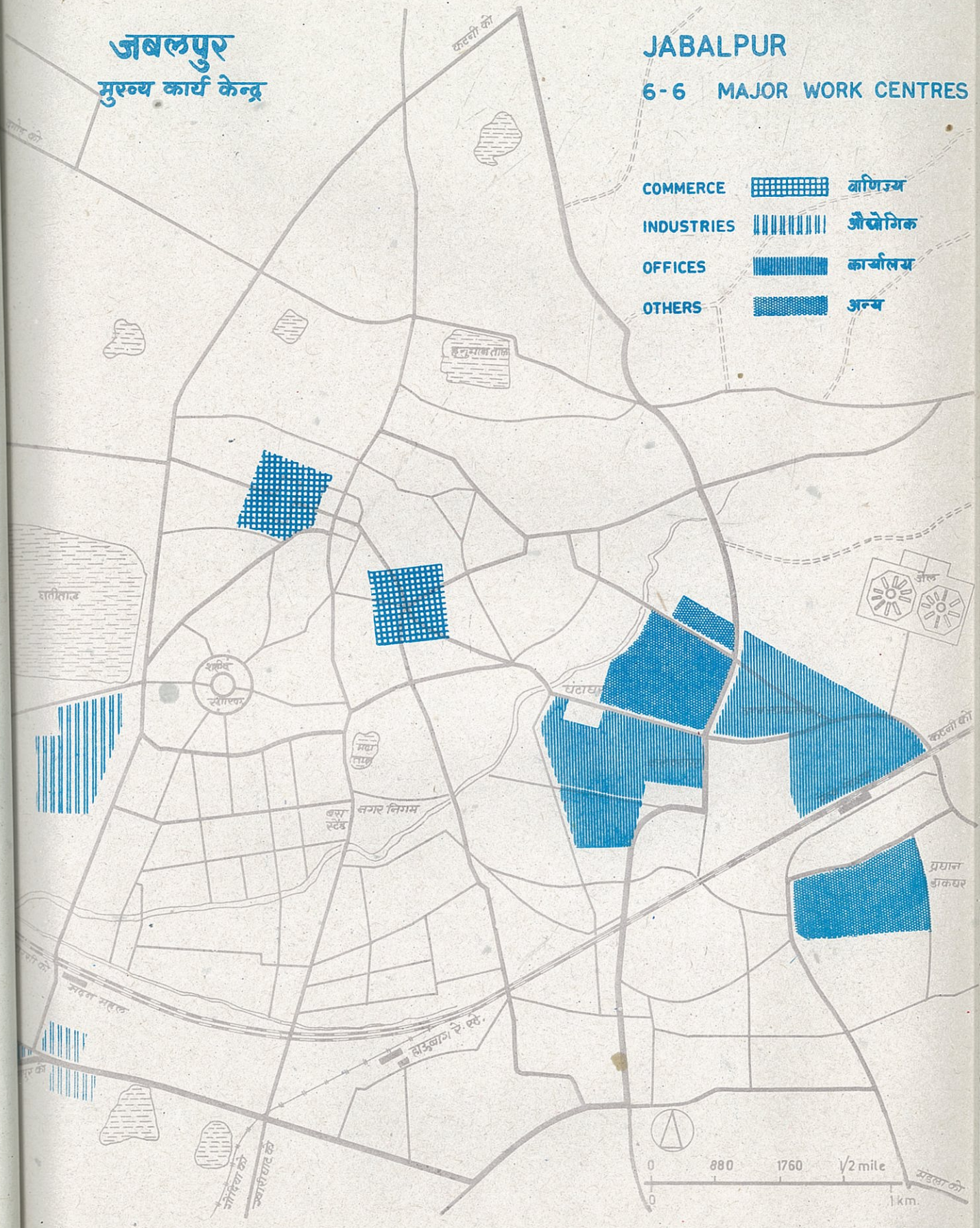
Availability of suitable land adequate power and water supply and good market facilities with quick transportation facilities are important

industrial infrastructure for industrial growth. At present the power demand for industrial purposes is met by 220 K. V. power line from Amarkantak. Adequate quantity of raw water could be made available from Pariyat Tank. However, it is proposed to have raw water supply from Bargi subsidiary canal. The linkage with important cosuming cities by rail and road exist since the industrial areas located right along the rail trunk route and at an approachable distance at National Highway No. 7 linking practically all the parts of the State as well as all the major cities in India.

An Industrial estate near Adhartal between the Railway line and N. H. No. 7 with an area of 42.5 hectares of land has been fully developed extending essential infrastructure including the industrial sheds. In addition to this, the industrial area admeasuring 200 hectares is under development to the north of Heavy Vehicles factory with the railway siding facility, proximity to the N. H. No. 7 at Richhai and Madhai village. This area will serve not only the ancilliary industrial units for Heavy Vehicle factory and defence projects but will also meet the requirement of large-scale heterogenous industries that are anticipated in future.

जबलपुर
मुख्य कार्य केन्द्र

JABALPUR
6-6 MAJOR WORK CENTRES



CHAPTER 7

TRAFFIC AND TRANSPORTATION

Functional efficiency of an urban settlement is influenced to a great exent by movement space and circulation pattern it offers to the users. No trans portation system can provide efficiency unless the movement space is sufficient and pattern is functional. Circulation pattern is again intimately related to disposition of various activities expressed in land-use pattern, and land-use pattern influences many factors related to transportation such as trip length frequency of trips, movement efficiency, in terms of speed, safety and convenience of movement etc. There is oilateral dependency of traffic pattern and land-use pattern of the city. The relationship again influences cost of transportation both in terms of time and money because cost is directly related to distance between work centres and place (Residential areas), between inter-related work centres and amenity areas, and the speed with which the traffic can move. Social and economic cost involved in traffic efficiency is high, though cannot be assessed accurately but which mainly affects, particularly, the producers and distributors of goods and services.

A study of circulation pattern and its relationship with the land-use pattern, modes and mobility of traffic, time-distance studies, traffic accidents and their causes etc. will help in identification of various traffic problems, which need attention. These studies, and the analysis could be relatively examined with the existing land-use pattern and life and structural conditions, which will bring out the solution and the possibilities of improvement and re-development.

7.1 *TRANSPORTATION SYSTEM (REGIONAL)*

A glance at the map of hinterland of Jabalpur shows that out of three modes of transportation viz. rail, road and air, the rail and road transportations have competition. Road transport is impotant on account of direct linkages not only with the imoprtant urban centres but also from time-distance factor, frequency of bus services, comparatively lesser journey time and lower passenger fair and freight rates. Jabalpur is connected by roads to almost all the important places in the region.

National Highway No. 7 Nagpur-Mirzapur Road passes through the city and provides direct link to metropolitan centres of north and north-eastern and southern parts of the country. Other state highways connecting various adjoining districts are—

(a) State Highway No. 37, which connects Jabalpur to Damoh and Mandla.

(b) State Highway No. 22 which connects Narsinghpur and Dindori, that is proposed to have other road links from Jabalpur to Patan, Deori and Dindori in Mandla district. Previously the later two roads were partly metalled and Jabalpur--Patan Road was unmetalled. But now these roads are completely metalled. Gradually the network of roads in Jabalpur district was extended and improved.

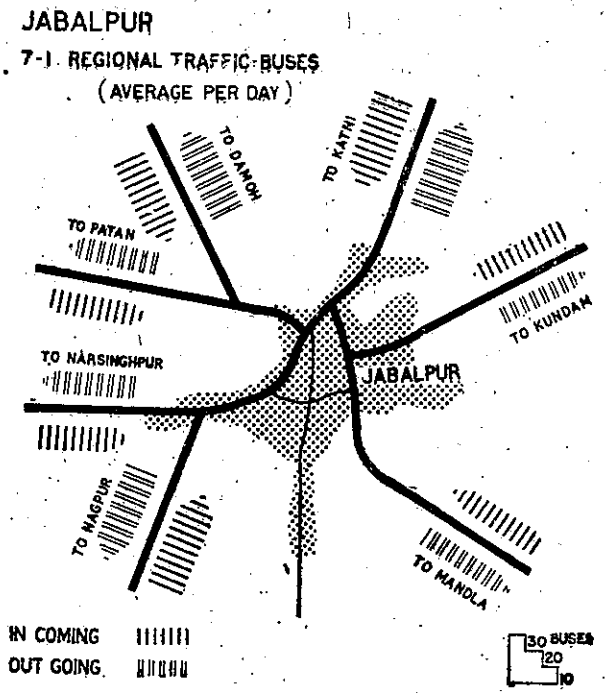
Jabalpur being a very important and the biggest urban centre of the region has direct economic links with the adjoining districts. There is continuous flow of passengers as well goods traffic not only from the adjoining places but from the adjoining districts. There is direct bus service for Gwalior, Indore, Bhopal, Raipur, Durg, Bilaspur and Amarkantak with-in the State and for Allahabad and Varanasi in Uttar Pradesh and Nagpur in Maharashtra.

Jabalpur is not on the air map of the country but since it has important defence establishments, there is a military air strip at Dumna.

The city offers both broad and meter gauge rail links and is directly linked to Bombay, Bhopal, Allahabad, Delhi and Howrah. It is also linked with Gondia by metre gauge. The broad gauge railway line in the form of horse shoe, separates the main city and defence establishments. There are four conveniently located under-passes and two over-bridges, providing uninterrupted flow of traffic. However, there are two level crossings at Garha Road and Gorakhpur Road, which create serious traffic bottle-necks and shall have to be taken into consideration while formulating Development Plan proposals.

7.11 Regional Traffic (Passenger)

The city being central place and well-linked with other trading centres of the country receives significant quantum of passengers as well as goods traffic through National Highway and other routes. It is estimated that nearly 214 passenger buses come to Jabalpur and 132 number of buses commence their journey every day from Jabalpur to other destinations. The number of incoming and outgoing passenger buser from different directions is given on the next table :—



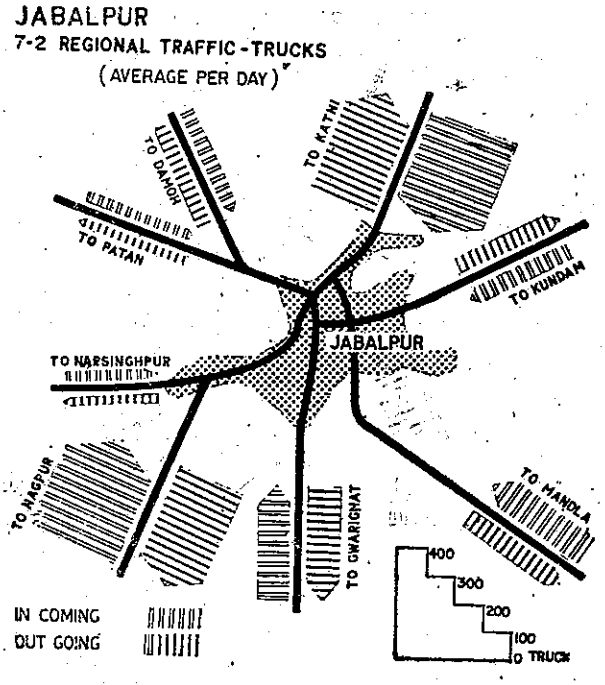
S. No.	Road Section	Average Per-Day	
		Incoming	Outgoing
(1)	(2)	(3)	(4)
1	Jabalpur——Nagpur	41	30
2	Jabalpur——Narsinghpur	7	11
3	Jabalpur——Mandla	19	20
4	Jabalpur——Kundam	24	25
5	Jabalpur——Damoh	12	14
6	Jabalpur——Patan	28	25
7	Jabalpur——Gwarighat	8	8
8	Jabalpur——Katni	75	43

Source : Compiled from data received from M.P.S.R.T.C. and private operators.

The above table shows that maximum traffic is along Jabalpur-Katni Road section followed by Jabalpur-Nagpur Road section.

7.12 Regional Traffic (Goods)

Jabalpur is an important trading centre of the region and functions as collecting and distributing centre of various commodities. As per the survey undertaken is September, 1976 it has been found that nearly 537 trucks commence their outward journey carrying 3722 metric tonnes of goods in different directions, while 503 trucks come to Jabalpur



carrying 3018 metric tonnes of goods every day. The details are given in the table below :—

JABALPUR : REGIONAL TRAFFIC (GOODS) 7-T-2

S. No.	Road Section	No. of Trucks Per Day					
		Incoming			Outgoing		
		1964	1976	%	1964	1976	%
1	2	3	4	5	6	7	8
1	Jabalpur—Katni	102	185	81.4	34	214	529
2	Jabalpur—Sagar	31	53	71.0	11	65	491
3	Jabalpur—Nagpur	89	146	64.0	30	130	333
4	Jabalpur—Mandla	41	63	53.6	15	76	407
5	Jabalpur—Kundam	23	26	13.0	7	21	200
6	Jabalpur—Narsinghpur	NA	15	..	NA	16	..
7	Jabalpur—Patan	NA	15	..	NA	15	..
	Total ..	286	503	75.9	97	537	454

Source : Regional Transport survey 1964 and Regional Traffic survey conducted by Town and Country Planning Deptt. (September 76)

Note.—No. of trucks for 1964 is worked out taking 6 tonnes per truck.

7.13 Through Traffic

The Department organised the Regional Traffic Survey in collaboration with Police Department in September, 1976. The duration of Survey was 24 hours. The information was collected at seven regional traffic points with a view to find out the dispersal of goods traffic in context to the origin and destination of the goods movement. The through traffic is predominent on Jabalpur-Katni Road followed by Jabalpur-Nagpur Road section. The following table gives the dispersal of traffic on various road sections :—

JABALPUR : THROUGH TRAFFIC (GOODS)

7-T-3

Number of Trucks per day

S. No.	From Road Section	Road Section						
		Jabalpur Katni	Jabalpur -Nagpur	Jabalpur Damoh	Jabalpur Patan	Jabalpur Mandla	Jabalpur Kun - dam	Jabalpur Narsingh-pur
1	2	3	4	5	6	7	8	9
1	Jabalpur-Katni	21	25	8	1	18	...	..
2	Jabalpur-Nagpur	38	9	2	..	1	1	—
3	Jabalpur-Damoh	12	6	7	..	12	..	1
4	Jabalpur-Patan	—	...	..	12	..	..	..
5	Jabalpur-Mandla	12	..	14	..	..	..	1
6	Jabalpur-Kunda m	1	..	..	..	—	..	..
7	Jabalpur-Narsinghpur	..	..	..	..	..	..	..
	Total	84	40	31	13	31	1	2

Source : Regional Traffic survey conducted by Town & Country Planning Department (September, 1976).

7.2 *CIRCULATION PATTERN*

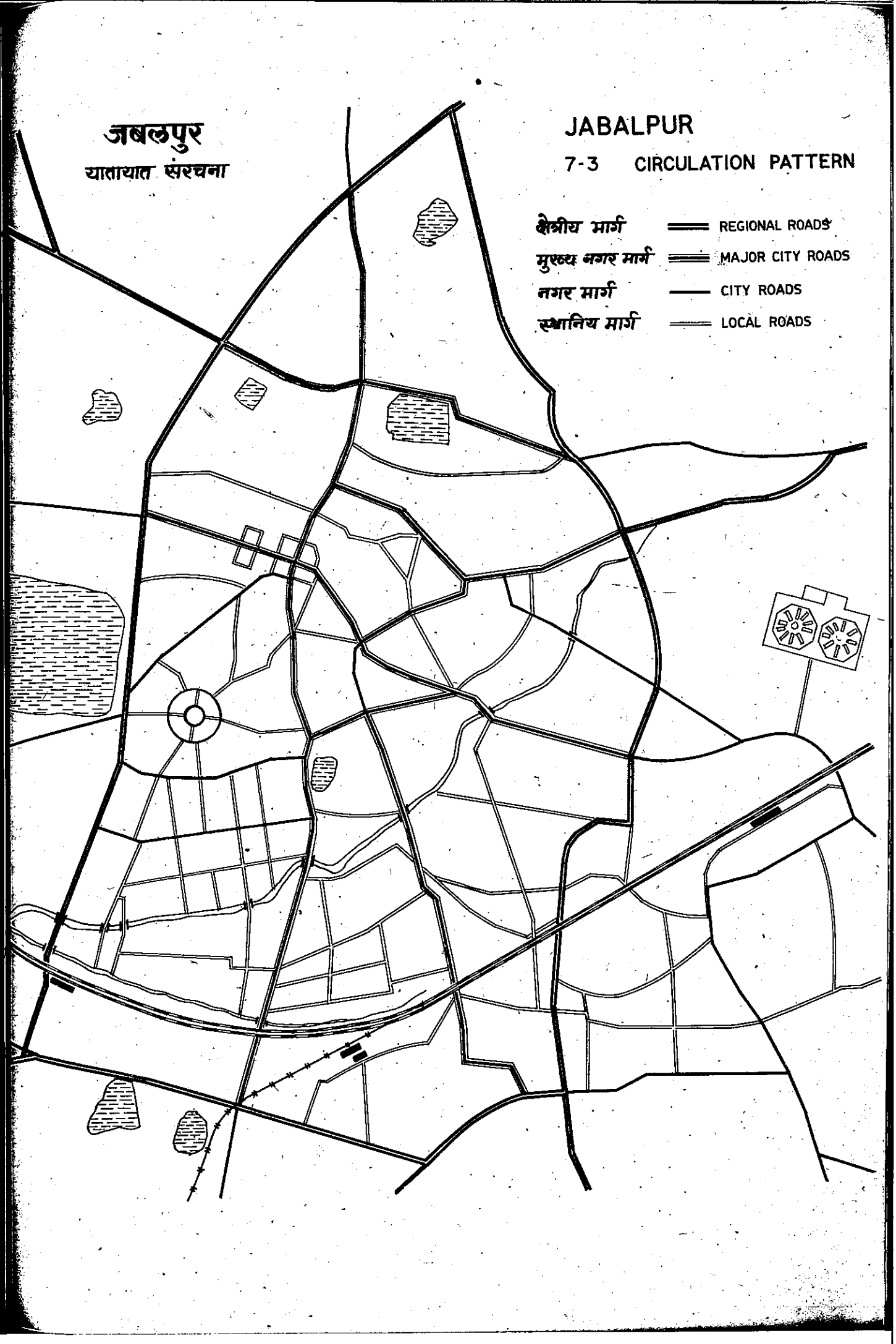
The circulation pattern of the city is predominantly east-west, which is given below :—

Ghamapur Chauraha, Kotwali to Chhota Fawara.

Road between High Court, Ghantaghar, Omti, Shyam Talkies to Ranital Chauraha.

Road from Y.M.C.A. Tayab Ali Chauraha, Naudra Bridge, Corporation Chauraha, Manas Bhawan, linking Madan Mahal Road.

Road from Third Bridge to Income-Tax office Chauraha, Russel Chauraha, Shastri bridge Chauraha to Madan Mahal Chaurha


जबलपुर
यातायात संरचना
JABALPUR
7-3 CIRCULATION PATTERN
क्षेत्रीय मार्ग REGIONAL ROADS
मुख्य नगर मार्ग MAJOR CITY ROADS
नगर मार्ग CITY ROADS
स्थानिय मार्ग LOCAL ROADS

North-South traffic arteries which brings traffic to horizontal arteries are :—

Mirzapur Road (from Madan Mohan Railway station to Damoh Naka upto the Road junction of N. H. 7 near Adhartal)

Gorakhpur to Corporation Chowk, Malviya Chowk Fawara, Ghoda Nakkas Chauraha.

From bridge No. 4 to Russel Chauraha, Naudra Bridge Karam Chand Chauraha to Tularam Chauraha,

From Income-Tax Office Chauraha, Tayabali Chauraha, Omti, Ghantaghar to Omti Chauraha meeting Acharya Bannerji Marg.

State Bank-High Court to Ghamapur Chauraha.

In addition to these horizontal and vertical traffic arteries, other important linkages are :—

Niwarganj Post Office to Bada Fawara, From Bada Fawara to Omti Chauraha (Andherdeo Marg)

From Ranital Chauraha to Ghamandi Chowk (Garha Phatak Road). From Gate No. 3 to Gurudwara.

From St. Norbant School to Russel Chauraha.

Tahsil Chauraha to Lakadganj Road junction.

7.3 *TRAFFIC GENERATORS*

The various work centres of the city have been classified into three categories keeping in view the type of traffic generated by them i.e. goods traffic, passenger traffic and mixed traffic. On the basis of studies conducted by the Department, the centres identified and categorised are given in the next table :—

JABALPUR : WORKCENTRES GENERATING TRAFFIC

7.T.4

Description	Location	Description of Area
(A) PREDOMINANTLY PASSENGER TRAFFIC		
Retail Market Cinemas	City core and Gorakhpur, and Ghamapur.	Covering Fawara Andherdeo, Sarafa, Lordganj, Niwarganj, Omti, Marhatal areas.
Railway Station and Bus Station	High Court Collectorate Bus stand, Railway station Educational Institutions.	Civil Lines, Napier Town, Wright Town, Pachpedi.

Description (1)	Location (2)	Description of Area (3)
(B) PREDOMINANTLY GOODS TRAFFIC		
Wholesale Market	Niwarganj Gurandi	Jawaharganj, wholesale fruit Market near Fawara, Madan Mahal Galgala Katni Road.
Timber Market	Mukadam ganj	Damoh Road, Mandla Road.
(C) MIXED TRAFFIC (GOODS & PASSENGER)		
	Ghamapur Gurandi area Factory area Factory and Madan Mahal Factory area, Defence establishment beyond the planning area.	Mandla Road passing through Napier Town goods & passenger traffic on Katni Road and Damoh Road which pass through the city or terminates in the city via, Ranital Road. Road leading to Gun Carriage Factory and Khamaria carrying very heavy passenger traffic during peak hours.

Residential Areas (Passenger Traffic)

There is a close relationship between work centres and residential areas. Residential areas have been grouped in the following five zones :—

1. Eastern Zone : Residential areas of Ghamapur, Gohalpur, Ranjhi, Kanchghar.

2. Northern Zone : ... Residential colonies on Adhartal Road (N. H. No. 7), Motinala, Bhantaliya, Milloniganj. Kotwali and Hanumantal.

3. Western Zone : Residential area of Kamala Nehru ward, P & T Colony, Agrawal Colony, Yadav Colony, Bank Colony, Garha, Kanchpura & Medical College Colony.

4. Southern Zone : Residential areas of Gorakhpur, Madan Mahal, Hathital Colony, Shankarshah Nagar, Rampur, M. P. E. B. Colony, Adarsh Colony and Narmada Colony along Gwarighat Road.

5. Central Zone : Residential areas of Lordganj, Sarafa, Wright Town, Napier Town, Gol Bazar, Marhatal, Omti, Galgala, part of Niwarganj and Garhaphatak area.

1.4 TRAFFIC TERMINALS

There are two main regional traffic terminals:

(A)	Bus Stand	Both for M. P. S. R. T. C. buses and private operators.
(B)	Three Railway Stations	1. Jabalpur 2. Madan Mahal 3. Howbagh

7.41 RAILWAY STATION

The present main railway station, in between cantonment and the main city is advantageously located. It provides convenient access to defence areas and main city, as well as the work centres. Unlike Indore, the main railway line dividing the city in two parts completely does not interrupt the city road traffic. There are six grade separators (four under-passes and two over-bridges).

A grade separator which provides inter-connection near Madan Mahal railway station linking N. H. No. 7 and Damoh Road along old Mirzapur Road is of dire necessity. As well the present level crossing along with Garha Road needs to be provided with grade separators.

7.42 RAILWAY GOODS YARD

The present goods yard near the Jabalpur railway station serves the needs of the transportation of goods to and from the city as well as the marshalling of defence goods trains. The yard is inconvenient and insufficient for the growing needs of the city, resulting in the intermixing of goods and mass transportation on the main road along High Court and Collectorate. Secondly, the goods station and goods yard towards north side that is city side has blocked the accessibility of the passenger traffic from the city to railway station. Further the goods station and the goods yard near Divisional Railway office is inconvenient. It will therefore, be necessary to establish a new goods yard at Adhertal and Kuchpura to meet the growing needs of the city. The establishment of new goods yard will concurrently reduce the warehousing activities in the heart of the city. The metre guage goods yard is suitably located near Madan Mahal Station.

7.43 BUS STATIONS

The existing Bus Stand near Corporation is located with convenient accessibility from the residential areas. However, the location of the Bus Stand being away from the Railway Station, the passengers desirous to have a change in transportation mode find it inconvenient. The efficiency of existing bus stand premises has been considerably reduced due to location of Bus Repair Workshop. The present Bus Stand is simultaneously used by private Bus operators and three-wheeler passenger tempos, carrying intra-city traffic in an unorganised manner. In context to the adjoining land uses which are predominantly commercial, public, semi-public and residential, the situation of bus stand is inconvenient.

7.44 BUS DEPOT AND WORKSHOPS

The present bus depots are located near Ranital and Hathital. The Hathital Bus Depot is conveniently located with the scope of future expansion. It would be possible to shift the workshop presently located near Bus Stand to Hathital Bus depot site improving the efficient organisation of the existing Bus station.

The Bus Depot is located at Ranital which is suitably situated at present, however, in future it would be necessary to shift it from the present site in view of the situation of city bus terminus near Madhotal.

The Divisional M. P. S. R. T. C. workshop located at Karmata, is suitably situated.

7.45 TRUCK TERMINUS

At present the trucks are parked on the road near Damoh naka and Maharajpur on N. H. No. 7.

It is necessary to provide for a well-organised truck terminus at suitable sites taking in to consideration, the goods traffic needs.

7.46 AERODROME

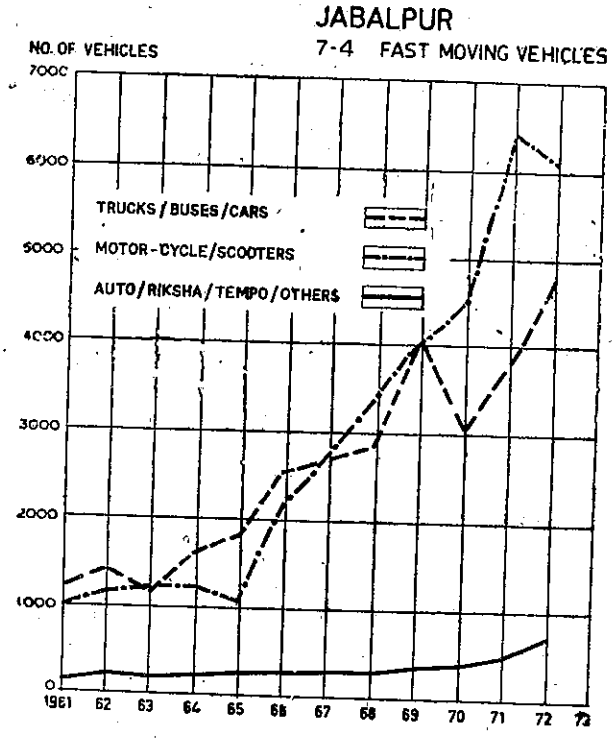
At present Jabalpur is not on the air map of India in spite of the fact that there is considerable anticipated inland and foreign tourist traffic. At present there is only an air-strip at Dumna, used for the purpose of defence requirements. It is very essential to locate a suitable site for aerodrome so as to link the tourist traffic from Delhi-Khajuraho-Jabalpur-Varanasi, Nagpur and Calcutta.

7.5 MODES OF TRANSPORT

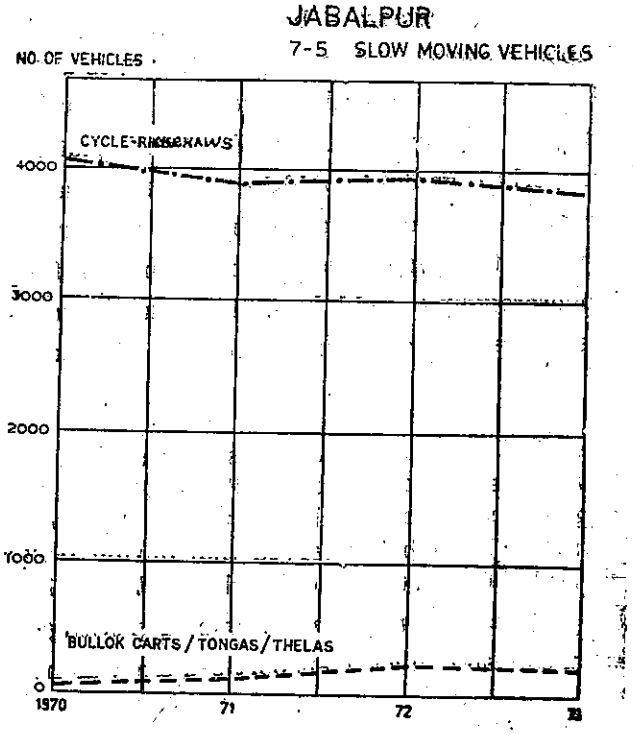
The fast-moving vehicles in the city are increasing at a faster rate. In spite of this increase, the fast-moving vehicles are not apparently replacing the slow-moving vehicles. Particularly Rickshaws and hand carts are also increasing number. In Jabalpur these vehicles still enjoy the popularity perhaps due to their ability to provide "door service" in areas where fast-moving vehicles are not able to reach, unless, drastic changes in the physical pattern of the city are carried out. The modes of transportation are not likely to undergo any appreciable change. The heterogeneous character of traffic comprising of both slow and fast-moving

vehicles will continue to remain a baffling problem. The mass transit mostly depend upon bicycles, rickshaws. The tempos are also used by a good number of commuters. But this is costly. It is utterly unfortunate that Jabalpur a city with vast expanse has inadequate. But transport system which properly organised could be most dependable mode of mass transit in the city of such magnitude. In this connection it would be necessary to increase the number of city buses and its frequency at peak hours so that overcrowding could be reduced and introduction to bus service on more routes so that every important area could be accessible by bus service.

The study of trends of fast-moving vehicles indicate that the total number of fast-moving vehicles increased from 2327 in 1961 to 10743 during 1971. The fast-moving vehicles include buses, trucks, tempos, motor cycles, scooters and cars. It is further observed that during 1963 that 8 tempos were registered and these figures increased to 261 in 1972. It is because of the fact that with the increase in volume of passenger traffic during the past years, cheap and quick transport system was not introduced in



the city. There has been significant increase in number of motor cycles, scooters and cars also. There were only 311 cars in the city during 1941 and this figure increased to 2570 during 1972. The number of motor cycles and scooters also increased from 1020 in 1961 to 6120 during 1972.



The trend of slow-moving vehicles indicate that the number of rickshaws is on the increase whereas the tongas are going off the road, it is because of the increasing cost of maintenance. For carrying goods, the total number of carts and thelas is also showing marked increase. The data on fast-moving and slow-moving vehicles are shown below in the table:—

JABALPUR : GROWTH OF FAST-MOVING VEHICLES

7-T.5

Year	Trucks, Buses & Cars	Carriage Auto-Rick-shaws	Motor-Cycle Scooters	Tempos	Others	Total
1	2	3	4	5	6	7
1961	1197	..	1020	..	110	2327
1962	1400	..	1173	..	211	2784
1963	1181	..	1195	8	192	2576
1964	1635	..	1239	10	211	3095
1965	1850	..	1088	22	243	3205
1966	2545	2	2214	26	245	5032
1967	2696	2	2742	28	247	5715
1968	2861	5	3447	31	251	6595
1969	4078	11	4044	79	261	8473
1970	3517	13	4494	93	271	8388
1971	3851	13	6434	118	327	10743
1972	4770	..	6120	261	468	11619

Source :—R. T. O., Jabalpur.

JABALPUR : GROWTH OF SLOW-MOVING VEHICLES

7 T.6

Year	Tongas	Bullock Cart, Thelas	Cycle Rickshaws	Total
1	2	3	4	5
1970-71	7	60	4039	4106
1971–72	7	155	3885	4047
1972-73	7	223	3949	4179
1973–74	7	167	3882	4056
1974–75	10	224	3680	3934
1975–76	11	234	3734	3979

Source:—Municipal Corporation, Jabalpur.

7.6 TRAFFIC PROBLEMS

In order to evolve proper circulation system, it is essential to understand the traffic problems by conducting the traffic surveys. Such surveys give a clear picture of volume, direction, type and character of traffic. The traffic surveys carried out in April, 1975 are described below.

7.61 TRAFFIC SURVEYS

Traffic volume counts and parking needs survey were conducted by this department in collaboration with Police Department at 79 points located on important regional and city roads. The counts were recorded in one operation in 16 hours time from 06 hrs. to 22 hrs. on normal working day and information regarding peak-hour traffic hetrogeneous traffic, characteristics by volume, traffic needs, predominance of goods and passenger traffic, was collected. It also covered traffic counts regarding behaviour of traffic at peak-hour.

In order to make comparative study of traffic volume on different roads, it is necessary to convert fast and slow traffic into a common unit. For this purpose each mode of traffic is converted into an equivalent called 'per car unit' (P. C. U.) by using conversion factor. The conversion factor has been worked out on the basis of road space used by the vehicle to per unit distance and time. The final value of the factor has been arrived at in consultation with Central Road Research Institute, New Delhi. The conversion factors used are:—

1. Car 1.0
2. Bullock Cart 6.0
3. Tractor 3.0
4. Tongo 3.0
5. Truck & Bus 2.5
6. Hand Carts 2.5
7. Tempo 1.25
8. Auto-Rickshaw 1.0
9. Scooter/Motor Cycle 0.75
10. Cycle 0.33
11. Cycle-Rickshaw 1.0

JABALPUR : PEAK-HOUR TRAFFIC VOLUME (in P. C. U.)

7-T.7

Sr. No. counting Station	Name of the Road	Peak-hour Time		Peak-hour Volume		Total
		Fast	Slow	Fast	Slow	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Katni Road ..	17–18	7–8	359	684	1043
2	Damoh Marg ..	15-16	19–20	265	1046	1311
3	Gopaldas Marg	6–7	11–12	114	1125	1239
4	Vallabh Bhai Patel Marg	19–20	8–9	69	607	676
5	Rashtriya Marg No. 7	17-18	21-22	154	289	443
6	Vehicle Factory Marg	12–13	12-13	1545	2453	3998
7	Mirzapur Marg ..	14–15	11–12	2290	4020	6310
8	Ambikacharan Marg	21–22	20–21	251	2073	2324
9	Mahatma Gandhi Marg	8–9	17–18	116	1187	1303
10	Vallabh Bhai Patel Marg	10–11	19–20	288	4215	4503
11	Vallabh Bhai Patel Marg	7-8	18–19	149	2545	2694
12	Dr. Ambedkar Marg	20-21	12–13	310	1922	2232
13	Vehicle Factory Marg	6-7	7–8	64	600	664
14	Dr. Ambedkar Marg	7–8	7-8	531	6385	6916
15	Kundam Road ...	7–8	7-8	1250	2025	3275
16	C. O. D. Marg ..	7–8	12-13	320	258	578
17	Gadha Marg ...	17–18	7–8	194	2184	2378
18	Lajja Shankar jha Marg	18–19	20–21	398	827	1225
19	Gadha Phatak Marg	8–9	7–8	282	2729	3011
20	Andher Deo Marg	18–19	10–11	135	1449	1584
21	Jaiprakash Narayan Marg	20–21	19–20	326	1749	2075
22	Nehru Marg ..	11–12	20–21	612	1484	2096
23	Nehru Marg ..	15–16	18–19	94	1112	1206
24	Ambikacharan Marg	18–19	18–19	270	2411	2681
25	Dipakchand Marg	8-9	20-21	224	6459	6683
26	Ravishankar Shukla Marg	18-19	17-18	414	1528	1942

(1)	(2)	(3)	(4)	(5)	(6)	(7)
27	Dr. Rajendra Prasad Marg	15-16	10-11	435	1318	1753
28	Rashtriya Marg No. 7	12-13	10-11	507	2428	2935
29	Rashtriya Marg No. 7	18-19	7-8	223	3102	3325
30	Madan Mahal Station Marg	9-10	19-20	67	582	669
31	Subhadra Kumari Chouhan Marg	10-11	10-11	935	921	1856
32	Jaiprakash Narayan Marg	12-13	12-13	664	1229	1843
33	Nehru Marg	20-21	20-21	329	1279	1608
34	Jaiprakash Narayan Marg	8-9	7-8	1188	1360	1548
35	Ravindra Marg	11-12	18-19	341	1799	2140
36	Ravindra Marg	12-13	11-12	229	1162	1391
37	Kalaniketan Marg	14-15	15-16	810	1380	2190
38	Rashtriya Marg No. 7	14-15	6-7	111	488	599
39	Rashtriya Marg No.7	16-17	19-20	751	1275	2026
40	Nehru Marg	20-21	20-21	583	1146	1729
41	Nehru Marg	17-18	16-16	488	1330	2018
42	Nehru Marg	19-20	11-12	249	781	1030
43	Rajendra Prasad Marg	17-18	18-19	352	417	769
44	Rajendra Prasad Marg	7-8	7-8	1560	4359	5919
45	Rajendra Prasad Marg	12-13	7-8	234	473	707
46	Rajendra Prasad Marg	18-19	21-22	169	496	665
47	Lenin Marg	12-13	19-20	165	359	552
48	Lenin Marg	13-14	11-12	454	630	1084
49	Lenin Marg	10-11	7-8	280	498	778
50	Panchamatha Marg	18-19	7-8	41	232	273
51	Nagpur Marg	17-18	9-10	749	323	1072
52	Nagpur Marg	21- 22	9-10	927	1087	2011
53	Babu Shioprasad Marg	18-19	18-19	327	889	1216
54	Babu Shioprasad Marg	11-12	11-12	491	1837	2328
55	Shastri Marg	12-13	19-20	700	1035	1735
56	Shahid Gulab Singh Marg	19-20	6-7	448	1738	2186

(1)	(2)	(3)	(4)	(5)	(6)	(7)
57	Shahid Gulab Singh Marg	20-20	10-11	112	467	579
58	Shahid Gulab Singh Marg	19-20	19-20	77	145	222
59	Shahid Gulab Singh Marg	20-21	20-21	169	172	641
60	Shahid Gulab Singh Marg	19-20	19-20	57	772	829
61	Nehru Marg	7-8	7-8	390	1349	1735
62	Nehru Marg	16-17	17-18	1984	1739	3715
63	Mandla Marg	6-7	6-7	255	967	1222
64	Mandla Marg	11-12	19-20	154	306	460
65	Indira Gandhi Marg	18-19	13-14	116	109	225
66	Lenin Marg	13-14	13-14	261	471	732
67	Indira Gandhi Marg	7-8	7-8	92	518	410
68	Indira Gandhi Marg	14-15	7-8	403	536	939
69	Ridge Road	18-19	17-18	581	523	1104
70	Ridge Road	9-10	..	249	190	439
71	Ridge Road	8-9	10-11	462	962	1424
72	Gwarighat Marg	11-12	11-12	71	207	278
73	Shahid Rambakas Marg	19-20	15-16	953	416	1369
74	Narmada Road	21-22	7-8	744	609	1353
75	Supply Depot Marg	11-12	12-13	1077	2431	3508
76	Kingsway	11-12	10-11	190	688	878
77	Mandla Road	11-12	11-12	588	2877	3465
78	Mandla Road	9-10	9-10	207	532	739
79	Gwarighat Marg	9-10	9-10	272	472	744

The last table reveals that the peak-hour time is from 7 to 8 in the morning and evening. The maximum traffic flow is on Dr. Ambedkar Marg, Deepak Chand Marg, old Mirzapur Road, Vallabh Bhai Patel Marg and Kundam Road.

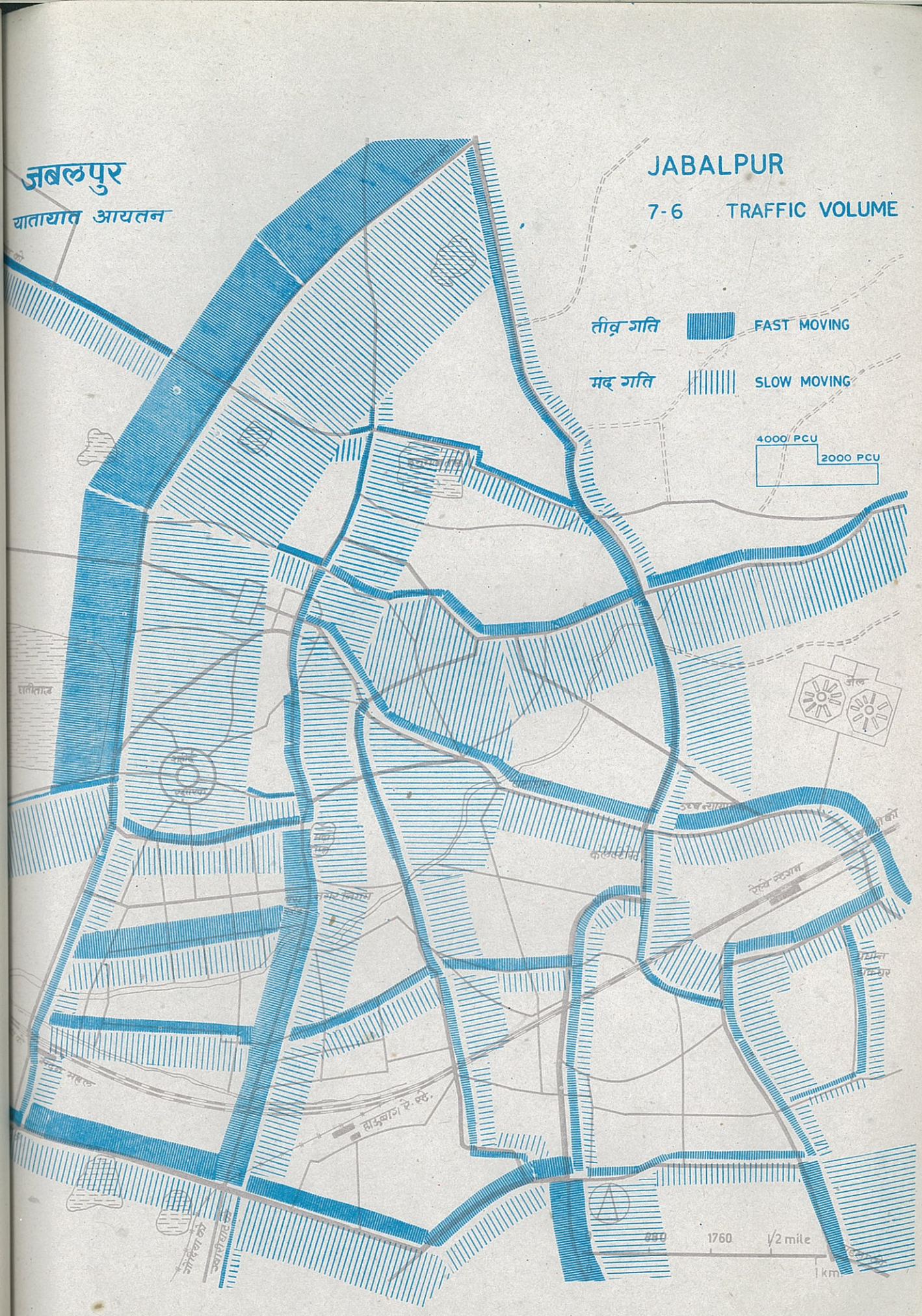
7.62 INTERMIXING OF TRAFFIC

The above studies have revealed that traffic mobility is greatly reduced because of intermixing of traffic on city roads. Although majority of

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roads carry lesser traffic than their capacity (based on average width), even then some of the roads are subjected to congestion and reduction in speed. Roads which suffer on account of intermixing of traffic are Nunhai Road, Acharya Bannerji Road, Garha Pathak Road; road from Malviya Chowk to Khamania, Andherdeo Road, road from Sarafa to Omti Chowk, road from Shastri Chouraha to Russels chouraha, Garha Road and Gorakhpur Road. The traffic mobility on these roads can be improved by enforcing traffic operational plans, re-distribution of activities and by providing new links.

Cycle and cycle-rickshaw traffic causes greater reduction in road capacities because of inherent behaviour of users to waiver along road in unregulated manner, and non-observance of traffic rules in general. Roads which suffer because of predominant cycle traffic are Garha Phatak Road, Niwarganj Road, Andherdeo Road, from Tularam chowk to Naudra bridge, from Malviya chowk to Omti chowk, from Malviya chowk to Fawara, from Ghamapur Chauraha to Ranjhi market and Gorakhpur Road.

It will be desirable to provide separate movement space exclusively for cycle and cycle-rickshaws at appropriate places from central area to work centres. Cycle tracks may also be provided along major roads of the city whenever possible.

7.63 CHARACTER OF TRAFFIC

Broadly the characteristics of traffic is heterogeneous wherein cycle is pre-dominant and is mixed with goods traffic on main arterial roads. This is due to the existing saw mills and transport agencies along the arteries. The stray cattle movement hampering the traffic flow is due to the existence of dairies in some localities adjacent to such roads.

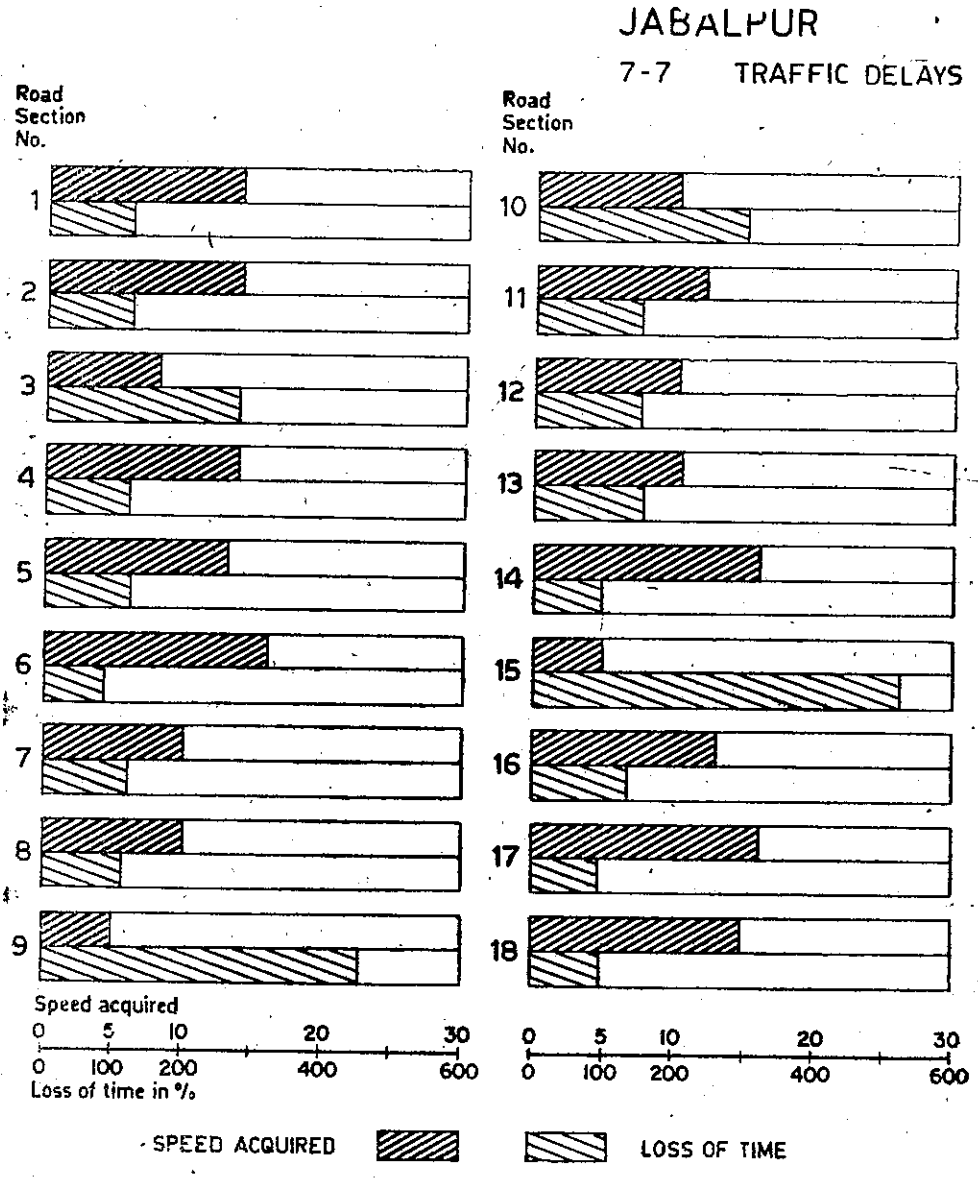
The roads where such problems occur are identified and given in the appendix.

7.64 ROAD EFFICIENCY

The efficiency of road depends on volume of traffic, its capacity in relation to effective width, character of traffic, uniformity in width, suitable road geometrics. One of the methods to study road efficiency is to relate peak-hour volume of traffic and compare the same with the maximum capacity of the road taking only the effective width i.e. carriage way equally available for movement of vehicular traffic. Road capacity has been worked out at 500 P.C.U. per hour per lane. Adjustments in calculations have been made upto half-traffic lane owing to mixed character of traffic. The result of this analysis has been tabulated and given in Appendix.

TIME-DISTANCE STUDY

Time-distance study was conducted along important city roads to ascertain the delay in movement due to traffic, conjestion, mixed traffic, traffic jams blind corners etc. The following table indicates that the maximum speed



in the city area is 10-15 kms. per hour during peak hours. This is due to inefficient road system. The inordinate delays result in economic loss to users.

JABALPUR : TIME-DISTANCE STUDY

7-T.8

S.No.	Name of Road	Distance in (Metres)	Time taken in (Metres)	Max. Speed aquired (Km /Hr.)	Lose of time with 30 Km/ hr speed (Percentage)	REMARKS
1	2	3	4	5	6	7
1.	Kundam Marg (Sitlamai Chowk to Ghamapur Chowk)	1126	5	13.50	122.20	Major city road with heavy-traffic due to defence establishments.
2.	A. C. Banerjee Marg (Ghamapur Chowk to Tularam Chowk)	1341	6	13.40	123.00	Mixed traffic movement with narrow carriage width.
3.	Victoria Marg (Tularam Chowk to Bedi Omti Chowk)	268	2	8.00	275.00	Link road to central area with mixed traffic
4.	Malviya Marg (Bedi Omti Chowk to Omti Police Station)	671	3	13.40	123.90	Major city road leading to NH. 7 having goods traffic.
5.	Malviya Marg (Bedi Omti Chowk to Karamchand Chowk)	429	2	12.90	132.50	Main shopping street, mixed traffic.
6.	Ravindra Nath Tagore Marg (Karamchand Chowk to Nodra Bridge)	406	15	16.20	85.20	Major city road and main approach to Rly. station, interference by pedestrians.
7.	Jawaharlal Nehru Marg (Nodra Bridge to Nagar Nigam Chowk)	349	2	10.50	185.70	A link road mixed traffic.
8.	Jayaprakash Narayan Marg (Nagar Nigam Chowk to Malviya Chowk)	268	1.5	10.70	180.40	Major city road with main shopping mixed traffic.
9.	Malviya Marg (Karamchand Chowk to Tularam Chowk)	268	3	5.40	455.00	Major city road having main shopping.

1	2	3	4	5	6	7
10.	Road from Karam Chand Chowk to Tularam Chowk	590	3.5	10.10	296.00	Link road mixed traffic.
11.	Andherdeo Marg (Tularam Chowk to Bada Fawara Chowk)	805	4.0	12.10	148.00	Major city road having goods traffic pedestrian interference.
12.	Vallabh Bhai Patel Marg (Bada Fowara Chowk to Miloniganj Chowk)	912	4.5	12.20	145.90	Major city road with heavy traffic mixed pedestrians.
13.	Old Mirzapur Road Marg (Old Damoh Naka to Baldeobagh Chowk)	697	3.5	11.90	152.10	Regional road goods traffic mixed with local traffic.
14.	Mahatma Gandhi Marg (Baldeo Bagh Chowk to Bada Fowara Chowk)	1073	4.0	16.10	86.00	A link of central area mixed traffic narrow carriage width.
15.	Jaya Prakash Narayan Marg (Bada Fowara to Lordganj Police Station)	322	4.0	4.80	525.00	Major city road with heavy traffic mixed with pedestri-ans.
16.	Jaya Prakash Narayan Marg (Lordganj Police Station to Malviya Chowk)	536	2.5	12.90	132.50	Major city road with heavy traffic mixed with pedestrians.
17.	Lajja Shankar Jha Marg (Gurdwara to gate No. 3)	804	3.0	16.10	86.30	Major city road with heavy traffic mixed with pedestrians.
18.	Shahid Gulab Singh Marg (Gorakhpur level crossing to Central Bank)	1012	4.0	15.20	97.40	Regional road (NH-7) leading to Cantonment, mixed traffic with narrow carriage width.

Source : Town and Country Planning Department.

7.7 TRAFFIC PROBLEMS

The traffic in Jabalpur city is intermixed with slow-moving and fast-moving vehicles. The intermixing traffic characteristics with inadequate effective road width added with improportionate road width in context to land-uses, have not only effected the road efficiency and capacity, but have also posed serious traffic problems have been described here.

1.71 TRAFFIC BOTTLE-NECKS

Two main reasons can be ascribed to traffic bottle-necks :—
(a) By loading and unloading activities and stray parking on road.
(b) By closer of railway crossings.

Traffic bottle-necks due to loading and unloading activities and stray parking on road especially on Niwarganj Road, road leading to vegetable and grain markets, Andherdeo Road, Tularam chauraha, Mukadamaganj area in Galgala and road between Karamchand chauraha to Jyoti Talkies and square near Kamania gate are obvious.

The areas which suffer owing to railway crossing are Gorakhpur and Kuchpura railway level crossing on Garha Road. The severe bottle-necks are as caused by narrow Road widths.

7.72 TRAFFIC CONGESTION

There are three major reasons which can be attributed for traffic congestion along city roads. Firstly, misuse of road space by encroachments, secondly, stray parking on road space and thirdly, narrow width of existing roads.

Some of the roads which suffer due to traffic congestion are :—

1. Garha Phatak Road.
2. Niwarganj Road.
3. Road between Super Market and Bada Fawara.
4. Milloniganj Road.
5. Andherdeo Market Road up to Omit Chauraha.
6. Road between Tularam Chauraha to Karamchand Chauraha and up to Naudra bridge.
7. Malviya Chowk to Ghantaghar Chauraha.
8. Ghamapur Chauraha to Niwarganj via Belbagh Chauraha.

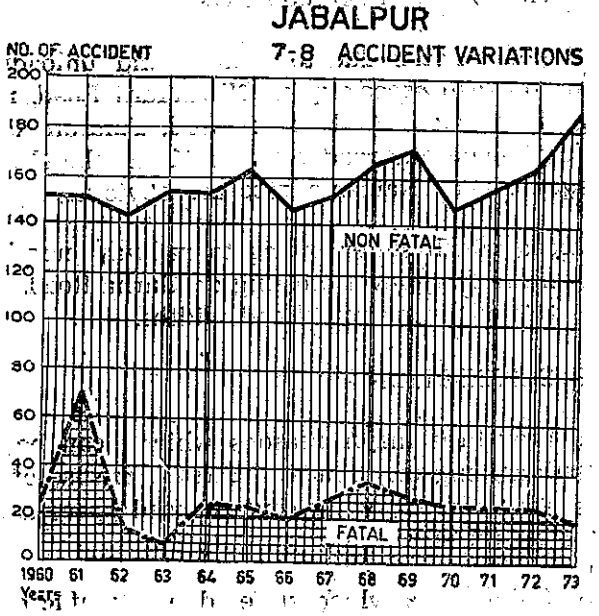
7.73 INTERMIXING OF GOODS AND PASSENGER TRAFFIC

Grain Mandi, particularly on Niwarganj Road, Gurandi and Gorakhpur Road, which have occupied busy area of the city, have created severe traffic problems by intermixing of goods and passenger traffic. So is the case with goods traffic along with Madan Mahal Road and Damoh Naka Road. The solution for these problems needs to be spelled out in Development Plan.

7.74 ACCIDENTS

There are nearly 71 accident points scattered all over the city. The number of accidents have nearly trippled during the last five years. It appears that the number of total accidents have decreased, but the number of non-fatal accidents have substantially increased. Total accidents have, however, reduced because of enforcement of measures like traffic control, regulation of traffic, improvement of junctions etc. Fatal accidents mostly occurred on regional roads on the point of entry to the city as well as on

the Road junctions where the traffic from industrial areas merge with the main traffic flow. Some of the roads, where accidents have been recorded are road under-pass No. 1, Milloniganj Road, Cherital Road, Baldeobagh Road, Damoh Naka, Pentinaka, Bhantalaiya Road, Adhartal

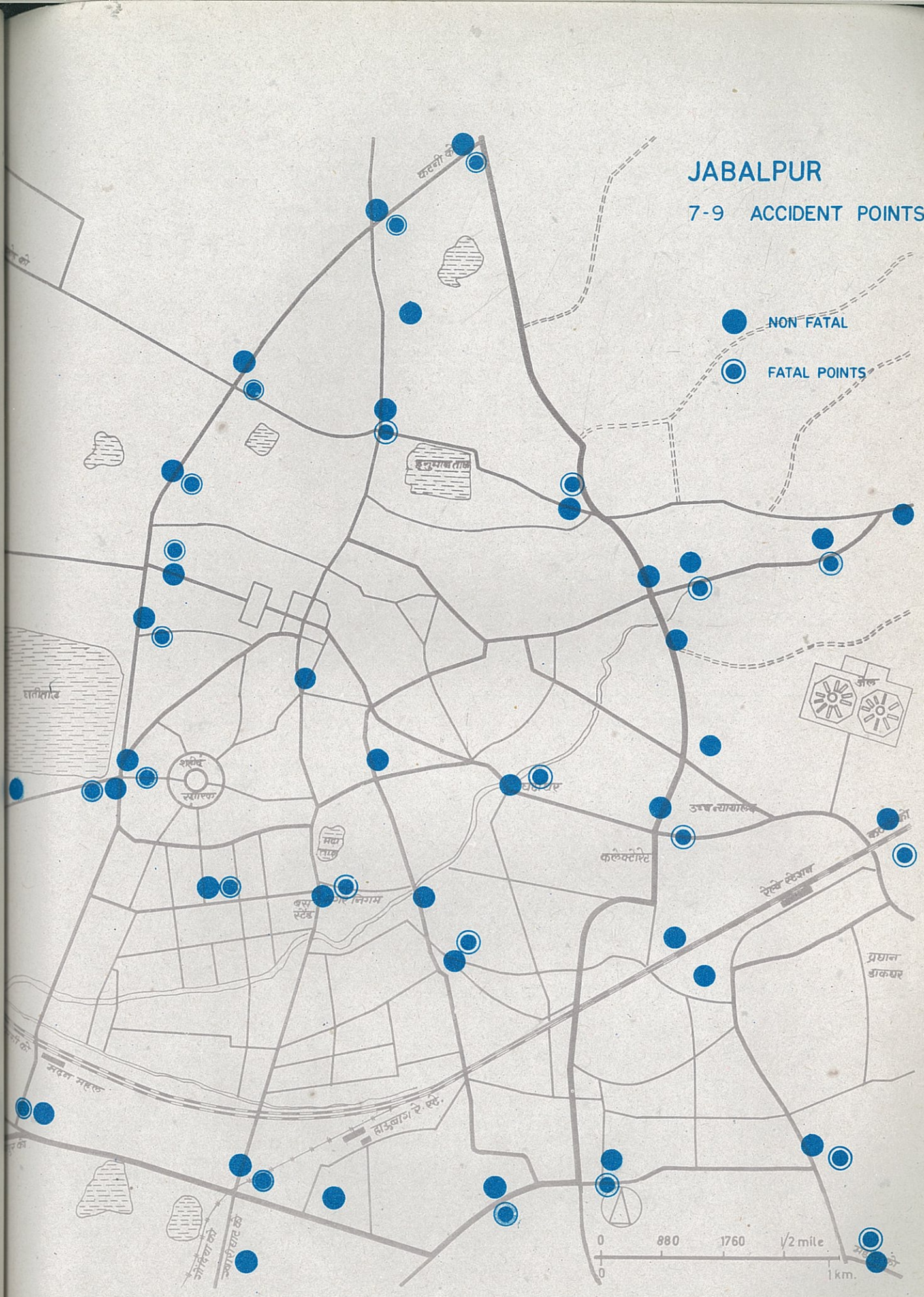


Road, near level crossing at Gorakhpur, intersection of Vehicle Factory Road, intersection of Shahpura Road at N. H. No. 7. The year-wise data of accidents are given in the following table, while the accident points are given in the Appendix.

JABALPUR : ACCIDENTS 7-T.9

S. No.	Year	Fatal	Non-Fatal	Total	Predominent type of vehicle involved
1	2	3	4	5	6
1.	1960	20	151	171	Truck, Bus, Car,
2.	1961	70	149	166	Tempo, Motor
3.	1962	15	141	156	Cycle, etc.
4.	1963	13	155	168	-Do-
5.	1964	24	153	177	-Do-
6.	1965	23	161	184	-Do-
7.	1966	20	143	163	-Do-
8.	1967	28	151	179	-Do-
9.	1968	35	163	198	-Do-
10.	1969	30	171	201	-Do-
11.	1970	24	145	169	-Do-
12.	1971	26	157	183	-Do-
13.	1972	24	162	186	-Do-
14.	1973	20	185	205	-Do-

Source : Superintendent of Police, Jabalpur.


JABALPUR
7-9 ACCIDENT POINTS
NON FATAL
FATAL POINTS
इनुमान ताल
घंटाघर
उच्च न्यायालय
कलेक्टरेट
रेल्वे स्टेशन
प्रधान डाकघर
मदन महल
हाऊराह रे. एसे.
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0 1 km.

7.75 INACCESSIBLE AREAS

There are a number of residential areas with extremely narrow lanes which are not accessible by the vehicular traffic and are only accessible by rickshaw and cycles. These areas are mostly beyond Kamania, Tamarhai, Belbagh, Toria, parts of Galgala, Motinala, Ghamapur, Madar Tekri, Kariapathar and Thakkargram. It will be desirable to prescribe street lines in certain areas as well to provide adequate access while framing re-development and environmental improvement schemes.

7.76 INCONVENIENT JUNCTIONS

Geometrics of most of the intersections are not proper and the traffic movements are unsafe. The Junction which carry bulk of traffic and are identified as most inconvenient are chourahas like Damoh Naka, Karam Chand, Omti, Gorakhpur, Tularam, Ghamandi, Kanchghar, Ranital, Sarafa Corporation, Ghamapur, Naudra Bridge and Satpula.

7.77 PARKING PROBLEMS

In order to assess the nature and extent of parking problems, a parking survey was conducted in April, 1975, which has revealed that parking problems are mostly predominant in the central area, wholesale market and in the proximity of cinemas. The parking is mostly associated with the activities such as markets, mandis, godowns, traffic terminal points, bus stand, offices and recreational areas. Organised parking areas in the city particularly in central area are few in number and inadequate in space. Parking therefore, invades road space, reducing the traffic efficiency.

Truck parking is mostly found near Mandis, wholesale markets, godowns, and similar activities. Areas where truck parking is more predominant are Timber market along Madan Mahal Road and Transport agencies at Adhartal and Damoh Naka.

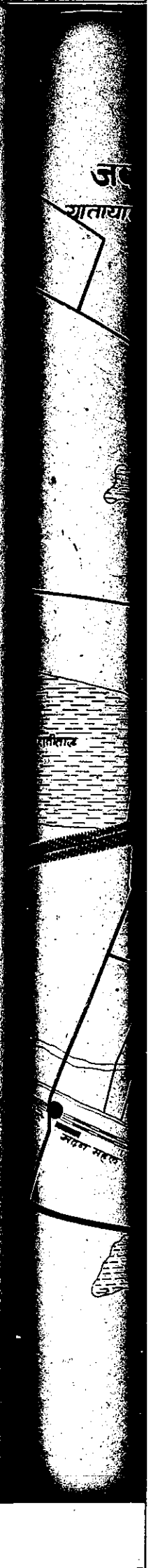
7.78 PARKING SURVEY

Parking Survey was organised at 54 points. Except at 12 points no parking space existed. The Parking Survey undertaken by the Department indicates that there are about 29 places where parking is mostly concentrated. Truck parking is mainly concentrated at Damoh Naka and Adhartal Chungi Chowki. Car and tempo parking is found in front of Shyam Talkies, Omti, Railway Station and Ranital Chowk. There is no parking space near Fawara, Niwarganj grain and vegetable market, Gurandi Vegetable, Junk and general market. Similarly Andherdeo and Lordganj are suffering from parking needs for fast and slow-moving vehicles. Almost all the parking places are occupying the road space reducing the traffic mobility considerably. Most of the parking demand is for tempos and buses. Considerable demand exists for the parking of cycles, rickshaws, thelas. Jabalpur as compared to other cities like Indore and Ujjain have more demand for parking of slow-moving vehicles. But during the coming years demand for fast-moving vehicles would also increase.

The result of Survey have been given in the Appendix.

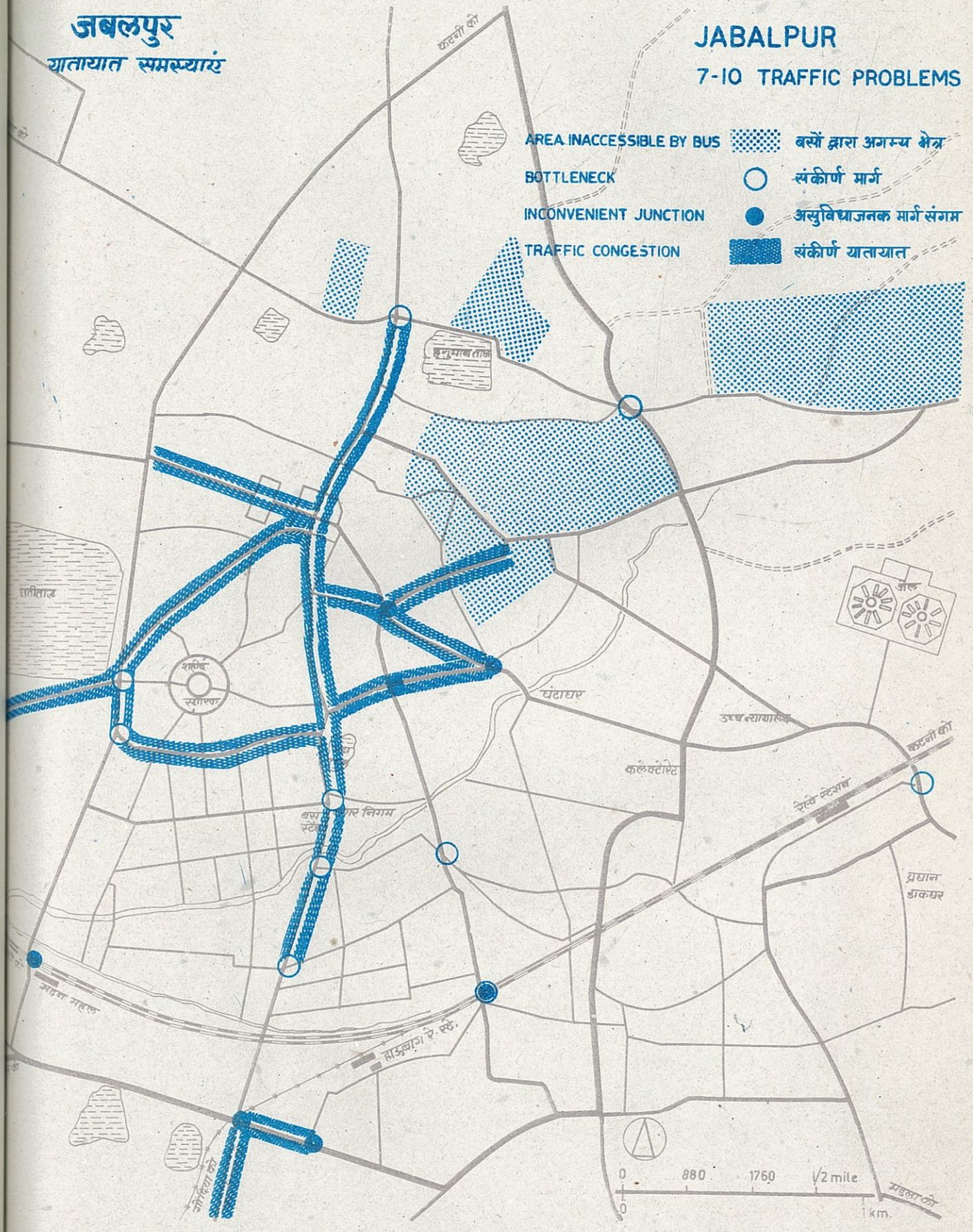
7.8 DIAGNOSTIC SURVEY OF ROADS

A diagnostic analysis of conditions on important roads was also carried out. Results in respect of same roads are given in the following table:— This study will help in evolving future course of action to improve circulation system of the city.



जबलपुर
यातायात समस्याएं

JABALPUR
7-10 TRAFFIC PROBLEMS



JABALBUR : DIAGNOSTIC ANALYSIS OF ROAD PROBLEMS

(Road with their Road portion)

Gada road	Andherdeo Marg.	Jaiprakash Narayan Marg	Goda Phatak Marg.	Nehru Marg	Shahid Gulab Singh Marg.	Ambika Charan Marg.	Ravindra Marg	Babu Shiv Prasad Marg.	Shahid Raman Bakshi Marg.	Kingsway	Gopaldas Marg	Dr. Rajendra Prasad Marg.	Madan Mahal Station Road.
Ranital Chauraha to Gada level crossing.	Fowara Chowk to Tularam	Malviya Chowk to Shastri Bridge	Fawara to Ranital Chauraha.	Anand Bhavan to Naudra Bridge Bainbina Chouraha.	Gorakhpur level crossing to Howbagh square	Ghamapur Chowk to Dixitpur.	Karam Chand Chowk to Naudra.	Madan Mahal Police station to Bainbina Chouraha.	Howbagh Women's College to Howbagh Chowk.	Shastri Park to Saint Aloysis College.	Damoh naka to Mirzapur Road.	Ghantaghar to Rajendra Pd. Chowk	Madan Mahal station to Rarital Chouraha.
14	10	16	9	20	18	8	18	16	30	18	12	30	12
1600	300	1600	850	650	600	2000	7200	800	1200	1000	800	600	600
Dairies Commercial.	City level shopping.	Rgeional city level shopping.	Commercial	Public Semi-Public Commercial.	Commercial	Regional city level shopping	Public Semi-Public Commercial	P. S. P. commercial	P. S. P.	P. S. P. commercial	Industries Dairies commercial.	P. S. P. Commercial.	Industries Dairies commercial.
No	(a)	Yes	(a)	Yes	(a)	No	No	(a)	(a)	Yes	No	No	(a)
2	2	4	2	3	2	4	4	3	2	3	3	2	4
City	City	City	City	City	City	City	City	City	City	City	City	City	City
Frequent	No	Frequent	No	No	Frequent	No	Frequent	No	No	Frequent	No	No	No
Poor	Poor	Average	Poor	Average	Poor	Poor	Average	Average	No	Average	Poor	Average	Average
(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Ganjipura	No	No	No	Ghamapur Chowk Dixitpura.	No	No	No	No	No	No	Near Mandi	No	No
Average	Poor	Average	Poor	Average	Very Poor	Poor	Average	Average	Average	Average	Poor	Average	Average

) defined space available for parking and as such road space for parking of vehicles.
Footpath is needed as the road carries heavy pedestrian traffic.

JABALBUR : DIAGNOSTIC ANALYSI
(Road with their Road portio

1.	Name of Road	Old Mirzapur road.	NH-7	Kundam road	Mandla road	Gorighat road	Gada road	Andherdeo Marg.	Jaiprakash Narayan Marg	Goda Phatak Marg.	Nehru Marg	Shahid Gulab Singh Marg.	Ambika Marg.
2.	From to ..	Katjanaka to Ranital.	Katjanaka to Medical College Junction.	Ghamapur Chowk to Ranji naka	Bridge No. 2 to Saint Aloysius College.	Gorakhpur level crossing to Azad Chowk.	Ranital Chauraha to Gada level crossing.	Fowara Chowk to Tularam	Malviya Chowk to Shastri Bridge	Fawara to Ranital Chauraha.	Anand Bhavan to Naudra Bridge Bainbina Chouraha.	Gorakhpur level crossing to Howbagh square	Ghama Chowk pur.
3.	Road width (Meter)	30	16	18	18	22	14	10	16	9	20	18	8
4.	Road length (Meter)	3200	7200	5000	800	850	1600	300	1600	850	650	600	200
5.	Predominent use	Industries Transport Agencies Warehousing	Commercial Industrial P. S. P.	Defence establishment Indiustry., commercial P. S. P.	PublicSemi-puplic	Public, Semi-Public Commercial.	Dairies Commercial.	City level shopping.	Rgeional city level shopping.	Commercial	Public Semi-Public Commercial.	Commercial	Region level sh
6.	Parking ...	(a)	(a)	(a)	No.	No	No	(a)	Yes	(a)	Yes	(a)	No
7.	No. of Inter-section	5	13	6	5	4	2	2	4	2	3	2	4
8.	Traffic Type ..	Regional city.	Regional city.	Regional city.	Regional city.	City	City	City	City	City	City	City	City
9.	Accident ..	Very Frequent	Very Frequent	Very Frequent	Very Frequent	Frequent	Frequent	No	Frequent	No	No	Frequent	No
10.	Traffic Control ..	Average	Poor	Poor	Average	Average	Poor	Poor	Average	Poor	Average	Poor	Poor
11.	Footpath ..	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
12.	Bottle-neck located at	No	Near Ghamapur	Gorighat level crossing.	No.	No	Ganjipura	No	No	No	Ghamapur Chowk Dixitpura.	No	No
13.	Road Geometrics ..	Very poor	Poor	Poor	Average	Average	Average	Poor	Average	Poor	Average	Very Poor	Poor

Source ;—Traffic Survey in 1975 by Town & Country Planning Department.

NOTE: There is no defined space available for parking and as such road space is misused (b) Footpath is needed as the road carries heavy pedestrian traffic. for parking of vehicles.

Ghamapur flows through the city with many stagnation points consequently affecting injurious to the public health.

CHAPTER 8

URBAN SERVICES AND AMENITIES

8.1 WATER SUPPLY

Jabalpur city had no filtered water supply prior to 1968. The city was supplied raw-chlorinated water from Khandhari reservoir and Pariyat river. The total water supply to an extent of 6 to 6 million gallons per day was inadequate for the needs of the city. It was only after 1968 that 12 M.G.D. filtered water was supplied from Khandhari reservoir which continues to be grossly inadequate. Nearly 30 to 40 per cent. of the population at present depends upon water supply from other sources than the tap water.

Very recently the Public Health Department has framed a comprehensive water supply scheme at an estimated cost of 18.0 crores. This scheme augments the city water supply from 12 M.G.D. to 30 M.G.D, at the rate of 30 gallons per capita per day, so as to meet the requirement of next decade. The scheme after modifications will provide 9 M.G.D. of water from Narmada river for 10 months in the first-phase and in addition to this 3 M.G.D. of water shall be augmented from Fagua nullah for the same period and during this period no water will be drawn from pariyat tank. For the remaining two months no water shall be drawn from Narmada, instead of 10 M.G.D. water would be drawn from Pariyat tank and 3 M.G.D. from Fagua nullah. Thus, 13 M.G.D. of water will be available throughout the year from this arrangement. Khandhari system will remain as it is providing 6 M.G.D. of water throughout the year. Thus, total supply of 19 M.G.D. will be made on completion of this composite scheme. Further in phases the water supply from Narmada would be drawn to an extent of 21 M.G.D. and 9 M.G.D. from other sources, ultimately providing 30 M.G.D. water supply for the city It would be worth-while to re-examine the facility of augmentation of water supply for industrial purposes from Bargi subsidiary canal, whereby the strain on filtered water-supply will be minimised.

8.2 SEWERAGE

Jabalpur city has no sewerage and sewage disposal system. The sullage water out of conservancy latrines is allowed to flow through open-surface drains which is ultimately discharged into Omtinalla and Motinalla. Omtinalla flows through the city with many stagnation points consequently affecting injurious to the public health.

The Public Health Department has recently framed the comprehensive sewerage and sewage disposal scheme which will cater to the needs of the city for the next two decades. The scheme envisaged laying of underground sewerage line to an extent of 305 kilometres. Construction of 5 pumping stations with 10 M.G.D. capacity and the construction of works for sewage disposal is estimated at a cost of Rs. 3.5 crores.

8.3 STORM WATER DRAINAGE

At present there are only a few line surface drains and insignificant number of storm water drains in the city. The sullage water and storm water drains are discharged into Omtinalla that flows through the city. During rainy season these nullahs overflow and the nearby areas are overflooded causing damage to the property and disturbing the normal life of the people in the affected areas. Flooding is caused by narrow channel and silting of these nullahs which overflow especially during rainy season.

The affected areas of floods are Omti, Wright Town, Motinalla, Gohalpur and Bhantallaiya localities. Recently the Government of Madhya Pradesh had sanctioned special funds to Jabalpur Municipal Corporation for taking out the silt from Omtinalla and properly channelising it so that the adjoining areas could be saved from flooding during rains.

8.4 POWER

In the recent past, Jabalpur Electric Supply Co. Ltd. was catering for the major demand of electric power in the city. It had an installed capacity of 7.5 MW. Keeping in view the demand of power in the city, this was grossly inadequate. JESCO supplemented power from Madhya Pradesh Electricity Board for distributing it in the major parts of the city. The areas of Rampur, parts of Madan Mahal, Marhatal and Garha were served with electric power direct from the M.P.E.B.

Recently the Madhya Pradesh Electricity Board has taken over the power supply and distribution from Jabalpur Elecric Supply Company. Acute power shortage in the past coupled with inadequate water supply had hampered the industrial growth of the city. To overcome this problem, the city is being linked with Amarkantak Thermal Station by 220 KV line. This will ease the situation of power supply for industrial growth.

8.5 HEALTH

The city has assumed the status of regional health centre providing specialised medical treatment and facilities not only to the city population but also to the needs of adjoining districts. The city has six major hospitals including specialised ones with total capacity of 1046 beds, which are given below :—

JABALPUR : HEALTH FACILITIES 8-T-1

S.No.	General Hospital	No of Beds	Location
1.	Medical College Hospital	500	On intersection of N. H. 7 & N. H. 13
2.	Victoria Hospital	214	Near Gandhi Bhawen
3.	Elgin Hospital	112	Near High Court
4.	Railway Hospital	90	Near Railway Station
5.	Govt. Ayurvedic Hospital	30	Gorakhpur
6.	Munnalal Trust Hospital	100	Dixitpura

In addition to this, there are 15 private specialised nursing homes and maternity homes run by Trusts or by specialists which have 154 beds. Thus, the total capacity of these hospitals is 1,200 beds, which works out to 350 persons per bed as compared to 458 persons and 250 persons per bed in Indore and Bhopal cities respectively. Thus, the medical facilities available in the city are fairly adequate at present.

8.6. EDUCATION

8.61. UNIVERSITIES

Jabalpur has a University established in 1957 imparting education at post-graduate level and extending facilities for academic research. Jawaharlal Nehru Krishi Vishwavidyalaya (Agriculture University) imparting specialised post-graduate facilities and scientific research facilities in the field of agriculture and animal husbandry was established in 1964. The University meets the requirement at the State level.

8.62 SPECIALISED INSTITUTES AND COLLEGES

There are 24 colleges imparting education in subjects of Arts, Science, Commerce, Law, Medicine, Geology and Engineering.

The Government Medical College and Government Engineering College, impart specialised education in their respective branches and are affiliated to University of Jabalpur. The Veterinary College is affiliated to the Jawahar Lal Nehru Agriculture University while Government Ayurvedic College is affiliated to the Board. The Government Polytechnic and Kalaniketan conducts undergraduate courses in vocational trades.

The College of Theology conducts graduate and post-graduate courses and is the only institute of its type in Central India.

The Telecommunication Centre of Government of India offers specialised technical training in Telecommunication Engineering and is the only institution of its type in India.

An analysis of colleges is given in the next page table :

JABALPUR ; ANALYSIS OF SPECIALISED INSTITUTIONS COLLEGES

8-T-2

S. No.	Name of the Colleges/Schools	Location	Playground	Future expansion possibilities	Building ownership	Structural condition	Location suitability
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Govt. Polytechnic ..	Civil-lines	No	Yes	Govt.	Good	Suitable
2.	College of Education	Civil-lines	Yes	Yes	,,	,,	,,

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
3.	Panchsheel College ..	Adhartal	Yes	Yes	Rented	Good	Suitable
4.	D. N. Jain College	Wright Town	Yes	No	Owned	,,	,,
5.	G. S. College of Commerce & Economics	Wright Town and Civil-lines	Yes Yes (one)	No. No	Rented Owned	.. ,,	.. ,,
6.	Govt. Science College	Pachpedi	Yes	Yes	Govt.	,,	,,
7.	Leonard Technological-College	Civil-lines	Yes	Yes	Owned	,,	,,
8.	Mahakoshal Arts Mahavidalaya	Pachpedi	Yes	N.A.	Govt.	,,	,,
9.	Hawbagh Women's College	Gorakhpur	Yes	Yes	Owned	,,	,,
10.	M. H. College of Home-Science for women	Napier Town	Yes	No	Govt.	,,	,,
11.	Bhatkhande Sangeet Mahavidyalaya	Napier Town	No	Yes	Owned	,,	,,
12	Chanchal Bai Mahila-Mahavidyalaya	Wright Town	No	Yes	,,	,,	,,
13.	Govt. Kalaniketan	Civil-lines	No	Yes	Govt.	,,	,,
14.	St. Aloysius College	Cantonement.	Yes	Yes	Owned	,,	,,
15.	Vety. Science and Animal Husbandry College.	Civil-lines	Yes	Yes	Govt.	,,	Unsuitable
16.	Engineering College	Gokalpur	Yes	Yes	Govt.	,,	Suitable
17.	Medical College	Nagpur Road	Yes	Yes	Govt.	,,	,,
18.	Hitkarini Law College	Marhatal	No	No	Owned	,,	,,
19.	Hitkarini Mahavidyalaya	,,	Yes	Yes	,,	,,	,,
20.	Kesharwani-College	Wright Town	Yes	Yes	Rented	Fair	Unsuitable
21.	Navyug Art and Commerce College.	Civil-lines	Yes	Yes	Owned	Fair	Suitable
22.	New Education Society Law College	Napier Town	Yes	Yes	Owned	Good	,,
23.	Janki Raman College	Ranital	Yes	No.	Owned	,,	,,
24.	New Education Society College of Science.	Gorakhpur	Yes	Yes	Owned	,,	,,

Source— Field Survey by Town and Country Planning Department.

8.63 HIGHER SECONDARY SCHOOLS

The city has 56 higher secondary schools and 41 middle schools. Apparently the number of middle schools appears to be less but nearly 50% of the middle schools are attached to higher secondary schools. The field survey conducted by the department reveals that most of the higher secondary and middle schools are having insufficient space. 33% of the schools have attached by playgrounds. Most of these institutes are housed in rented buildings and are located without any relation in regard to distance and time. A detailed analysis is given in Appendix.

8.64 PRE-PRIMARY & PRIMARY SCHOOLS

The city has 93 Pre-primary and 177 Primary schools. Most of the Primary schools are widely dispersed in location and have inadequate floor space. Only 25% of the Primary schools in the city are having playgrounds.

8.7 SOCIAL AND CULTURAL INSTITUTIONS

Jabalpur has inherited good traditions in social and cultural life. There are seven public halls, namely, Shaheed Smarak, Gandhi Bhawan, Makhanlal Chaturvedi Hall, Manas Bhawan, Panjabi Samaj Hall, South Indian Association Hall and Bengali Club Hall to cater to the social needs of the town. Apart from University Library, the city has four public libraries, one museum and 7 clubs.

8.8 RECREATION

8.81 CITY PARKS

Parks and playgrounds are the breathing spaces of the city. Jabalpur city has only five parks, namely, Bhawartal Park, Nehru Park, Gandhi Bhawan Park, Saheed Smarak Park and Hathital Colony Park. These parks are situated near residential areas. Besides these, some open spaces exist which are being used for public meetings, namely, Tilak Bhumi Tallaiya, Shree Nath-Ki-Tallaiya, Marhatal and Ramlila ground.

8.82. PICNIC SPOTS

There are about 15 picnic spots suitable for outing. These picnic spots are situated within 20 kms. distance.

1. Bheraghat—Marble Rocks.
2. Tilwaraghat—Gandhi Memorial and Commomerative place of Tripuri Congress.
3. Pisanhari-Ki-Madhiya—Jain Temple.
4. Madan Mahal.
5. Deotal—Supatal.
6. Gupteshwar.
7. Sangram Sagar.
8. Kataiya Ghat on Gour River.
9. Gwarighat.

10. Khandari Reservoir.

11. Bhita Tank.

12. Ganesh Temple at Rampur.

13. Pariyat Tank.

14. Jabalpur Tank.

15. Katao.

8.83 PLAY AREAS

There are only 7 major sites being used as play areas viz. Wright Town Stadium, Marhatal, Science and Arts College Playgrounds, Veterinary College Playground, Police Stadium near Central Jail. Railway Station and Shivaji Stadium in Cantonment.

8.9 OTHER AMENITIES

8.91 POST AND TELEGRAPH OFFICES

The Head Post Office is situated in South Civil Lines. The City Central Telegraph Office is located in North Civil Lines. The newly constructed Telephone Auto-Exchange in Wright Town has been recently commissioned. Besides these, 46 sub-post offices are located conveniently throughout the city so as to meet the requirement.

8.92 POLICE STATION

The main police station is located in Kotwali Ward, besides this there are 11 sub-police stations and 10 police outposts located in different localities.

8.93 FIRE STATION

The city has fire station located in Municipal Corporation premises. The other fire brigade services are available from defence establishment.

8.94 DHOBI GHAT

Dhobi ghats are located near Ranital, Deotal and Supatal. The washerman families reside in jhuggis in nearby Mohallas. It is very essential to establish planned dhobi ghats at appropriate places.

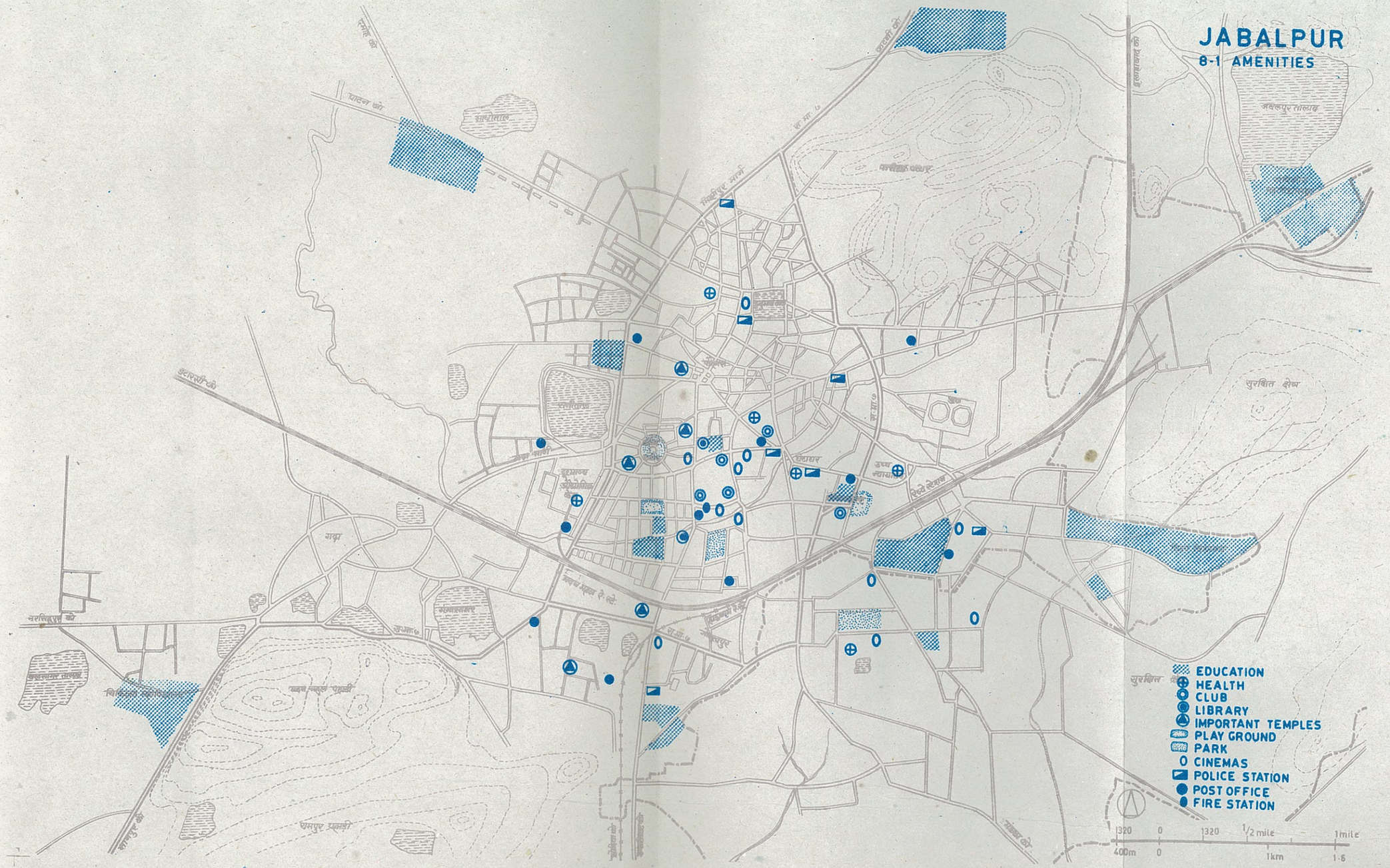
8.95 DAIRIES AND CATTLE BREEDING

The private dairies are scattered all over the city, particularly, in residential areas. They are creating serious environmental and traffic problems. Every day the cattle are being taken out for grazing purpose and they create traffic hazards during the peak-hours of the traffic. The Municipal Corporation has recently framed the scheme for shifting the cattle breeding and dairies at suitable areas on the fringe of the city.

A Government dairy is located at Adhartal.

JABALPUR

8-1 AMENITIES



8.96 CREMATION GROUNDS AND BURIAL GROUNDS

The cremation grounds are in Ranital, Chandalbhata, Kariapather, Gohalpur, Gupteshwar, Gopal Bagh and Gwarighat on the banks of river Narmada. The burial grounds for Muslims are located in Thakkargram and Supatal.

JABALPUR; EXISTING SERVICES AND AMENITIES 8-T-3

Type of Services and Amenities	No. of Units	Population per Unit
(1)	(2)	(3)
A. Health:—		
1. General Hospitals	17	25073
2. Specialised Hospitals	1	426224
3. Child Welfare Maternity Hospitals	10	42622
4. Dispensaries	16	26639
5. Family Planning Centres	9	47358
B. Education:—		
1. Nursery Schools	19	23433
2. Primary Schools	177	2408
3. Middle Schools	41	10396
4. Higher Secondary Schools	56	7893
5. College	22	19374
6. Technical Institutions	2	213112
7. University Campus	2	213112
C. Social and Cultural:—		
1. Art Gallery	1	426224
2. Museums	1	426224
3. Clubs	13	31786
4. Libraries	4	106556
5. Community Halls	2	213112
D. Recreation:—		
1. Playgrounds	4	106556
2. Park and Gardens	4	106556
3. Cinemas	14	30445
4. Local News Papers	8	53278
5. Swimming Pools	1	426224
6. Stadium	2	213112
7. Zoo	Nil	..
8. Picnic Spots	8	53278
E. Other Amenities:—		
1. Post and Telegraphs	48	8880
2. Telephone Exchange	2	213112
3. Electric-Sub-Station	..	..
4. Police Stations	12	35519
5. Fire Stations	1	426224

PART—II

PLANNING PROPOSALS

CHAPTER 9

CITY FUNCTIONS AND FUTURE CITY NEEDS

The preparation of Development Plan for a human settlement is an effort to evolve scientific and rational policies which will meet functional needs of the city and yet satisfy the aesthetic and emotional aspirations of its citizens. This requires systematic assessment of present problems and inadequacies of the city together with future requirements particularly during the Plan period.

The present problems and inadequacies of Jabalpur have been systematically studied and described in Part-I. The estimates of future requirements based on the major functions which the city will be required to cater to the trends of development of other urban centres in the region, the policies for industrial and economic development, are discussed in the following paragraphs.

9.1 MAJOR CITY FUNCTIONS

The studies contained in the previous chapters have brought out the gradual change in the trends of the city functions. In view of these trends and the inter-relationship with functions of other urban centres in the region, it is desirable to develop the city to cater for the following major functions:—

(a) An industrial centre primarily for engineering, electronics, agro-based and allied industries, small and medium-size and allied industries, small and medium-size industries in specialised fields and consumer goods, ancilliary industries to defence and M.P.E.B. and other establishments.

(b) A major trade and commerce centre (collection and distribution of commodities) and centre for business establishment.

(c) An educational centre essentially for the region but a specialised educational centre for the State in respect of Agricultural Science and Engineering Technology.

(d) An administrative centre for the region.

9.2 PLAN PERIOD

Growth of an urban settlement is a continuous process yet for the purpose of preparation of a Development Plan, it is necessary to assume a 'Time-Span'. The time-span will facilitate estimation of various requirements of the city during this period. Normally a period of 20-25 years is taken as 'Plan Period'. In case of Jabalpur the Plan period has been taken upto 1991. It will coincide with census decade, which will facilitate comparison at a later date between various projections made for the city and actual figures recorded during census operations. This will be useful for review of the Plan in future.

The proposals contained in the Development Plan cannot be entirely based on the requirements of the Plan period. The city has to function efficiently for centuries beyond the Plan period also. A limited view with in the restricted time-scale will, therefore, be harmful to the future of the city. Moreover, many aspects such as Urban Infrastructure (road network, water supply etc.) amenities, recreation etc. will require perception beyond the Plan period also.

Development Plan although is meant to serve the development needs of the city for the next 15 years, yet it is required to be reviewed every 5-7 years so as to accommodate adjustments in the programme of implementation and also to assess requirements or needs created by new and unforeseen factors.

The phasing of the implementation of the Plan will be related to the five-year Plan periods so as to facilitate inter-relationship between fiscal outlay for the Plan implementation and financial allocations available under various sectoral heads.

9.3 FUTURE POPULATION

9.31 POPULATION ESTIMATES

Population estimates are necessary to assess various needs of the city including requirement of land for various uses. These are also taken as base for working out other requirements as housing, commerce, industries, recreation, Urban infra-structure, health and education. It is difficult to assess accurately future population of a city because the factors on which growth of population depends cannot be foreseen or forecast with accuracy. Too many variables and even some unknown factors are involved.

Estimates of future population are based on the past and current trends of growth. Various methods such as decennial growth method, fitting curve method, ratio method, and comparative graph method can be applied for population projections.

(a) Geometrical Interpolation and Extrapolation Method :

It is a simple method for determining the population for any year. It amounts to geometrical interpolation and extrapolation census data. The United Nations manual on "Method of estimating total population for current dates" also recommended this.

(b) Fitting-Curve Method :

Fitting-curve method consists in establishing population time series based on past census data. It assumes that the past trend of population growth is likely to continue.

(c) Ratio Method :

The estimates are based on the growth figures of a large area, it is calculated how much the city is expected to share in relation to it. The estimated population is based on the projected urban population of

Jabalpur District and population content of Jabalpur City in the District. It also takes into consideration how this content (share) has been changing in the last few decades.

(d) Comparative Graph Method :

It consists in selection of cities with similar characteristics and having the same population as that of the city in question about two to three decades ago, the period for which the future estimate is required.

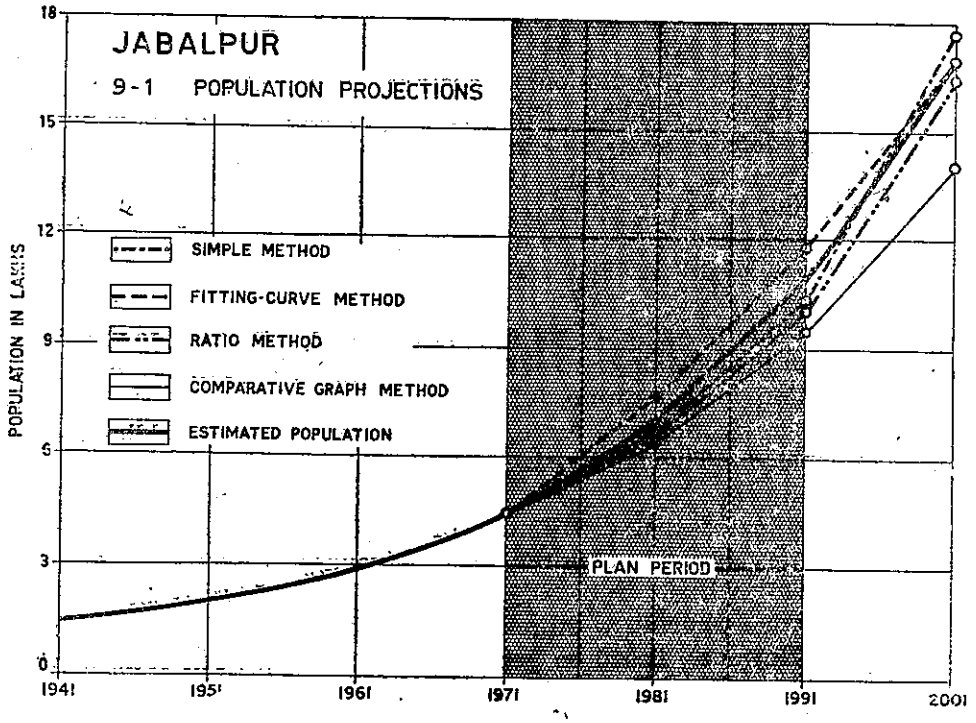
The population estimates by different methods for Jabalpur city are as under :—

JABALPUR : POPULATION ESTIMATED IN LAKHS — 9-T-1

Methods	Existing(*) Population	Estimated		
	1971	1981	1991	2001
(1)	(2)	(3)	(4)	(5)
Geometrical interpolation and Extrapolation Method	4.40	7.00	11.10	17.70
Fitting-Curve Method	4.40	7.70	11.80	16.90
Ratio Method	4.40	6.50	10.00	16.40
Comparative Graph Method	4.40	6.40	9.50	14.00
Estimated Population	4.40	6.90	10.60	16.20

(*) Including population of urban outgrowth but excluding population of defence areas.

Source.—Estimates by Town and Country Planning Department.



9.32 POPULATION ESTIMATES FOR DEFENCE AREA

The defence area of Jabalpur Cantonment and Khamaria are not included in the Planning Area owing to the provisions in the Town & Country Planning Act. However, these areas form part and parcel of the city life and it would, therefore, be necessary to estimate future population of this area also. Some of the amenities and public utilities like water supply, drainage etc. will have to be planned for the total population of the city including the defence area. While requirement for housing and slum amenities population of the city area excluding defence area will be taken into consideration. The estimates of defence area are given as under.

JABALPUR : POPULATION ESTIMATES FOR CANTONMENT AND DEFENCE AREA (1991) 9-T.2.

Year	population of Defence Area (in Lakhs)	percentage Decade Variation	population Estimation in Lakhs
(1)	(2)	(3)	(4)
1951 ..	0.53	..	..
1961 ..	0.71	34	..
1971 ..	0.92	29	..
1981 ..	..	..	1.23
1991 ..	..	..	1.67

The projected population in defence and cantonment area in 1991 is estimated to 1.7 lakhs. The projected population of Jabalpur city (excluding defence area) is estimated to be 11 lakhs in 1991 and the projected population of Jabalpur Urban Agglomeration including defence and cantonment area is estimated to be 12.67 lakhs or say 12.7 lakhs.

9.33 DISTRIBUTION BY AGE AND SEX GROUPS

Population by age and sex groups has been estimated taking into consideration the existing content of different age-groups in the total population. A decline in age-group 0.1 is anticipated owing to Family Planning measure. A marginal increase in the younger and middle-age groups is anticipated. The family-size is likely to reduce.

It is estimated that distribution of population by broad-age groups with age intervals 0-14 (children) 15-34 (young) 35-59 (middle-aged) and 60+ (old) is likely to be 39%, 33%, 22.5% and 5.5% respectively by 1991. It is rather difficult to estimate the sex composition of the future population. However, based on general observation the sex ratio of the city is

expected to increase marginally due to improved living conditions. The prevailing variation in sex ratio in broad-age group will continue. Based on these assumptions the population break up in different age groups is worked out as under.

JABALPUR : ESTIMATED POPULATION BY AGE AND SEX (1991)

(in Lakhs) 9-T.3

Broad Age Group	Age Group (classified according to educational level).	Males	Females	Total
(1)	(2)	(3)	(4)	(5)
Children (0-14) ..	0-4 Pre-Primary ..	0.80	0.66	1.46
	5-14 Primary and Secondary	1.56	1.27	2.83
Young (15-34) ..	15-19 Higher Secondary	0.62	0.47	1.09
	20-24 College ..	0.59	0.46	1.05
	25-34 Young persons	0.79	0.70	1.49
Middle-Aged (35-59) ..	Middle-aged persons ..	1.37	1.11	2.48
Old (60) ..	Old persons ..	0.33	0.27	0.60
	TOTAL	6.06	4.94	11.00

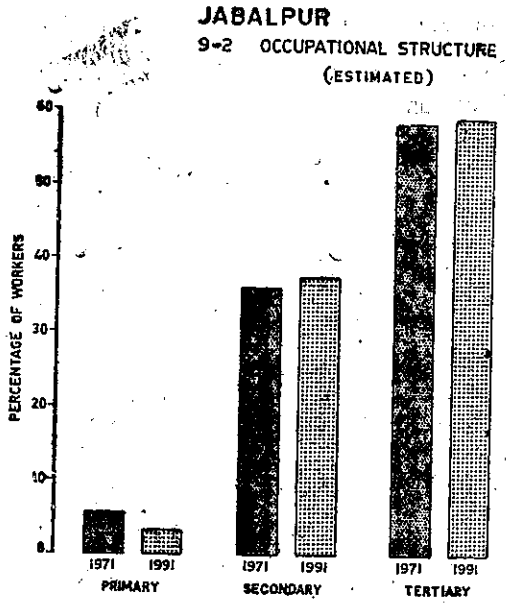
The population break up also helps in assessing educational and other social needs. The secondary education is expected to be provided to all children while strength for higher secondary education may be taken as 75% and 40% for males and females in the respective age-groups. As regards higher education, the strength is calculated as 40% for males and 15% for females in the corresponding age-group which is predominantly working age group. A higher percentage has been assumed in view of the growing consciousness for female education for various professions.

Although the number of schools and colleges has been estimated on the basis of population standards the same has also been assessed and verified on the basis of the estimated school and college-going strength discussed above.

9.34 OCCUPATIONAL STRUCTURE-ESTIMATES

The percentage of workers to total population has decreased from 32.7% in 1961 to 28.5% in 1971, which appears to be the employment opportunities in the city as mainly due to the change in definition of worker in 1971 as compared to previous census. Occupational structure

indirectly reflects the composition of various activities thriving in the city. In order to estimate the space demand by different activities it is



essential, to have an idea of changes in occupational trend likely to take place during Plan period.

Occupational structure of Jabalpur has been worked out keeping in view the changes in occupational pattern and city functions. Some improvement in participation rate is expected to take place due to improvement in the expectancy of longevity. The proportion of economically active population in 1991 is, therefore, likely to change slightly. By 1991 nearly 3.30 lakhs persons are expected to be working in different occupations.

It is difficult to foresee the picture of distribution of working force in different categories in 1991. However, it is presumed that with more diversification in the city activities primary sector is likely to decline and there would be consequent increase in secondary and tertiary sectors. It is estimated that the city is likely to share 3.2%, 37.5%, 59.3% workers respectively in three basic sectors of economy by 1991. Estimated distribution of workers in different categories is given in table 9-T.4.

JABALPUR: ESTIMATED OCCUPATIONAL STRUCTURE (1991) 9-T-4

Category / Sector	Percentage of workers to total workers		No. of workers (in thousand)	
	1971	1991	1971	1991
(1)	(2)	(3)	(4)	(5)
Primary Sector I + II + III ..	5.60	3.20	8.46	10.56

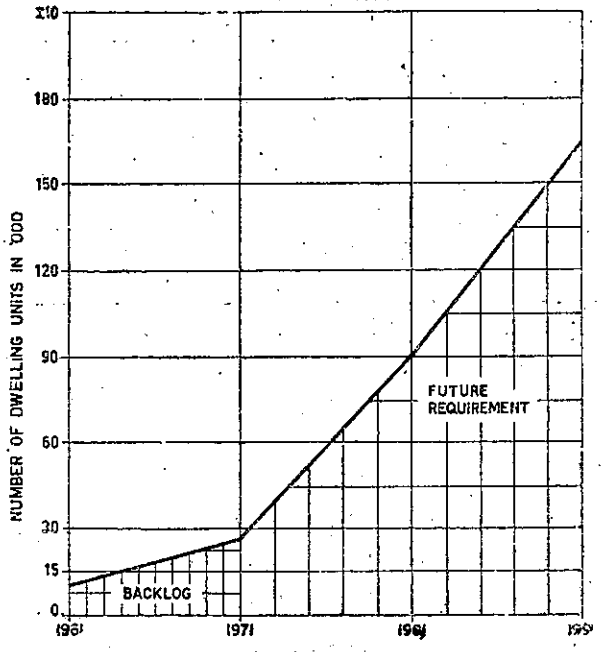
(1)		(2)	(3)	(4)	(5)
IV. Household Industiries	..	8.00	8.50	12.17	28.05
V. Manufacturing	..	25.40	26.00	38.65	85.80
VI. Construction	..	2.70	3.00	4.09	9.90
Secondary Section	..	36.10	37.50	54.91	123.75
VII. Trade and Commerce	..	13.30	14.30	20.21	47.19
VIII. Transport, Storage and Communication		11.20	12.00	17.01	39.60
IX. Other Services	..	33.80	33.0	51.57	108.90
Tertiary Sector	..	58.30	59.30	88.79	195.69
GRAND TOTAL	..	100.00	100.00	152.16	330.00

9.4 HOUSING REQUIREMENT

Jabalpur suffers from housing shortage particularly for low-income group and the economically weaker section of the society. The housing backlog in 1971 was nearly 22,000 dwelling units. This backlog has caused congestion and higher occupancy rate particularly in the central area and formation of slums in various parts of the city.

The future need for housing has been related to future growth of population, change in social outlook resulting in disintegration of joint

JABALPUR
9-3 HOUSING REQUIREMENT



families, reduction in present housing stock owing to dilapidation etc. There are no authoritative figures available for number of families in the

city. It has, therefore, been assumed that number of census households roughly correspond to the number of families, Census, 1971 recorded family-size of 5.2 persons for Jabalpur which is rather high. The higher family-size may be due to shortage of houses. However, it is anticipated that the family-size may decrease from 5.2 in 1971 to 4.8 in 1981. This means that the city will have additional families of 54,000 lakhs in 1981 and 89,000 in 1991.

Assuming that 85% of the families will require dwelling units, the requirement of additional dwelling units during various time-span has been worked out to nearly 46,000 units during 1971-1981 and 80,000 units during 1981-91. Adding the housing backlog of 22,000 units and replacement of 20% houses (1% per annum) which will become unfit for human habitation, the housing need by 1991 is worked out to 1.63 lakhs dwelling units.

JABALPUR : PROJECTED FAMILIES AND HOUSING REQUIREMENTS
(1991) 9-T. 5

S. No.	Particulars	Year		
		1971	1981	1991
1	2	3	4	5
1.	Population (in lakhs)	4.40	7.00	11.00
2.	Additional Population (in lakhs)		2.60	4.0
3.	Average family-size	5.2	4.8	4.5
4.	Additional families	..	54166	88888
5.	Families required dwelling units at 85% 1981 and 90% 1991	...	46041	79999
6.	Requirement of units including 1971 backlog	21689*	67730	147729
7.	Units requiring replacement @ 1% per annum of habitable dwelling units	..	7584	15168
	Total requirements of dwelling units including backlog	21689	75314	162897

* Housing backlog 1970.

9.4.1 HOUSING TYPE

The total housing requirement of 1,63,000 as assessed above covers all economic groups of the society. It is, therefore, necessary to work out its break up in terms of housing needs for economically weaker sections, low-income group, middle-income group and high-income group. The basis of working out is taken to be the existing proportion of households living in 1 room, 2 rooms, 3 rooms, 4 rooms and above dwellings approximately correspond to this aforesaid income groups. This broadly gives

break up of housing requirement by type as 42% for E.W.S., 33% L.I.G. 13% for M.I.G. and 12% for H.I.G. It is anticipated that demand for H.I.G. will decrease by 1991. The following percentage has, therefore, been adopted for reservation of land for various income groups.

JABALPUR : DWELLING UNITS REQUIREMENT BY TYPE 9-T-6

S. No.	Income Group	Dwelling Unit	
		%	Number
(1)	(2)	(3)	(4)
1.	Economically Weaker-Section	40	65159
2.	Low-Income Group	30	48869
3.	Middle-Income Group	23	37466
4.	High-Inconie Group	7	11403
	Total ..	100	162897

9.42 RESIDENTIAL AREA REQUIREMENTS

Jabalpur has higher residential densities in old city wards. The residential land works out to 3.40 hectares per 1000 persons which appears to be rather low. It is proposed to provide residential land at the rate of 3.30 hectares per 1000 persons. This would give gross residential density of 303 persons per hectare. Thus, the requirement of area under residential use is worked out to 3635 hectares for the projected population of 11.00 lakhs.

9.5 TRADE AND COMMERCE

At present the Land utilization rate for commercial use is merely 0.15 hectare per 1000 persons which is rather inadequate for a city like Jabalpur. In terms of workers in trade and commerce, commercial area works out to 3.36 hectares per 1000 workers as against 4.5 hectares at Indore, 3.8 hectares at Ujjain and 4.00 hectares at Bhopal. It is estimated that Jabalpur will require nearly 11.00 hectares per 1000 workers in trade and commerce because forest and agro-based trade require more space. Based on this, it is estimated that the city will require nearly 512 hectares of land under commercial use.

A broad estimate for requirement of land for major wholesale markets, mandis, categorised markets etc. is given on the next page table :—

S. No.	Name of Mandi or Wholesale Market	Description	Approximate Area Required (in hectares)
(1)	(2)	(3)	(4)
1.	Grain Mandi/Kirana Mandi	A new site of grain mandi, where grain/ Kirana Trade could function.	30-40
2.	Timber Market	A separate Timber Market where timber market could function.	20-30
3.	Loha Mandi	A new site to accommodate this trade.	5-8
4.	Vegetable-cum-Fruit Mandi	A new vegetable & Fruit mandi	6-8
5.	Warehouse, Godowns & cold storage	Distributed at various places near wholesale market.	15-25
6.	Building Material Yard	An organised market to deal with building materials such as sand, stone, steel, etc.	15-20
7.	Wholesale cum-Retail Market.	New centre of wholesale-cum-retail market & Business office.	30-40
8.	Transport Nagar	A new site to accommodate present transport agencies.	8-10
9.	Categorised Market	Market to accommodate relocation of Gurandi Market.	20-25
10.	City-level retail Shopping Centre including Business Complex.	A new shopping centre to accommodate trade and commerce activities to relieve congestion from Galgala, Gorakhpur and Ranjhi.	60-70
11.	Zonal (Distt.) Shopping Centre	One for each planning unit a population of 0.82 to 1 lakh population.	4-6
12.	Sector Shopping Centre	Shopping centre to serve sector population of 12-15 thousand inhabitants.	1-2

9.6 OFFICE-SPACE REQUIREMENT

Jabalpur being the Regional and District headquarter a number of offices of State and Central Government, autonomous bodies are being established. Out of offices of Central and State Government and autonomous bodies, most of the offices are located in scattered from all over the city and in rented premises This reflects an urgent need for office space. An Office complex is, therefore, needed which will accommodate Central and State Government offices. An area of nearly 60—70 hectares will be needed for various offices.

9.7 INDUSTRIES

It is difficult to make an exact forecast of number and type of industries which will be established. During the plan period the following large and medium-size industries are expected to be established in the city.

(a) Large and Medium-Size Unit :

1. Structural Industries.
2. Steel Forging and Fabricating.
3. Agricultural Implements.
4. Dairy Equipment.
5. Fertilizer.
6. Chemical Industries.
7. Automobile Parts.
8. Cycle-Tyre Tubes.
9. Printing Machinery.
10. Wood Working Machinery.
11. Electronic Equipment.
12. Laminated and Fibre Board Industries.
13. Lime and Ceramic Industries.

(b) Medium and Small Scale Industries Units :

1. Building Steel Structure.
2. Tyre Retreading and Remoulding.
3. Printing Ink.
4. Printing Press.
5. Soap Manufacturing.
6. Light Engineering.
7. Transformers.
8. Electroplating.
9. Ancillary Industries.

At present rate of utilisation of land for industrial works out to be 4.8 hectares per 1000 industrial workers. A ratio of 5.7 hectares per 1000 industrial worker is considered to be reasonable. On the basis of this, area required for industrial use is worked out to be nearly 707 hectares.

9.8 URBAN INFRA-STRUCTURES

9.81 TRAFFIC & TRANSPORTATION

A study of modes of transportation at Jabalpur has revealed that slow-moving vehicles during 1970-74 have registered no significant increase, but the number of cycle-rickshaws are increasing whereas the tongas have nearly gone off the road. The number of thelas is, however, increasing. It is possible that these thelas may be replaced by tempos to a certain extent in consistancy with present age of science and

technology thus they are likely to continue. The cycle-rickshaws plying presently in the city, may be only partially replaced by mechanically-propelled rickshaws and auto-rickshaws. The cycle-rickshaw will continue to play a dominant role as common man's means of transport.

The data for fast-moving vehicles for the city are not available since the Regional Transport Authority compiles the data for district. However, the information collected from their records from 1961 to 1971 for Jabalpur city shows an increase of 113.5% during this period. In absence of relevant data, it is difficult to project the number of vehicles on the basis of past trends. An accurate forecast is difficult in view of unpredictable price trends in petroleum. However, it is assumed that motor cycles, scooters, cars and three-wheelers are likely to increase during the plan period.

The table below gives an estimated number of fast-moving vehicles in different categories.

JABALPUR : ESTIMATED FAST MOVING VEHICLES 9-T.8

Sr. No.	Category	Year		Estimated
		1966	1971	1991
(1)	(2)	(3)	(4)	(5)
1.	Trucks/Buses/Cars ..	2545	3851	82 00
2.	Tempo/Auto-Rickshaw ..	89	131	1200
3.	Scooter/Motor Cycles ..	2214	6434	16000
4.	Others (including mechanically propelled Rickshaw)	245	327	5600
	Total ..	5032	10743	31000

The estimated number of 31000 vehicles works out to nearly 28 vehicles per 1000 persons, which is lower than the estimated figure of 44 vehicles per 1000 persons estimated for Raipur. A lower figure has been estimated owing to predominance of cycle and cycle-rickshaws.

The circulation pattern of the city has to be evolved to suit the above needs. It will also be guided by necessity of movement with highest efficiency and greatest safety. It is also governed by land-use pattern or the disposition of activities. Other space requirements for traffic terminals, parking and other necessities have to provided at the following standards.

1.	Passenger Railway Station	15-25 Hectares.
2.	Additional Railway Goods Yard	5-10 "
3.	Regional Bus Stations	3-5 "

4.	Bus Stations	2-3 hectares
5.	Pick-up Stations	1/2-1 "
6.	Bus Depots with Workshops	3-5 "
7.	Taxi-Scooter Stands	1/4-1/2 "
8.	City Bus Terminals	1/2-1 "
9.	Parking space at appropriate places near work centres	As per need

9.82 SERVICES AND AMENITIES

The requirement of various services and amenities are worked out in order to take locational decisions particularly for the higher order amenities in the Development Plan. It is, of course, difficult to adopt definite standards as standard would vary from a metropolitan centre to a small urban centre and from a principal city to a dependent town. Even the cities of the same size may have varying standards owing to differences in the importance of various activities. Amongst the higher order amenities, certain amenities not only serve the city but also serve the Region, while the others are mainly for the Region but serve the city as well. The services and amenities at planning unit level and sector level are mainly for the city population.

The following standards adopted for Jabalpur city are based on the knowledge of the city and its surrounding region.

JABALPUR : STANDARDS FOR SERVICES AND AMENITIES 9-T.9

Level of Amenity	Category	Standard adopted Population/ Area Served
(1)	(2)	(3)
Education		
City Level	1. University	Region/City (1)
	2. Technical & Professional Colleges	City/Region (2)
Planning Unit Level	3. College	50 to 75 Thousands
	4. Higher Secondary School	10 to 15 "
	5. Middle School	5 to 6 "
	6. Primary School	3 to 4 "
	7. Pre-Primary School	3 to 5 "
Health		
City Level	1. General Hospital	City/Region
	2. Specialised Hospitals	Region/City

(1)		(2)	(3)
	3.	Other Hospitals (Ayurvedic, Unani, Homeopathic).	City/Region
	4.	Nursing Home	City/Region
	5.	Hospital Bed	400 to 500 Persons
Planning Unit Level	6.	Maternity Home	One for one planning unit (about 1 lakh)
Sector Level	7.	Large Dispensary	-do
	8.	Small Dispensary	10 to 15 Thousands
Social & Cultural City Level	1.	Town & Community Hall	3 to 5 lakhs
	2.	Art Galla ry & Museum	City/Region
	3.	Major City Club	2 to 3 lakhs
	4.	Auditorium	do
	5.	Central Library	City/Region
Planning Unit Level	6.	Audit orium-cum-Community Hall	One for each planning unit (about 1 lakh)
	7.	Club	do
	8.	Library	One for each Planning unit (about 1 lakh)
Sector Level	9.	Community Building including Dharamshala	10 o 15 Thousand
	10.	Reading Room	4 to 6 „
Recreational City Level	1.	Botonical	Region/City
	2.	Zoological Garden	do
	3.	Regional Park	do
	4.	Acquarium	City/Region
	5.	Picnic Spots	do
	6.	Exhibition Ground	3 to 5 lakhs
	7.	Stadium	2 to 3 lakhs
	8.	City Park	do
	9.	Swimming Pool	do
	10.	Large Open Space	do
Planning Unit Level	11.	Zonal Park	One for each Planning unit (about 1 lakh)

9.83

1	2	3
Sector Level	12. Sector Park	10 to 15 Thousand
	13. Children Park	4 to 6 „
	14. Playground	10 to 15 „
	15. Play Field	2 to 4 „
	16. Tot-lot	500 persons.
Other Services	1. Central P & T Office	City/Region
City/Level	2. Auto-Telephone Exchange	3 to 5 lakhs.
	3. Main Police Station	2 to 3 lakhs.
	4. Fire Station	3 to 5 lakhs.
	5. Burial Ground and cremation Ground	1.5 to 2 lakhs.
Planning Unit Level	6. Zonal P & T Office	One for each Planning Unit (about 1 lakhs)
	7. Zonal Police Station	do
	8. Electric Sub-Station	do
Sector Level	9. Sub-P T Office	10 to 15 thousand
	10. Sub-Police Station	10 to 15 thousand.

1. Region/City : Mainly for the Region but serves the city as well.
2. City/Region : Mainly for the city but serves the Region as well.

9.83 PUBLIC UTILITIES

WATER SUPPLY

Requirement of water for the projected population of 11.00 lakhs is worked out to be 44 M.G.D. taking an average consumption of 40 gallons per capita per day covering domestic, industrial and other requirements. Water Supply project prepared by the Public Health Engineering Department makes an provision of 20 M.G.D. which will meet the requirement for the next decade and is likely to be inadequate by 1991. The sources of water envisaged under the scheme are river Parihat, Gaur, Khandari and Narmada.

DRAINAGE

At present there is no underground drainage. All the water from the inhabited area is drained through open surface drains. A comprehensive drainage scheme, is needed so as to meet the existing need and anticipated development of the city. This is essential to improve the hygienic conditions and quality of livability in the city.

SEWERAGE

Jabalpur city is not served by underground sewage system. A comprehensive sewage scheme is, therefore, considered necessary for old city and new areas coming under development. Public Health Engineering Department has recently framed the comprehensive sewerage and sewage disposal scheme, which will cater to the needs of the city for the next two decades. Sewage network has to confirm to the envisaged development of the city. Treated water from sewage treatment plant can be usefully utilised for vegetable and market gardens. Roughly the treated sewage for a unit of 1000 persons could be used for 0.4 to 0.5 hectares of land for vegetation. Thus, nearly 550 hectares of land could be reserved for vegetable and market gardening.

As regards garbage disposal, possibilities for cooking needs to be explored. In the mean time sufficient area for trenching grounds has to be reserved.

CHAPTER 10

PROPOSED LAND-USE PLAN

10.1 AIMS AND OBJECTIVES

A human settlement functions like a living organism with its inherent tendencies to grow and decay as a whole or in parts. The main aim and objective of preparation of a Development Plan for the settlement is to arrest decay and haphazard growth and to ensure growth on a planned basis. The Plan has to satisfy immediate needs and meet long-term objectives. It has to be economically viable, socially satisfying and aesthetically inspiring. Above all, it must satisfy the aspirations of the people who live, work and recreate in the settlement. The aims and objectives kept in view are given below :—

(a) Compact development assimilating present development synchronizing with the future growth .

(b) Efficient discharge of regional and urban functions of the city.

(c) Gradual removal of disorder by re-arrangement of incompatible landuses.

(d) Decentralization of work places.

(e) Harmonious and functional inter-relationship between various uses and activities.

(f) Optimum use of urban land.

(g) Functional distribution of work centres and living areas with synchronized transport network so as to attain the functional efficiency of he activities.

(h) Hierarchical city structure in terms of self-contained planning units with disposition of facilities, services and amenities on the basis of hierarchical order.

(i) Efficient transportation network and circulation system, ensuring safe and speedy movement of city and regional traffic.

(j) Separate pedestrian and cycle tracks for slow-moving traffic in new development with linkages to work centres.

(k) Formulation of traffic operation plan to attain the efficiency of the transportation disposal system.

(l) Improvement of environment by improvement of sanitary condition and evolving efficient garbage disposal system.

10.2 BASIC CONSIDERATION

A detailed study of various aspects of the city life described in the previous chapters has brought out some basic problems which need immediate attention. The study has also brought out the opportunities available at present for proper development of the city in future. Keeping in view, the problems as well as the opportunities, the following considerations emerge, which will form a basic guide for the Development Plan proposals.

(a) Conversion of 'Single-City centre' to "Linked-City centre" so as to meet the complex needs of the growing city transforming into a metropolis.

(b) Development of a new city-level shopping centre for certain commodities to accommodate growing commercial activities.

(c) Provision of sector-level shopping centres to relieve congestion in the present city centre and to provide shopping facilities to residential areas within convenient distance.

(d) Development of 'Civic Centre' and specific areas for social and cultural activities.

(e) Development of 'Administrative Centre' to accommodate public and semi-public offices of State and local levels.

(f) Efficient use of Government land and properties by putting them to appropriate uses.

(g) Encouragement for establishment of small industrial units by providing flatted factories at suitable sites.

(h) Development of land for industrial use with a view to accommodate needs even beyond the Plan period, resolving conflicts of various needs related to land uses.

(i) Location of obnoxious industries at appropriate places.

(j) Provision of proper circulation pattern enabling separation of intra-city and inter-city traffic.

(k) Prescribe street lines for narrow but important roads of the city and enforce the same even beyond the Plan period during the process of renovation.

(l) Rational distribution of residential densities so as to minimize disparities without destroying the character of the city and yet ensuring its compact development.

(m) A phased programme of development of house sites and construction of houses so as to minimize the wide gap between requirement and available housing stock.

(n) A time-bound programme of improvement and clearance of slum areas by providing environmental improvement and by construction of cheap houses to suit the paying capacity of the economically weaker section.

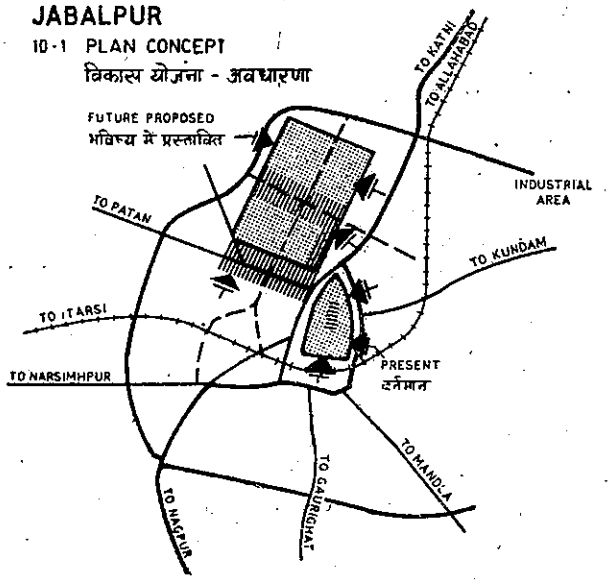
(o) Provision of major recretional areas such as regional park, geological park, exploiting the natural potentials for such development.

(p) Provision of integrated water supply and sewerage system for the entire city, particularly, areas which are devoid of these services.

10.3 PLAN CONCEPT

The form of Jabalpur has been though influenced by natural topography yet the man-made features have also conditioned its growth to a great extent. The hill-girdle extending from eastern to south-western side, Narmada terrain on the south-western side, and cantonment to south-east have confined the city growth to a great extent. The main city growth is confined within old Mirzapur Road, railway 'U' clamp, and with secondary regional link to Sagar towards north-west. During the past, the city growth gradually intensified along the regional links resulting in nodal developments.

Within the limitations of physical features and growth pattern of the past, it is proposed to develop the city as a 'linked entity'. The major portion of future growth on the north-eastern side inter-connected with the parent city through corridors of commercial activity and amenities. The corridors will not only provide physical inter-links but will also.



strengthen economic, social and cultural links with the existing city. From the point of view of transportation the city of Jabalpur can be called a 'Cycle City'. It is likely to remain as such for a long time to come. The concept of future plan of the city has been evolved to meet this peculiar transport need of the worker.

The concept of the Plan is highlighted by the sketch given above.

10.4 PLANNING UNITS

The Development Plan for the city has been framed on the basis of relatively self-contained nine planning units. Conceptually each unit will function as an entity in respect of shopping, education and health amenities, recreational areas, and to a certain extent work centres will also be provided within the units. The planning units are linked to the city centres and work centres of the higher order, city-level amenities and traffic terminals etc. Each planning unit is further divided into sectors and sub-sectors v hich will also contain sector-level amenities.

The city structure of Jabalpur, thus consists of nine planning units covering an area of 8649 hectares. This includes 3029 hectares of presently developed area. The size of the planning units is not uniform because the area included in a planning unit is based on the conformity to various land-uses, character of existing and proposed development, functional hierachy and physical homogeneity etc. rather than the land area. The planning units have been numbered and major city roads of the proposed circulation pattern have been given functional names for the sake of convenience of description of the planning proposals.

Planning Unit No. 1

This unit comprises the main city area and the existing city centre together with Kariapather, Lalmati, Industrial Estate, Ghamapur and Pachpedi. It is bounded by old Mirzapur Road towards west, Industrial Estate road from Adhartal to railway crossing to the east, western boundary of defence area to the south bounded by partly northern boundary of the defence area and railway line up to Madan Mahal station. The unit covers an area of 1373 hectares out of which nearly 1293 hectares are built up area and 80 hectares are proposed for development.

Planning Unit No. 2

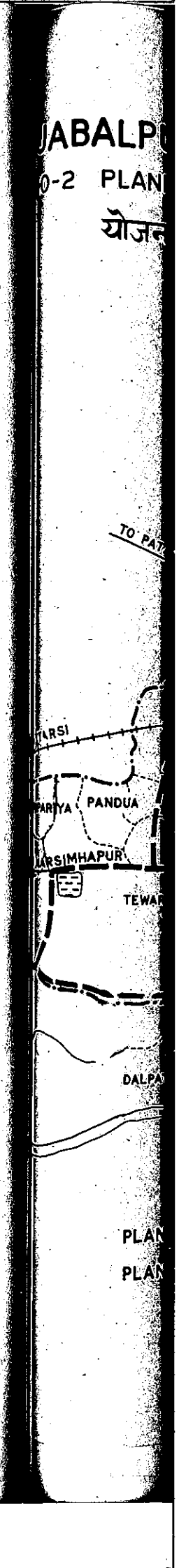
This unit is bounded by National Highway No. 7 from Adhartal to Pariyat to the west and follows the Pariyat river to the north and part of Ring Road RN to the east it is bounded by RE, to the south bounded by the northern boundary of defence area up to the railway crossing and further along Industrial Eastate road. The unit includes Heavy Vehicles area, Industrial area, Ranjhi, Manegaon, Engineering College and Jabalpur tank. The unit covers an area of 1679 hectares out of which nearly 500 hectares is built up area and 1179 hectares is proposed for development.

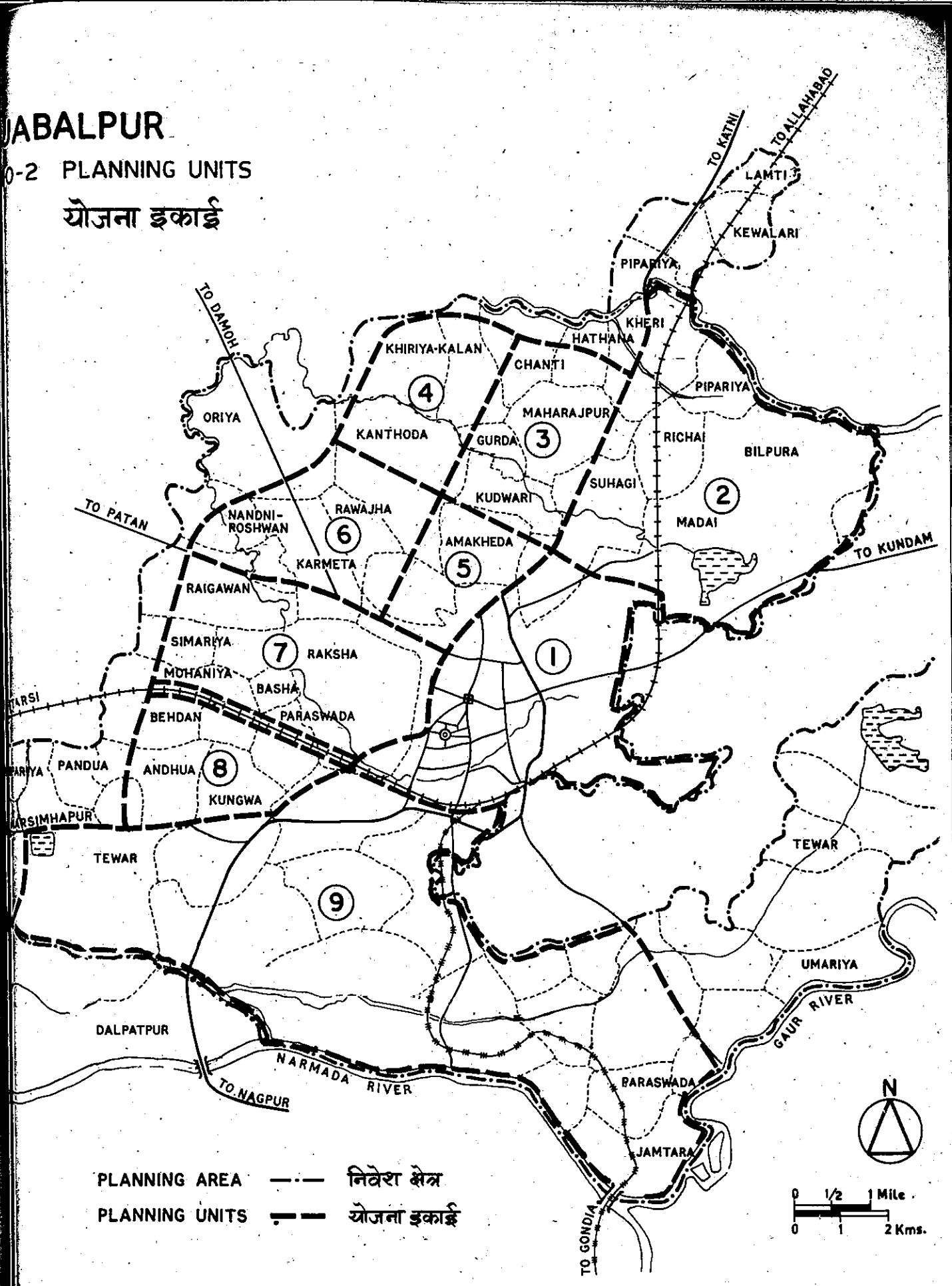
Planning Unit No. 3

This unit is bounded by RN to the north, National Highway No. 7 to the east up to Adhartal, and bounded by MR-1 and MR-4 (part) on the southern and western side respectively. The unit contains part of Agriculture University area, and Maharajpur. The tatal area covered in this unit is 606 hectares out of which nearly 350 hectares is built up area and 256 hectares is proposed for development.

Planning Unit No. 4

This unit is bounded by RN 1 (part) to the north MR-4 (part) to the east, to the south bounded by part MR-1 and to the west bounded by




JABALPUR
0-2 PLANNING UNITS
योजना इकाई
TO KATNI
TO ALLAHABAD
LAMTI
KEWALARI
PIPARIYA
TO DAMOH
KHERI
HATHANA
KHIRIYA-KALAN
CHANTI
PIPARIYA
ORIYA
KANTHODA
GURDA
MAHARAJPUR
RICHAI
BILPURA
SUHAGI
KUDWARI
MADAI
TO PATAN
NANDNI-ROSHWAN
RAWAJHA
AMAKHEDA
KARMETA
TO KUNDAM
RAIGAWAN
SIMARIYA
RAKSHA
MOHANIYA
BASHA
PARASWADA
BEHDAN
PANDUA
ANDHUA
KUNGWA
NARSIMHAPUR
TEWAR
TEWAR
UMARIYA
GAUR RIVER
DALPATPUR
NARMADA RIVER
TO NAGPUR
PARASWADA
JAMTARA
TO GONDIA
PLANNING AREA —·— निवेश क्षेत्र
PLANNING UNITS — · — योजना इकाई
N
0 1/2 1 Mile
0 1 2 Kms.

RW-2. The total area covered in this unit is 268 hectares out of which nearly 10 hectares is built up area and 258 hectares is proposed for development.

Planning Unit No. 5

This Unit is comprised area with part MR-1 to the north near Adhartal tank, old Mirzapur Road from Adhartal to Damoh naka crossing to the east, Damoh Road to the south and MR-4 to the west. This unit includes, Lamagarden, Truck Stand, Manmohan Nagar, Trust Scheme No. 9 and part of Scheme No. 3. The total area covered in this unit is 605 hectares out of which nearly 65 hectares is built up area and 540 hectares is proposed for development.

Planning Unit No. 6

This unit is bounded by (part MR-1) to the north, part MR-4 to the east, Damoh Road (part) and Patan Road to south and RW to the west. This unit comprises Madhotal, Kathonda village. The total area covered in this unit is 678 hectares out of which only 15 hectares is built up area and 663 hectares is proposed for development.

Planning Unit No. 7

This unit is bounded by Patan Road to the north, old Mirzapur Road to the east, north-western portion of the Garha Phatak Road from Ranital Chauraha to Garha Phatak railway crossing, to the south bounded by railway line to the west bounded by part RW from railway crossing to Patan Road. This unit comprise Ranital, Cherital, Ukhari village and diagonally crossed by Omtinala. The total area covered in this unit is 868 hectares out of which nearly 100 hectares is built up area and 768 hectares is proposed for development.

Planning Unit No. 8

This unit is bounded by railway line from Garha railway crossing up to the inter-section of RW with the railway line, to the east bounded by Garha Road up to the inter-section of N. H. 7 to the south bounded by Garha Road further extended to the State Highway No. 22 up to inter-section of R.W. This area comprises part of Garha village. Danvantari Nagar, Shainaka, part of Chavanpur. The total area covered in this unit is 613 hectares, out of which nearly 155 hectares is built up and 458 hectares is proposed for development.

Planning Unit No. 9

This unit is bounded to the north by the railway line from Gorakhpur to Garha Phatak railway crossing part of Garha Road and then Garha Road further extend up to the State Highway No. 22. To the east of the area is bounded by cantonment boundary at Sadar and Mandla Road starting from Corporation boundary upto planning area boundary, to the south it follows the boundary of planning area upto the western boundary of village Tewar, to the west it again follows the western boundary of village Tewar and inter secting at State Highway No. 22 near village

Sagara. The unit contains Madan Mahal locality, Gorakhpur, Hathital Colony, Rampur (M.P.E.B.) Gwarighat Road, Medical College, Sagara village, Balsagar tank, Jilheri and Tilheri village. The total area covered in this unit is 1894 hectares out of which nearly 541 hectares is built up and 1353 hectares is proposed for development.

JABALPUR : PLANNING UNIT-WISE PROPOSED AREA, 1991

10-T. 1

Planning Unit	Developed Area (in hectares)		
	Existing	Proposed	Total
(1)	(2)	(3)	(4)
1	1293	80	1373
2	500	1179	1679
3	350	256	606
4	10	258	268
5	65	540	605
6	15	663	678
7	100	768	868
8	155	458	613
9	541	1353	1894
Outside planning unit boundaries	..	65	65
Total ..	3029	5555	8649

10.5 PROPOSED LAND-USE PLAN AND LAND ALLOCATION

The proposed land-use plan has been worked out on the basis of aims and objectives spelled out in the proceeding paragraphs. The main features of the proposed land-use plan are: inter-linked city structure, compact development, synchronization of present development with the future growth, decentralisation of places of employment to achieve desired work-place relationship. Judicious allocation of land for various uses resolving the conflicting complex needs of the city functions. During the process of formulation of Development Plan proposals for various physical constraints, which affect the growth of city, have been taken into account. Besides this, the future needs of city in terms of social, cultural, religious and economic activities have also been considered. The financial constraints and administrative requirements have also been kept in view. While estimating the cost of Plan, care has been taken to ensure the basic facts that the Plan is physically sound, economically viable, socially satisfying and aesthetically inspiring.

Land-use analysis of the present inhabited area and agglomerations gives urban spread at the rate of 6.84 hectares for 1000 persons, whereas at Bhopal, Indore and Raipur, it was 7.18, 4.29 and 7.7 hectares for 1000 population respectively. In order to meet the present inadequacies and future requirements, it is considered necessary to provide urban land at the rate of 7.86 hectares per 1000 persons. On this basis, the total

requirement would be around 8649 hectares for a population of 11 lakhs. The table 10-T.2 gives land utilised at present as well as proposed for various uses in the Development Plan. The relative percentages for various land-uses bring out that the proportion of land for residential use has been reduced from 49.6% to 42.0%. A compact residential development in future is envisaged. The land allocation for recreational use has been increased from 1.32% to 10.3%. This will meet the present deficiencies. The land allocation for various uses is given in the next table:

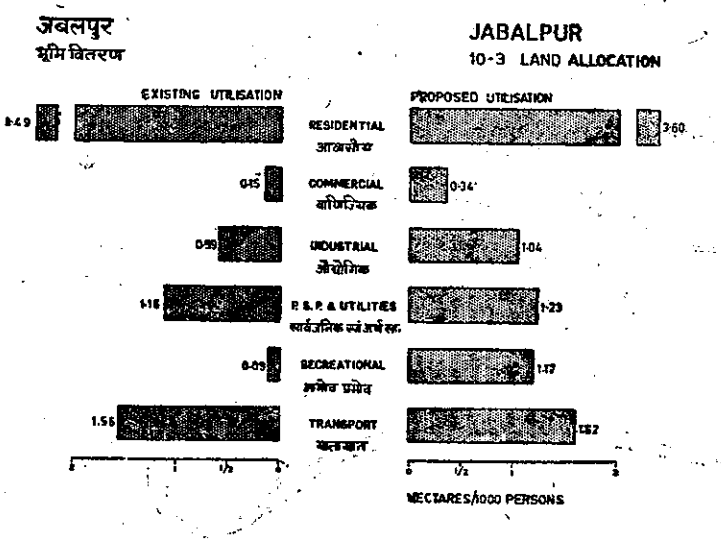
JABALPUR ; PROPOSED LAND USE AND LAND ALLOCATION, 1991

10-T-2

Land Use	Existing (1976)			Proposed 1991		
	Existing	Percentage	Land Utilisation per 1000 persons	Proposed	Percentage	Land Utilisation per 1000 persons
1	2	3	4	5	6	7
Residential ..	1503	49.6	3.40	3635	42.0	3.30
Commercial ..	68	2.2	0.15	512	5.9	0.47
Industrial ..	263	8.7	0.59	707	8.2	0.64
Public & Semi Public Utilities. ..	511	16.9	1.15	1124	13.0	1.02
Recreational ..	39	1.3	0.09	886	10.3	0.81
Transportation ..	645	21.3	1.46	1785	20.6	1.62
Total ..	3029	100.0	6.84	8649	100.0	7.86

* It does not include the area of proposed extractive allied industries proposed to be located at Lalpur, Jametra and Umariya villages covering an area of about 100 hectares.

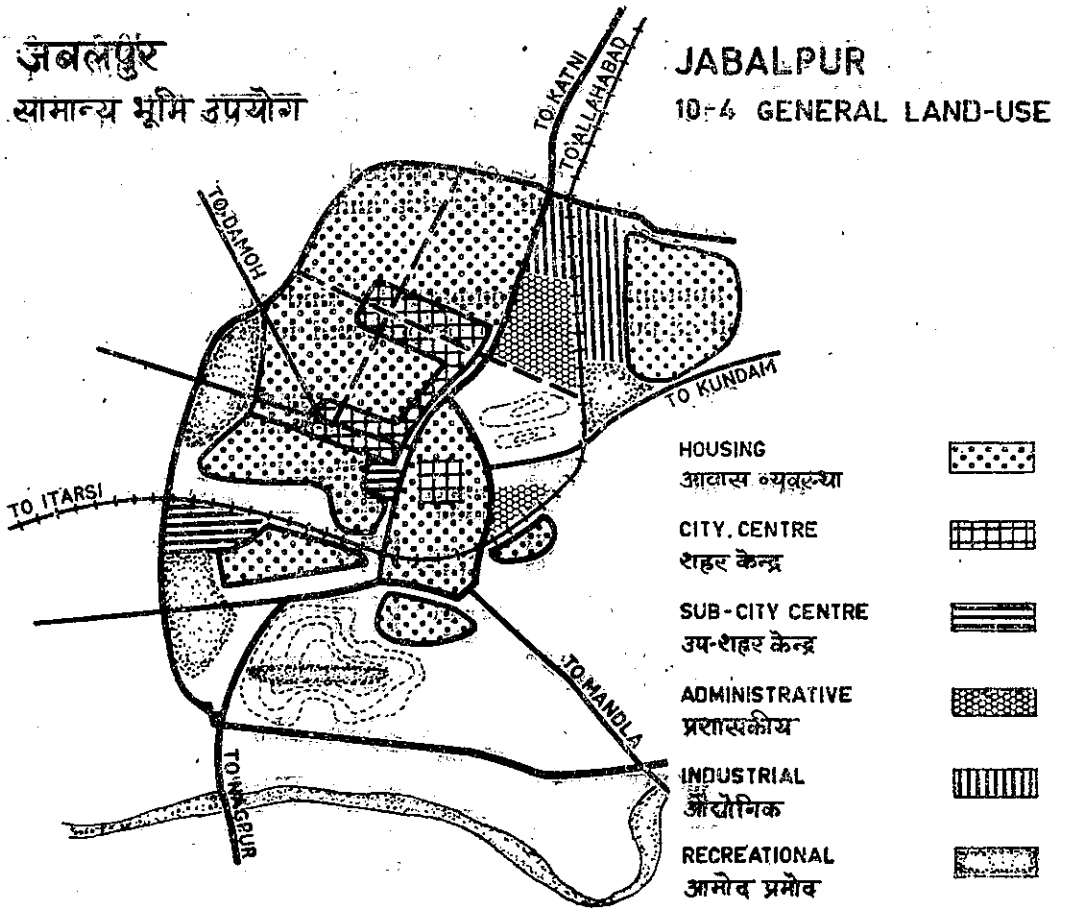
It will be more appropriate to compare the land allocation for various uses with the unit of population. It is proposed to allocate 7.86 hectares



per 1000 persons for various land-use categories as against 6.84 hectares available at present. The land allocation for residential use is 3.30 hectares per 1000 persons as compared to 3.40 hectares per 1000 persons at present. The land allocation for other uses is 0.64 hectares per 1000 persons in industrial use, 0.47 hectares per 1000 persons in commercial use, 1.02 hectares in public and semi-public use (including public utilities), 0.81 hectares for recreational use and 1.62 hectares in transport and communication.

10.6 LAND-USE-PATTERN

Mostly the Indian cities have predominantly mixed land-use particularly commerce, service industry, residential etc., are generally found in the same areas. Mixed land-uses are generally a common feature of the central core. The concept of mixed land-use zoning is, therefore, accepted as most suited to the present situation obtaining in Indian cities. Complete segregation will be undesirable as it will create problems of inter-relationship and increase distance of movement. However, some land-uses which do not conform to the functions of the area where they are located and cause nuisance are proposed to be relocated at new sites. Industrial units which either owing to their performance characteristics or requirement of specialised services and infra-structure for their efficient functioning,



are also proposed to be relocated. The general land-use pattern for Jabalpur has been derived from the following considerations :—

(a) Integrated and continuous growth of important land-uses so that the city attains a complete entity during all phases of its development.

(b) Mixed land-use zoning particularly in the city centres and planning unit centres to minimize need of services and movement.

(c) Inter-relationship of highest order activities with planning unit activities.

(d) Decentralization of work centres.

(e) Work-place and living area relationship.

(f) Commercial corridors to inter-link parent city and new development.

(g) Major commercial activities such as mandis and wholesale markets, their relationship with industrial area, other markets and regional roads.

(h) Minimum dislocation of present land-use pattern.

(i) Comprehensive transportation system.

10.61 Residential Area

Development Plan envisages distribution of residential areas in terms of self-contained residential entities grouped near major work centres, such as industrial, commercial and administrative. According to the studies conducted and discussed in Chapter 5 some of the present residential areas suffer from the overcrowding and lack of essential amenities and facilities. In order to overcome these deficiencies and to accommodate additional population of 6.6 lakhs (during 1971-1991), an additional area of 2132 hectares (including 1503 hectares of existing area) will form 42.0% of the total land proposed for development. Detailed proposals in respect of residential areas are given in Chapter 13.

10.62 Commercial Area

The present commercial areas around Bada Fawara, Jawaharganj mandi, Andherdeo, Tularam Chowk, Ghantaghar, Gurandi, Lordganj, & Gorakhpur will not be able to accommodate future commercial activities owing to restricted accessibility and concentrated conditions. The existing Jawaharganj mandi and wholesale vegetable market at Latkaripadar are functionally crippled due to overcrowding and poor accessibility. In order to accommodate the growing need of the future city for the commercial areas it is proposed to create a new commercial corridor along Damoh Road and MR-1 in Planning Unit Nos. 3 and 5. The existing retail and specialised market in the localities stated previously shall continue while the wholesale markets are proposed to be shifted at suitable places outside central area.

The planning unit shopping precincts have been proposed which will cater to the needs of the people. This will check strip development of shops and also reduce the pressure on central area. The built up hierarchy

is envisaged with main commercial area in the centre supported by shopping precincts in planning units and further at the last tier of the hierarchy of local shopping area at sectoral and sub-sectoral level. Development Plan provides a total area of 512 hectares for commercial activities.

10.6.3 Industrial

Adequate land has been proposed for the new industrial development as for further expansion of the present units. These areas are proposed to be equipped with industrial infra-structure so as to attain necessary functional efficiency. The obnoxious industries scattered in the city are proposed to be shifted to an appropriate area north of the present industrial area in Planning Unit No. 2. Large industrial units like Heavy Vehicles, Grey Iron Factory are located in north-east near Adhartal railway station. The industrial area to accommodate the future needs of heavy and medium industries, as well for the anciliary industry for defence industries is proposed in continuity to the Heavy Vehicles in Richhai and Madai as well to the north of Agricultural University which is most ideal location from functional point of view. Total area for industrial activities provided is 707 hectares which is 8.2% of the total area. Detailed proposals in this regard are separately dealt in Chapter 12 on Major Work Centres. 10.65

10.64 Public and Semi-public 10.66

This category of land use includes land for Government and Semi-Government offices, educational and health amenities, cultural and religious institutions. Rational distribution, adequate space, sufficient number and convenient approaches are the factors which have been taken into consideration while planning the public and semi-public uses. The total area earmarked for this category works out to 1124 hectares.

(a) **Offices :**

The offices are proposed in Planning Unit Nos. 1, 3 and 5, which will accommodate the offices of Central, State, local and autonomous bodies. An additional area of 30 hectares is earmarked so as to accommodate offices presently located in the rented buildings in the different parts of the city.

(b) **Education :** 10.67

A separate zone of higher education exists in Planning Unit No. 1 which contain Jabalpur University and other Government colleges. Additional land has been earmarked for the future expansion for allied uses and activities related with education such as social and cultural needs. The existing Agricultural University partly in Planning Unit No. 2 and partly in Planning Unit No. 3 has adequate area. However, it is proposed to shift the Veterinary College complex from south Civil Lines. The land for colleges and schools have been provided at planning unit level and further at sectoral level. Some of the educational institution which have appropriate locations and continue efficient use are proposed to be shifted to proper place. An additional area of 390 hectares has been earmarked for this purpose. 10.7

(c) **Public Health:**

An additional area of 37 hectares has been earmarked for this purpose in all planning units. It will accommodate specialised medical services, hospitals, large dispensaries and maternity homes. Small dispensaries will also be provided at planning unit-level and sector-level. For this purpose and additional area of 25 hectares has been proposed in the Development Plan.

(d) **Social and Cultural:**

Social and cultural functions of the city need to be strengthened further to make life varied, rich and socially satisfying. Land for social and cultural purposes has been proposed in planning units which are devoid of these amenities. An additional area of nearly 31 hectares has been provided for this purpose.

10.65 Public Utilities and Facilities

Utilities and services do not consume much land as they form part of the city road network. However, intake work sewage and garbage disposal works and cremation and burial grounds consume some land. Trenching grounds for garbage disposal falls in Planning Unit No. 4 which is proposed to be shifted in village Oria along Omti nala.

10.66 Religious and Recreational

The regional, city, planning unit, and sector levels recreation areas have been provided. Jabalpur city and its environs are rich in religious centres situated in linear manner along with river Narmada. It is proposed to give total uplift to the religious places by providing suitable approach links and treating the areas with appropriate landscape treatment. Jabalpur environs is endowed with potential recreational areas located in Madan Mahal area and along the river front, particularly. Bheraghat on Narmada and Gaur river essentially exploited to meet the recreational need not only at city level but also at national and State levels. Development of religious and recreational areas have been dealt in Chapter 14. The other recreational areas at planning unit level have also been provided adequately. The total recreational area earmarked is 886 hectares.

10.67 Transportation

This category of land-use includes land for roads and railway network, terminal centres bus depots, parking areas etc. The total land earmarked under transportation is about 1785 hectares which is 20.6% of the total area. The detailed proposals in respect of traffic and transportation network concerned for the region and city, major city roads, sector roads, traffic terminals, truck stand, transport nagar, railway station and yard etc; are discussed at length under Chapter 11.

10.7 LAND-USE DISTRIBUTION (PLANNING UNIT-WISE)

The overall city structure consists of 9 planning units. Each planning unit derives its land-use chapter from the linkages it builds within the

framework of total land-use pattern envisaged in the Development Plan. The land-use allocations within each planning unit are meant to serve the purpose of preparation of zoning plans which is a follow up action after finalisation of Development Plan. The detailed zoning plan will prescribe the detailed layout use of land, norms for road width, density, plot coverage, F.A.R. etc. Zoning plans for 'Action Areas' will be prepared after sanction of the Development Plan under the provisions of Section 19 of the M.P. Nagar Tatha Gram Nivesh Adhiniyam, 1973. The distribution of areas within each planning unit in different land-use categories is given in the table 10-T.3.

JABALPUR : LAND USE DISTRIBUTION (PLANNING UNIT WISE) 1991

10-T.3.

Planning Unit No.	Land use categories (Area in hectares)						
	Residential	Commercial *	Industrial	Public & Semi-Public	Recreational	Transportation	Total
1	2	3	4	5	6	7	8
1.	530	76	80	203	120	364	1373
2.	454	32	480	208	200	305	1679
3.	280	36	..	78	60	152	606
4.	133	10	..	35	..	90	268
5.	296	100	10	80	..	119	605
6.	395	22	1	88	11	161	678
7.	400	80	43	110	40	195	868
8.	315	87	11	80	..	120	613
9.	832	69	17	242	455	279	1894
Outside planning unit boundaries		..	65	..	..	..	65
Total ..	3635	512	707	1124	886	1785	8649

Note* Areas of mixed land uses has been calculated with commercial.

10.8 INCOMPATIBLE USES (RELOCATION)

As already stated earlier the Plan aims at minimum dislocation of the present uses and activities. Only those uses have been proposed to be shifted which are nuisance to areas as well as add to congestion, owing to loading and unloading activities or the use does not fit into the total environment of the area in which it is situated. The relocation will have to be done as soon as the Development Plan comes into operation. However, a reasonable period for shifting will no doubt be available as

laid down under Section 25 of Nagar Tatha Gram Nivesh Adhiniyam, 1973. The inefficient uses are also listed in the table. These will not require immediate shifting but future expansion of the activities in their present areas will be restricted so that ultimately these areas can be put to better and efficient use as proposed in Column 5 of the table 10-T.4. However, such expansion programme which can form part of the proposed use also will be permitted with appropriate conditions.

JABALPUR ; RELOCATION OF LAND-USES AND DEVELOPMENT OF VACATED LANDS 10-T. 4

S. No.	Use to be shifted	Existing Location	Proposed Location	Use after Vacation
(1)	(2)	(3)	(4)	(5)
A.	**INCOMPATIBLE USES**			
1.	Jawaharganj grain mandi	Niwarganj road, Millonigan j road.	Planning Unit No. 7	Kirana and Vegetable retail market
2.	Wholesale fruit and Vegetable market and godowns.	Old Maccharbai marg, Kajanchi marg, near Fawara Latkari Padar.	Planning Unit No. 7	Retail shopping.
3.	Husk godown	Near Ghamapur kalari and Millonigan j	Planning Unit No. 5	Retail shopping.
4.	Kabadi market ...	Gurandi.	Planning Unit No. 5	Retail shopping.
5.	Bans-balli market	...Gurandi.	Planning Unit No. 8	Retail shopping.
6.	Liquor Godown	South Civil Lines.	Planning Unit No. 5	Public Semi-Public residential.
7.	Printing press and paper godown.	Sarafa and Ganjipura.	Planning Unit No. 1	Retail shopping.
8.	Scattered Repair workshops	Bus Stand, Madan Mahal, Marhatal road between Karamchand Chauraha and Naudra Bridge, Corporation road, Anjuman School Compound.	Planning Unit Nos. 1,3, 5 and 9	Retail shopping.
9.	Oil mills and Dal mills	Naya Mohalla, Millonigan j. Cherital, Bhartipur and Galgala	Planning Unit No. 7	Residential
10.	Saw mills	Madan Mahal Mahanadda. Premnagar , Gorakhpur, Belbagh and Naya Mohalla	Planning Unit No. 8	Residential.

(1)	(2)	(3)	(4)	(5)
11.	Ice factory	South Civit Lines	Planning Unit No. 5	Residential.
12.	Soap factories	Napier town, Garha Phatak road, Naya Mohalla and Omti road	Planning Unit No. 2	Commercial/ Residential.
13.	Bidi factories	Dixitpura, Gol Bazar	Planning Unit No. 2	Residential.
14.	Earthenwares and potteries	Kumhar mohalla, Gorakhpur, Kariyapathar, Thakkargram, Garhapurwa.	Planning Unit Nos. 2 & 9..	Residential.
15.	Slaughter house	West Belbagh, Motinalla, Madartekari	Planning Unit No. 2	Park
16.	Soap-stone factory	Ghamapur, Ratan nagar.	Planning Unit No. 9	Residetial.
17.	Brick Manufacturing	Madan Mahal Area, Kanchanpur near Industrial Estate Manegaon, Mohaniya	Planning Unit No. 9	Residential/ P. S. P.
18.	Ayurvedic College and Hospital.	Gorakhpur.	Planning Unit No. 9	Public/ Semipublic/ commercial.
19.	Garbage disposal	Lemagarden	—	Commercial.
20.	Grave yard	Nasiabad, Gohalpur Sainaka.	—	Park.
21.	Truck parking	Old Mirzapur road,, Damoh naka, Madan Mahal, near income-tax office, and Gurandi bazar.	Planning unit Nos. 2,5,8.	Road
22.	M.P.S.R.T.C. Depot.	Ranital (Agha chowk), Bus Stand	Planning Unit Nos. 1 & 5	Service industries PSP/ Residential.
23.	Burn and Company	Behind Gokaldas Dharamshala	Planning Unit No. 2	Residential.
24.	Cattle breading and dairies.	Gohalpur, Milloniganj, Jamtara, Cherital road, Ranjhi, Paraswara, Wright town, Napier town, Marhatal, Naya Mohalla, Ghamapur, Belbagh, Sarafa, Hanumantal, Gorakhpur, Madan Mahal. Pariyat.		Residential/ Park.

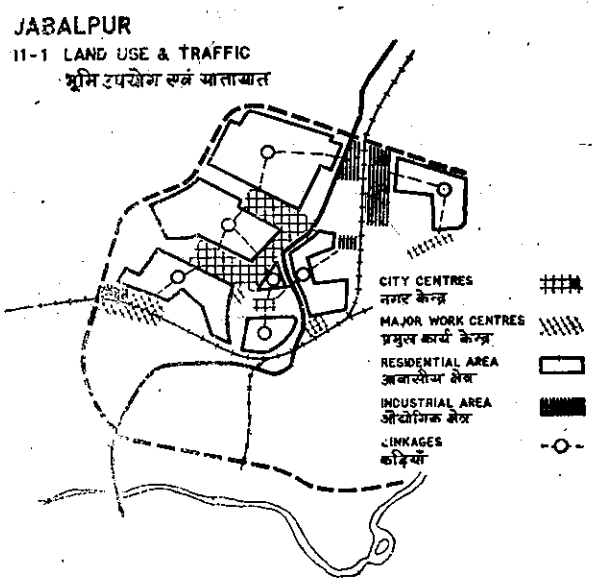
(1)	(2)	(3)	(4)	(5)
B. INEFFICIENT USES				
1.	Wholesale grain godowns.	Jawaharganj and F.C.I. godowns near Agha chowk.	Planning Unit No. 7	Flatted industries and retail shopping.
2.	Vegetable Market	Gorakhpur, near Gurudwara, Milloniganj, Garha Road near Telegraph workshop	Planning Unit No. 1	Road.
3.	Tin goods furniture and upholstry.	Naya mohalla, near coffee house, Andherdeo and Bhartipur.	Planning Unit No. 1	Retail shopping.
4.	Govt. and private offices.	Wright town, Napier town.	Planning Unit No. 1	Residential.
5.	Central Jail	North Civil Lines	Extra Planning Unit No. 2	Public and semi-public./ Residential.
6.	Isolation hospital.	Old Mirzapur road near Damoh naka.	Planning Unit No. 9	Commercial.
7.	Garib khana	On Damoh road	—	Commercial.
8.	Veterniary College	South Civil Lines	Planning Unit No. 2	Public and Semi Public.

CHAPTER 11

PROPOSED CIRCULATION PLAN

An efficient circulation pattern is a must for the continued growth of economic base and satisfying social life in an urban settlement. Proper functioning of the city and even efficient management of various activities depends on the circulation pattern and transport system. Planning of circulation pattern as well as land-use pattern is important. Road pattern once developed will remain well beyond the plan period even though the building abutting these roads may undergo change in volume and use. Hence it needs more attention.

Efficiency in movement within the city can only be achieved by evolving a functional land-use pattern combined with efficient circulation plan which will provide efficient linkage and also minimise travel



distance. The circulation pattern as well as land-use pattern for Jabalpur have, therefore, been evolved after considering the requirements of both simultaneously. The other considerations which have guided the plan for proposed circulation pattern are :—

Regional Level

(a) Effective linkages within the region.

(b) Segregation of regional traffic and city traffic.

(c) Direct accessibility between regional roads and traffic generators and between functionally inter-related traffic generators inclusive of those in defence area.

(d) Proper road and rail linkages with other important trade centres of the State and the Country.

(e) An independent direct linkage to work centres through cycle track.

(f) Suitability of road pattern for mixed-traffic.

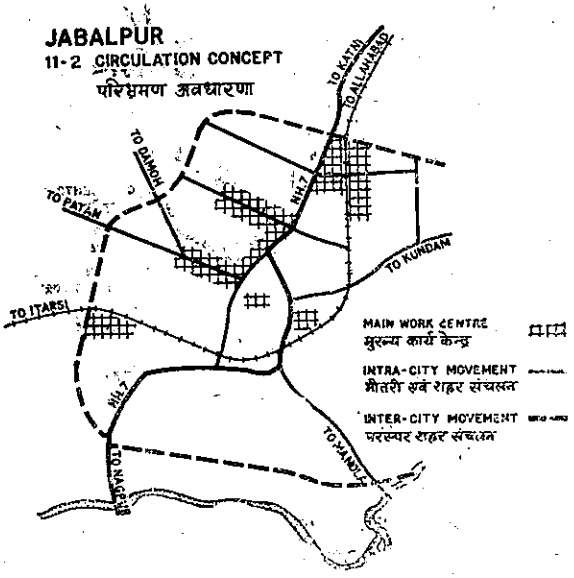
(g) Formulation of traffic operation plan to maximise efficiency of the network.

(h) Effective and direct linkages between the work centres and living areas adjoining cantonment areas affecting mass transportation system.

11.1 CONCEPT OF CIRCULATION PLAN

The National Highway No. 7 connecting Allahabad and Nagpur passes through the city. Other important regional roads inter-connecting Jabalpur with Damoh, Sagar, Bhopal, Patan, Mandla. Shahpura also meet the National Highway at various points. Although, a major portion of the traffic along National Highway as well as other roads terminate at Jabalpur yet it is necessary to provide an alternative road to by-pass the congested areas, to provide inter-changeability of traffic from the National Highway to other regional roads and to provide as far as possible direct links to the terminating points.

At city levels, cycles and cyclerickshaws dominate the mode of transportation, particularly, between residential areas, work centres and traffic terminals. It is, therefore, imperative to provide direct and



independent inter-connection for this traffic between present and future residential areas and work centres. A direct link would incidentally be shortest link for the cyclist.

Keeping in view the above major considerations as a 'D' shaped pattern with National Highway as the base and the proposed ring road as circumference, other roads entering the city from west and north-western side as radial links will be most suitable.

Independent cycle tracks provide direct link to the work centres particularly to the industrial area situated on the northern side, and the Commercial centres of the city will be most convenient and safe for the cyclist.

11.2 REGIONAL LINKAGES

No trade and industrial centre can discharge its functions efficiently unless it has proper and efficient linkages with other urban centres of the country as well as the region and of course, between various inter-related land-use zones within the city itself. The proposals contained in the circulation plan aim at securing efficient linkages at national, regional and local levels.

11.21 Rail Linkage

Jabalpur is an important railway station on Howrah-Bombay broad gauge line which connects it with the important urban centres of the country. The existing rail system is by and large satisfactory. However, the existing meter gauge railway link between Jabalpur and Gondia needs to be converted into broad gauge so as to develop an efficient railway transportation link between Allahabad and Hyderabad, Jabalpur and Raipur. This will add considerable importance to city in context to national rail grid. At local level, it is very essential to investigate a proper rail alignment without disturbing the urban pattern of the city and taking into consideration the disadvantageous existing rail alignment particularly from Gwarighat station to Howrah Railway station. There are two alternatives for rail alignments. First with take off from existing loco-shed further traversing along with Simla foot hills beyond University administrative complex further inter-secting the Ridge road and linking the existing alignment beyond Khandari nullah and Mandla Road crossing near village Katiyaghat, and second alternative would be possible by having a take off near Bhadhan village and further inter-secting the State Highway No. 22 (Bheraghat Road) and extending up to Ramnagar near Narmada river and then further traversing east-west parallel to the Narmada river and touching the existing alignment near Gwarighat Railway station. The decision shall have to be taken by the concerning authority studying the viability very carefully.

11.22 Road Linkages

Jabalpur has satisfactory road linkages with Allahabad, Nagpur, Sagar and Mandla, Narsinghpur-Bhopal State Highway is under implementation. However, the National Highway No. 7 and other regional linkages need structural improvement to meet the demand of growing traffic Detailed proposed regional linkages will be spelt out in regional Development Plan for Jabalpur forest resources region as notified under Act vide notification No. F4/261133 dated 22nd October, 1973.

11.23 Air Linkage

Jabalpur is conspicuously missing on the air map of India. In view of expanding industrial, commercial and administrative activities and inherrent tourist potential of Bhedaghat and Kanha, it is imperative to link Jabalpur through air service particularly Delhi, Bhopal, Nagpur, Aurangabad and tourist centres of Khajuraho and Varanasi. While framing the Development Plan proposals due consideration has been given to this aspect.

11.3 CITY CIRCULATION PATTERN

Proposed circulation pattern of the city is broadly a network of north-south and east-west road alignment so as to provide a direct access between the areas of activities in existing city and the new areas proposed for further developments. This includes major north south axis of National Highway No. 7, proposed MR-4 and proposed Ring road (RW) inter-sected by east west axial roads mainly proposed MR-2 and Damoh Road.

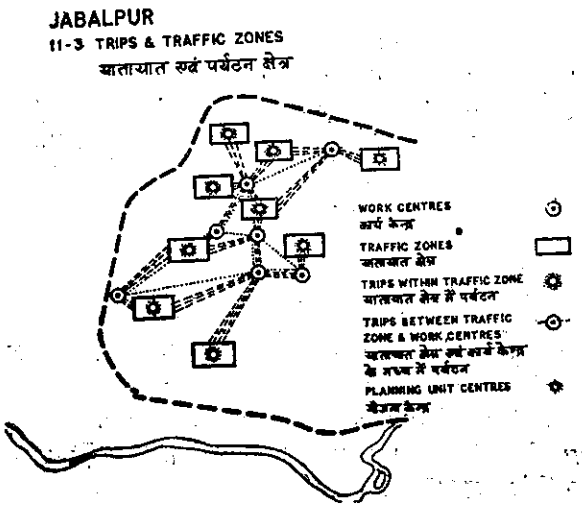
The road crossing will provide suitable inter-changeability for city and regional traffic terminating in the city. The pattern is based on the concept of growing city serving industrial and commercial activities and takes into account public transport system of the city.

11.31 Through Traffic

According to traffic studies a major portion of goods and passenger traffic originates as well as terminates in the city, but nearly 40% of the goods traffic also passes through the city without transhipment. Through traffic is essentially on Katni-Jabalpur-Nagpur section on National Highway No. 7 and on Jabalpur-Damoh-Sagar Road. A size-able road traffic also moves on Jabalpur-Mandla Road. The future road pattern of the city has therefore, to provide for direct accessibility to traffic terminating and originating areas, as well for through traffic, without entering the congested parts of the city. RN, RW and RS in the form of circumferential roads are proposed to provide a by-passing to the city. This road will also inter-connect all the regional roads.

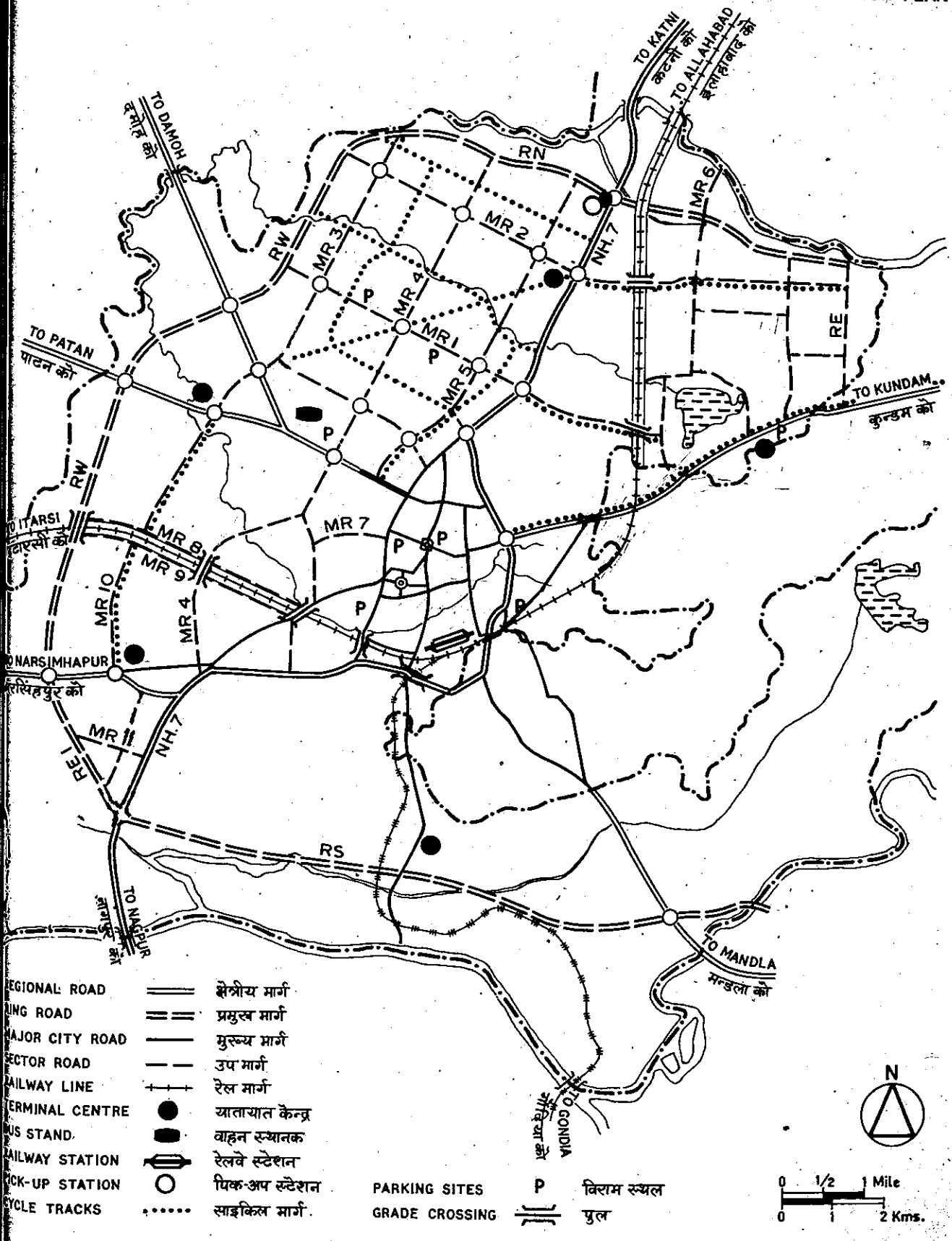
11.32 Link to Work Centres

The proposed circumferential road will also link the various work centres in industrial area in Richhai Madai, agro-based and forest-based industries, and Mandis on Damoh road and Kachhapura proposed MR-1 and MR-2 are conceived as linkages to the industrial areas. Damoh-Patan Road shall from a link between the existing city centre and newly developed areas with commercial activities and mandis.



जबलपुर
प्रस्तावित यातायात संरचना

JABALPUR
11-4 PROPOSED CIRCULATION PLAN



11.33 Link in Central Area

The present central area around the Fawara is proposed to be linked with the peripheral major roads by widening and providing a few new links. These links are further connected with the major roads i.e. National Highway No. 7 and old Mirzapur Road that gives further access to industrial area and regional roads. The details of circulation pattern of central area are dealt in Chapter 15.

11.34 Links to Proposed Commercial Centre

The existing city centre continues to function as city level centre in the Developmet Plan. The major spinal artery through Fawara is proposed to be vitalized and further linked with the new commercial centre. New activities along Damoh Road and Central area are proposed to be linked by major link from Damoh naka to Ghamapur chauraha via Hanumantal. The missing links between Gurandi and Omti to Hanumantal giving linkages to the commercial area are also proposed. The details are dealt in Chapter 15.

11.35 Grade Crossing

In order to eliminate vehicular traffic jams at level crossings of roads and rails and also to facilitate free movement of traffic between various parts of the city separated by railway-line grade crossing at ring roads and major vital links are necessary. At present, there are four underpasses, two overbridges and two level crossings in the city. In addition to these, the following grade separators are proposed for implementation on the roads as detailed below :—

1. MR-2 linking industrial area.
2. MR-1 near Industrial Estate linking Heavy Vehicles industrial area.
3. Garhafatak crossing.
4. MR-4 at village Bhadan near Kachhpura siding.
5. RW near village Mohania.
6. Pedestrian underpass to inter-connect proposed commercial corridor along Damoh Road.
7. Grade crossing for express cycle tracks.
8. Grade crossing at Gorakhpur level crossing.

Out of the above listed two grade separators will have to be implemented to bring immediate relief, namely, along MR-1 near Industrial Estate and along Garhaphatak Road.

Besides this, grade crossings for cycle tracks and slow-moving vehicles are also proposed to be implemented at Madan Mahal Railway Station.

11.4 FUNCTIONAL HIERARCHY

The hierarchy of road pattern is based on the functional performance particularly in context of the locational aspect of the activities and its relationship with the residential area. The proposed road network of the city consists of the roads which correspond to the hierarchy of movement and linkages.

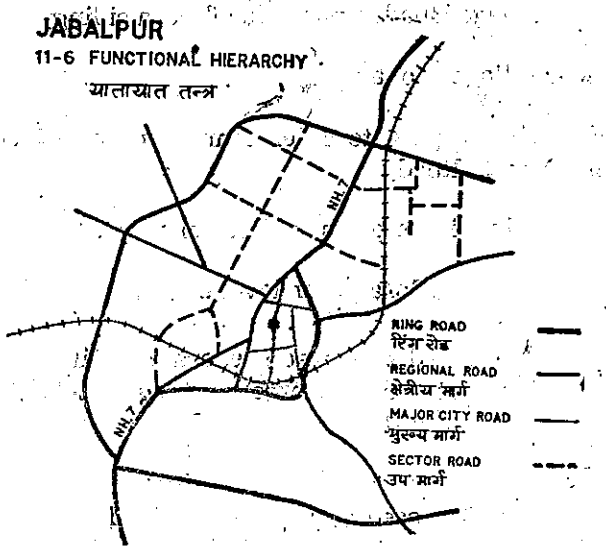
The seven categories are :—

1. Regional Roads and Ring Road (a circumferential road in this case).
2. Major city roads.
3. Sector roads.
4. Sub-sector roads.
5. Local roads.
6. Cycle arterial ways.
7. Pedestrian ways.

11.41 Regional Roads

These roads provide linkages between city and other urban centres not in the region but also in the major urban centres at State and National level at large. The ring road inter-connecting these regional roads are also considered in this category. These roads are proposed to carry heavy regional traffic. Portion of the regional roads traversing through existing built up areas, where proposed right of way is not available, the right of way for these regional roads within the city area will be as follows :—

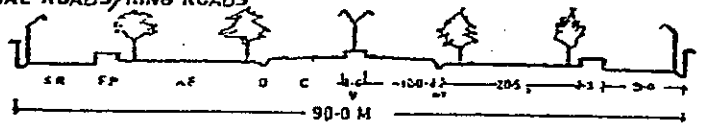
Name of the road	Right of way (in meters)
1. National Highway No. 7 (Medical College to Adhartal)	40/45 (24 meters from Bhan Talayia to Bayoharbag and 10 Meter from Choti line Fatak to Azad Chowk)

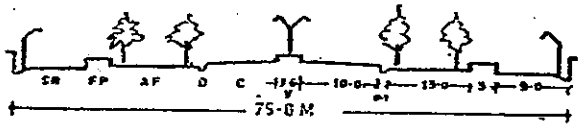


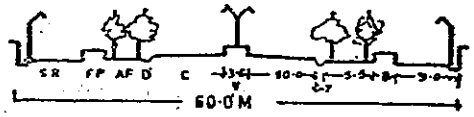
IMMEDIATE तुरन्त
ULTIMATE अन्तत:
REGIONAL ROADS/RING ROADS

REGIONAL ROADS/RING ROADS

ULTIMATE अन्तत:

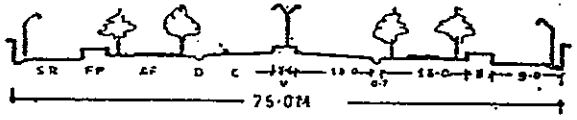


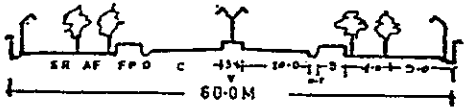


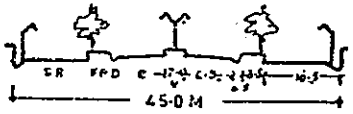


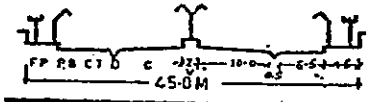
मुख्य नगरीय मार्ग

MAJOR CITY ROADS

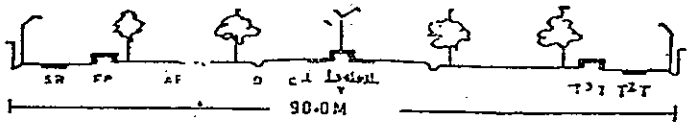


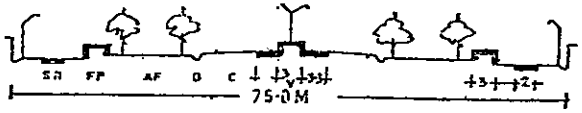


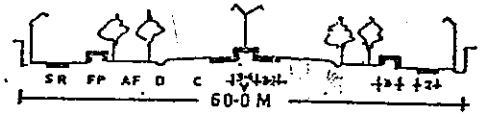


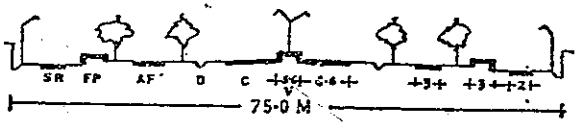


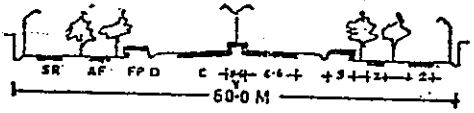
IMMEDIATE तुरन्त

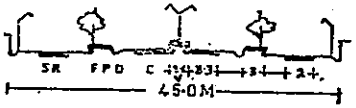














CROSS SECTION OF ROADS

मार्गोंका तिर्यक छेद

NOTETIONS:—

V. VERGE

C. CARRIAGE WAY

D. DRAINS

FP. FOOT PATHS

FA. PLANTATION

CT. CYCLE TRACK

SR. SERVICE ROADS

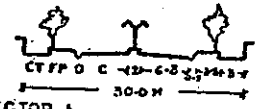
P. CASUAL PARKING

B. BURMS

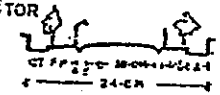
सेक्टर मार्ग

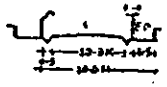
SECTOR ROADS

ULTIMATE



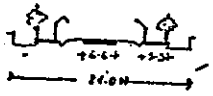
SUB SECTOR ROADS.

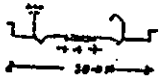




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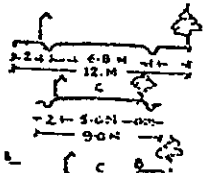




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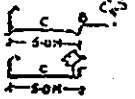
LOCAL ROADS ULTIMATE

स्थानीय मार्ग



ARTERIAL CYCLE & PED WAYS

आर्टीरियल एवं पार्श्वके पैदल मार्ग

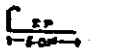


CYCLE WAYS

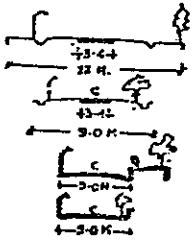
साईकल मार्ग

PED WAYS

पैदल मार्ग मार्ग



IMMEDIATE





2.	Old Mirzapur road (Madan Mahal Station to Adhartal)	40/45
3.	Mandla Road	30/35 Upto Goriyaghat
4.	Damoh and Patan Road (Up to Damoh Naka)	40 from Damoh Naka to Harijan Colony
5.	Narsinghpur Road	30/35
6.	Kundam Road	30/35

The right of way in open area proposed for development are prescribed in Table 11-T.1.

11.42 Major City Roads

These roads basically carry intra-city traffic (i.e. traffic within the city) between various planning units and major work centres, recreational aras, educational and health amenities etc. All major city roads are designed to function as mass transportation routes within the city. Major city roads network corresponds to more or less a grid-iron Plan. These important traffic arteries of the city are to serve public transport system and hence designated major city roads in the existing areas as well as proposed new development. There are two important parallel major city roads, namely, MR-1 and Damoh Road carrying traffic between the commercial corridor and industrial areas, while the major city road MR-4 is a vital artery in the newly developed areas linking major activity centres. The major city network of the existing city is discussed in detail Chapter 15.

These major city areas traversing through vacant areas will be provided full right of way as mentioned in 11-T.1. Major city road which will form the vital links between central area and city area are proposed to have right of way at 60 meters, while other city roads are provided right of way at 40/45 metres (except in central area where right of way has been taken as 20/25 metres). Proposed circulation plan shows that the alignment of regional roads, link road and major city roads. The alignment of these roads is subject to minor alterations in concurrence with the local conditions. The right of way proposed for these will be maintained in open areas but in built up area right of way may be reduced according to feasibility in particular area.

11.43 Sector Roads

The sector roads are important for movement within the planning units. These will cater for the fast-moving traffic and are also meant to interconnect the residential sectors with the activity sectors. The proposed right of way of these roads are 30/35 metres. The residential buildings will not have direct access on the sector roads and will be given access through controlled points. These roads will also serve as city bus routes.

11.47

11.44 Sub-Sector Roads

These roads are primarily meant to serve the traffic needs of residential sectors. These roads will be connected to sector roads. The right of way for these roads is proposed to be 20/25 metres. The alignment of these have not been shown in circulation plan and its details will be worked out at the time of preparation of zoning plans.

11.45 Local Roads

11.48

Local roads are meant for circulation within residential sectors and as such provide access to the building sites. These roads will carry all local services such as water supply, sewerage and power lines. In the proposed circulation plan, these roads have not been shown since these will form part of the residential lay-out plan. The right of way for these roads shall range between 8/12 metres depending on the nature of lay-out.

11.46 Cycle Tracks

Cycle, the common man's vehicle, is one of the significant modes of transportation in Jabalpur. The studies have revealed that nearly 4 to 5 thousand workers perform the journey from their places to major work centres by the cheapest mode of transportation i.e. cycle. The movement flows through city from all the directions with destination to east and north-east and vice-versa. In addition to this almost 5 to 6 thousand workers use cycle as the mode of conveyance. They live and work in defence area. The bulk volume of cycle commuters on Kundam Road and respective feeders is as high as 15,000 to 20,000 cycles per day, which is unlike any other city in the State. These characteristics attribute Jabalpur as a Cycle City and it is imperative to resolve the problem of the cycle commuters by providing the cycle track separately to achieve traffic efficiency for slow-moving and fast-moving traffic. In future also this trend is likely to continue.

Express cycle arteries with 8 lines, shaded with tree plantations have been provided which serve as feeder line between collecting commuters from residential sectors traversing a minimum distance between the work-place and home, no other vehicular traffic is permitted on these arteries. The express cycle arteries which link Medical College, Mandi complex, commercial corridor, Agricultural University area and Heavy Vehicles Factory and industrial area. The tracks are aligned along local constraints like nullah and high tension lines. The cycle tracks are maneuvered at vehicular road inter-sections by providing grade separators with cycle tracks inter-secting generally at lower levels.

Along Kundam Road separate cycle tracks on either sides paralleled to vehicular traffic are proposed within the right of way. The village roads and tracks linking city will form feeders to the proposed shady cycle tracks and express cycle tracks, thus, providing soothing and safe communication lines to villages within the planning areas and outside.

11.47 Ped Ways

Ped ways are essentially needed for the safety of pedestrians particularly children and old persons. Ped ways are proposed in such a way that the pedestrian would find easy access to the places where amenities like convenient shops, pre-primary and primary schools, reading rooms are provided. These ped ways are proposed to be linked with one neighbourhood to another. The details of the ped ways will be worked out in the zoning plans.

11.48 Road Sections

Road sections are proposed for different categories of roads. The road sections are recommended in accordance with the functional importance, long-term perspective and the nature and character of traffic which they are likely to carry. The table below gives recommended road sections :

JABALPUR : RECOMMENDED ROAD SECTIONS 11—T.I.

S. No.	Classification	Right of Way in Meters (including service roads)	Purpose
(1)	(2)	(3)	(4)
1	**Regional Roads**		
	Nagpur Katni Road	75	Regional traffic
	Mandla Road	60	Do.
	Narsinghpur Road	75	Do.
	Damoh Road	60	Do.
	Patan Road	60	Do.
	Kundam Road	40	Do.
2	**Ring Roads**		
	Northern Ring Road (RN)	60	Regional through traffic
	Western Ring Road (RW)	75	Do.
	Southern Ring Road (RS)	60	Do.
	Eastern Ring Road (RE)	40	Do.
3	**Major City Roads**		
	MR-1	60	Intra-city movement
	MR-2	45	,,
	MR-3	45	,,
	MR-4	50	,,
	MR-5	45	,,
	MR-6	30	,,
	MR-7	24	,,
	MR-8	40	,,

(1)	(2)	(3)	(4)
	MR-9	40	Intra-city movement
	MR-10	30	"
	MR-11	25	"
	Garhaphatak Road from Garha crossing at N. H. 7 to Ranital Chauraha.	30	"
4	**Sector Road**	30/35	Movement with in planning unit.
5	**Sub-Sector Road**	18/25	Movement within sector.
6	**Local Roads**	8/12	Do.
7	**Ped Ways**	5	Do.
8	**Other Main Road**		
	Power House Road (Kanchghar Chowk to Railway Bridge No. 1)	14/20	Major City Link

11.49 Road Inter-Sections

The junctions requiring improvement in their road geometrics are proposed to be designed on scientific lines. These junctions are : Damoh naka, Tularam chauraha, Karamchand chauraha, Omti chauraha, Andherdeo chauraha near Fawara, Gorakhpur chauraha, Ghamandi chowk, Kanchgarh chauraha, Ranital chauraha, Sarafa chauraha, Corporation square and Garha Road inter-section with N.H. 7 etc.

11.5 TERMINAL CENTRES (GOODS)

11.51 **Railway Goods Yards**

The existing goods yard at Madan Mahal and main railway station will continue to function to a limited extent. Besides this Kachpura railway siding and Adhartal railway yard are proposed to meet further needs generated due to the proximity of industrial establishment and the railway goods traffic movement.

11.52 **Truck Stations**

The main centres generating goods traffic by trucks are mandis, timber markets, industrial centre, railway goods yards, transport nagar, building material yards etc. considering the requirement for the truck station in context to location aspect of goods traffic generating points and the regional transport. Three sites of 2 hectares each provided on Damoh Road, N.H. 7 near maharajpur, and along RW at the inter-section of MR-9.

11.6 TERMINAL CENTRES (PASSENGERS)

11.61 Airport

Dumna airstrip which is used occasionally for air landing is not suitable for a major airport. The approach to Dumna passes through the restricted area. Moreover, the strip is located with unfavourable land forms and hardly any space for expansion. In view of these factors sufficient space of nearly 300 acres is proposed for the airport near village Tewar and partly in village Sagra. This site is located along State Highway No. 22 and will provide proper access to the city and new developments.

11.62 Railway Stations

The city is served by Madan Mahal, Main city station and Howbagh railway stations. Adhartal is also proposed for passenger traffic. It is possible to introduce local train service from Kachpura to Panagar so as to provide cheap and quick communication from one end of the city to the major industrial complex.

11.63 Regional Bus Stand and Bus Depot

As already mentioned in Chapter 7, the existing Bus Stand does not have sufficient area to cope up mass transportation from functional point of view. Taking into consideration, the inter-city transportation system and converging regional roads, a major bus station is proposed at Madhotal after reclaiming low-lying areas. Location of this bus stand will not only serve the new developments but also the parent city with the minimum travel distances.

11.64 Regional Pick-Up Stations

Besides the central bus station, a number of pick-up bus stations have been proposed to serve the needs of the people living at far off places. They are proposed to be located at the existing bus stand site which will also function as city bus terminus, another pick-up station is proposed near Maharajpur in Planning Unit No. 2 N. H. 7, third pick-up bus station is proposed near underpass No. 2 near Empire Talkies, and fourth pick-up station at Ranital in P. U. 7. However, this site is within cantonment area, the proposed site for pick-up station shall serve the population of the city adjacent to the city as well as Sadar.

11.65 City Bus Terminal Centre

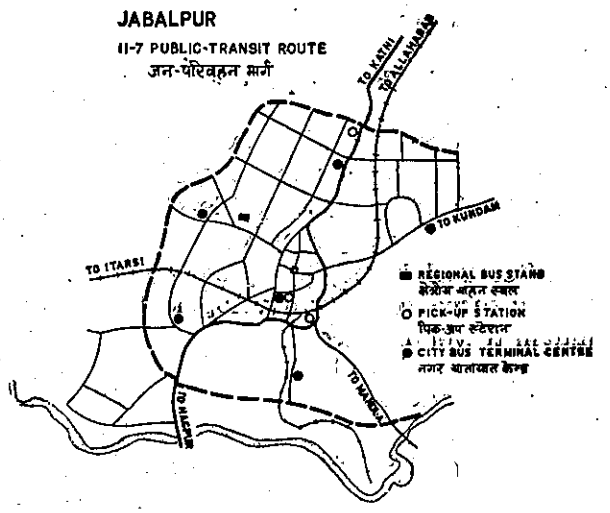
In order to have efficient city bus service, six bus terminal centres have been proposed in addition to the main bus station near Corporation chauraha. The city buses will have their origin and destination at these centres located as follows :—

1. Main city bus terminus
2. Gorakhpur
3. Ranjhi
4. Near Maharajpur along N. H. 7

5. Khiriya Kalan along MR-2
6. On Patan Road near Karmeta
7. Near Dhanwantari Nagar.

11.7 PUBLIC TRANSPORTATION

The circulation pattern of the city has been evolved to suit the requirements of public-transit system. The main public-transit routes are old Mirzapur Road upto Garha crossing, major city roads and other city roads which inter-connect various works centres such as industrial complex, Agricultural University, Commercial centre, core-city centre, mandis, work centres at Kachpura and Medical College. Regional and subsidiary bus stand, terminal centres and pick-up stations have been located along these roads. These routes will also cater to the other types of mass transportation modes of public movement.
types of mass transportation modes of public movement.



11.8 PARKING

The city is likely to have 4000 cars/jeeps, taxis, 16000 motor cycles, scooters, and 5000 trucks and buses. Sufficient parking space to accommodate these vehicles have been provided particularly in all major work centres, railway stations, bus stands, pick-up stations and other terminal centres. Sufficient off street parking space particularly in the areas of concentrated activities also proposed to avoid use of city roads for parking which adds to traffic congestion. Details are given in central area proposals.

12.1

CHAPTER 12

MAJOR WORK CENTRES

Commercial, industrial and administrative activities forming major functional areas are the nerve centres, which generate the economy, reflecting the socio-economic life of the city. These being the major traffic generators, the spatial distribution of areas are located in such a way that they are properly linked with the residential areas so as to achieve a minimum journey time to work-place and are also inter-linked with each other for convenient, safe and rapid movement.

The proposals for Jabalpur have broadly been dealt under Chapter 10. Specific proposals in terms of location and allocation of land for uses under commercial, industrial and administrative activities are dealt here. As per estimate, Jabalpur will have 3.30 lakhs of workers by 1991 out of which a large number of workers would be engaged in secondary and tertiary sectors i.e. commerce, industries, offices and services with a negligible number of workers in primary sector. Thus, land proposed for commerce, industries, administration and services would be the major work areas together with the activities concerning education, health etc. A broad distribution working force in the city work centre is assessed as under :—

City centre	0.80 lakhs
Major industrial centres	1.40 lakhs
Other work centres	1.10 lakhs
	3.30 lakhs

12.1 PROPOSED COMMERCIAL AREAS

The planning proposals provide 512 hectares of land allocated for commercial use comprising commercial centres at all levels. The classification of commercial activities in terms of their hierarchy and type as envisaged in the proposals as under :—

I. Commercial Area at City level

(a) Trade centre.
(b) Wholesale Market.
(c) Specialised Market.
(d) Mandi
(e) Categorised Market.
(f) Weekly Market.

II. Commercial Area at Planning Unit level

(a) Planning Unit centres.

III. Commercial Area at Sector level

(a) Sector shopping centre.

(b) Local shopping centre (forming part of residential area).

The following table gives a detailed land allocation earmarked in the planning proposals for various commercial activities :

JABALPUR : COMMERCIAL WORK CENTRES

12—TI

Serial No.	Description	Location	Area in Hectares
(1)	(2)	(3)	(4)
1	**Wholesale and Specialised Market**	Planning Unit No. 1	40
		Planning Unit No. 3	20
		Planning Unit No. 5	45
			105
2	**Warehousing Cold Storage Godowns**	Planning Unit No. 1	18
		Planning Unit No. 3	5
		Planning Unit No. 5	6
		Planning Unit No. 7	6
		Planning Unit No. 9	3
			38
3	**Mandis**		
	(a) Grain Mandi	Planning Unit No. 7	32
	(b) Kirana Mandi	Planning Unit No. 1	5
		Planning Unit No. 9	2
	(c) Vegetable and Fruit Market	Planning Unit No. 5	5
	(d) Grass Mandi	Planning Unit No. 9	4
		Planning Unit No. 3	2
	(e) Timber and Bans-Balli Market	Planning Unit No. 8	70
			120
4	**Categorised Market**		
	(a) Kabadi market	Planning Unit No. 5	10
	(b) Transport Nagar forwarding agencies.	Planning Unit No. 3	6
		Planning Unit No. 6	6
		Planning Unit No. 8	4
	(c) Iron and Steel and Building material yard.	Planning Unit No. 7	15
		Planning Unit No. 2	5
	(d) Oil and Fuel Depot	Planning Unit No. 1	3
		Planning Unit No. 9	8
			57

(1)	(2)	(3)	(4)
5	**Retail Shopping Centres**		
	(a) City and Planning Unit-level shopping centre	All Planning Units	155
	(b) Sector-level shopping centre	Each residential sector	37
			192
		GRAND TOTAL	512

12.11 WHOLESALE AND SPECIALISED MARKETS

The Development Plan conceives growth of Jabalpur in terms of linked city centres. The concept of city centre is most suited to the mixed land-use character of Indian city centres. It is proposed therefore, to develop the linked city centres as central activity complex, that will comprise the activities such as commercial, business, wholesale-cum-retail markets, specialised market, service shops and flatted factories etc.

An area of 105 hectares has been earmarked for wholesale and specialised market including existing establishment within the city. The spatial distribution of areas for these activities are in Planning Unit No. 1 (city area), 40 hectares, Planning Unit Nos. 3, 20 hectares and Planning unit 5, 45 hectares.

SPECIALISED WHOLESALE MARKETS

The city has specialised wholesale markets in various commodities and most of them are overcrowded to accommodate their activities reflecting adversely on functional efficiency. It will be necessary to provide additional space at new sites mentioned in the table 12-T.1 to acccommodate the following specialised markets :—

(a) Ready-made clothes and hosiery.

(b) Hardware, paints and steel furniture.

(c) Spare parts.

(d) Electrical goods.

(e) Cycle markets.

12.12 WAREHOUSES, COLD STORAGE AND GODOWNS

Areas for warehouses and godowns will be provided in the city i.e. Planning Unit No. 1 in the proximity of the existing commercial area. Independent site with an area of 5 hectares are proposed for warehousing, godowns and cold storage in Planning Unit No. 3. In the proximity of the new mandi in Planning Unit No. 7 as well as in Planning Unit No. 5, provision for grain godowns and cold storage have been provided to an extent of 6 hectares in each Planning Unit.

12.13 MANDIS

Adequate provision of space for mandis have been provided in the planning proposals for new mandi. The total area provided for this purposes is 120 hectares.

(a) GRAIN MANDI

The present location of Jawaharganj grain mandi is not suitable in view of inadequacy of space and proper accessibility. The location of grain mandi is essentially governed by the transport infrastructure facility. In view of the above facts a new grain mandi site with an area of 32 hectares is proposed on Damoh road with provision of future expansion. The new mandi scheme is under implementation.

(b) KIRANA MANDI

The existing Kirana mandi on Jawaharganj road is functioning in congested area. However, after re-couping the existing site for Jawaharganj mandi, kirana mandi will be properly accommodated within an area of 5 hectares. Similarly, the existing kirana mandi in Planning Unit No. 9 (Gorakhpur) shall be re-organised. The area allocated for kirana mandi is 2 hectares in Gorakhpur.

(c) VEGETABLE AND FRUIT MARKET

The studies in Chapter 6 reveal that the present location of wholesale activities in fruit and vegetables near Fawara and Latkari Padar near Jawaharganj mandi is incompitable and inefficient from the functional point of view. In view of the above facts a new site for wholesale vegetable and fruit market of 5 hectares in Planning Unit No. 5 is proposed. The location of the wholesale vegetable and fruit market is well accessible from the market garden area along with Omti nullah.

(d) GRASS MANDI

An area of 6 hectares in Planning Unit Nos. 9 and 3 for the purpose of grass mandi which will be inconsistant with the proposed dairy sites.

(e) TIMBER AND BANS-BALLI MARKET

These activities presently located at Gurandi market and Madan Mahal are not inconsistant with the adjoining uses. Moreover, fire hazards also pose serious problems particularly bans-mandi in Gurandi. It is proposed to re-locate the timber and bans-mandi in Planning Unit No. 8 with land allocation of 70 hectares. The site advantageously suited from due to the proximity to Kachhpura railway goods yard and suitably accessible from National Highway No. 7 and Mandla road, which are the main feeder links for the timber and bans. However, retail activities of bans and timber shall be allowed along with the proposed Kabadi market site in Planning Unit No. 5.

12.14 CATEGORISED MARKET

(a) KABADI MARKET

Activities under this category are functioning mostly at Gurandi market. The locality is strained due to inadequacy of space and inaccessibility. Moreover, the continuance of these activities in the city creates environmental and traffic problem. Planning proposals envisage an organised space of 10 hectares in Planning Unit No. 5 at Lamagarden.

(b) TRANSPORT NAGAR AND FORWARDING AGENCIES

The forwarding agencies at present are scattered in the city mainly at Maharajpur, Damoh naka and Madan Mahal. These activities create traffic hazard in the absence of storage, parking and loading and unloading space. In view of this fact, transport activities are proposed to be re-located in the organised transport nagar distributed along with major transportation nodal points in Planning Unit Nos. 3, 6 and 8 providing a total area of 16 hectares.

(c) IRON AND STEEL AND BUILDING MATERIAL YARDS

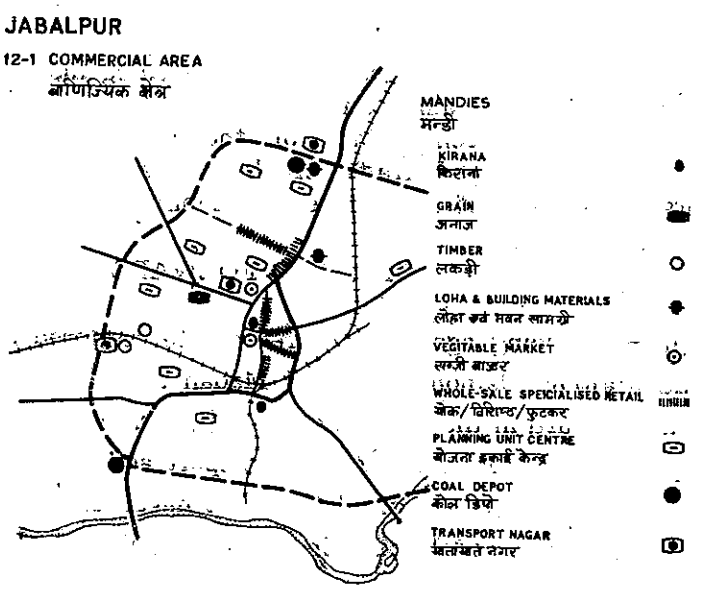
The activities under this category are scattered in the city that is on road between Karamchand chauraha to Tularam chauraha, Marhatal, Tamarhai, near Chhota Fawara and Gohalpur naka, mostly in central area of the city. The Development Plan conceives the building material centres so as to help the construction activities with efficient building material supply. Two sites for building material and iron and steel yards are proposed in Planning Unit Nos. 7 and 2 providing a total area of 20 hectares.

(d) OIL AND FUEL DEPOT

The depots for inflammable materials like kerosene, petrol, diesel and cooking gas need to be appropriately located so as to avoid fire hazards.

12.15 PLANNING UNIT LEVEL SHOPPING

In the Development Plan, extension of city shopping centre is proposed in various Planning Units. The planning unit shopping centre as conceived will be a composite commercial centre accommodating various activities that is shopping, commercial institutions, business offices, health and recreational facilities. The following table shows the estimated population which will be served by respective planning units. The total area covered by planning unit-level commercial centre works out to 40 hectares.



JABALPUR : PLANNING UNIT SHOPPING CENTRES

12-T-2.

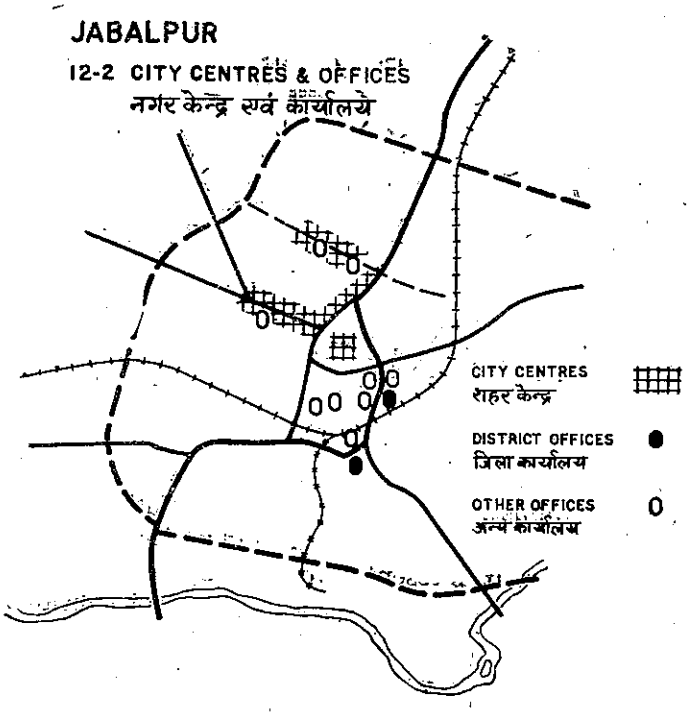
Planning Unit No. (1)	Population estimated (in lakhs.) (2)	Location (3)
1	2.20	Existing city centre will serve as planning unit centre.
2	1.19	Existing Ranjhi market with its extension.
3	0.94	New planning unit centre has been provided near Maharajpur along major city road MR-2.
4	0.25	New Planning unit centre has been provided near Khari along major city road MR-2.
5	1.42	Existing shopping along Mirzapur Road, it will partly be served by city retail shopping.
6	0.84	New Planning unit centre has been provided along existing Damoh Road.
7	1.22	New planning unit centre has been provided near Laxmipur and Lamti village.
8	0.92	Existing shopping area in Garha will serve the Planning unit.
9	2.02	Existing shopping area in Gorakhpur and Madan Mahal will serve.

12.16 SECTOR-LEVEL SHOPPING CENTRE

Residential sectors having 12-15 thousand population contents will need a separate-sector shopping which will form the focal point of the sector. Each residential sector also provides area for local shops, which will contain 8-15 shops for a population of 3 to 4 thousand. Total area earmarked for sector and local shopping area is abbout 37 hectares covering all the residential sectors proposed in Development Plan.

12.2 OFFICES

At present the offices in the city are scattered at various places, namely, North Civil Lines, South Civil Lines, Pachpedi, Ghamapur, Wright Town,



and Napier Town areas. Looking to the future requirement of the city, adequate land is earmarked for the office complexes in Planning Unit No. 1 covering an area of nearly 20 hectares in the site occupied presently by the Veterinary College in the proximity of Divisional Commissioner's Office. The existing State Government and Central Government Offices that are mostly occupying rented premises are proposed to be accommodated in the aforesaid new office complex. The total area allocated for the Govt. offices including the present Collectorate building and allied offices is 30 hectares in Planning Unit No. 1. In order to accommodate the commercial and local Govt. offices Marhatal new complex with an area of 8 hectares is proposed. In addition to this total area of 30 hectares is earmarked in Planning Unit No. 3 and 5 respectively for accommodating the offices of State Govt., Local authorities and regional business offices. The total area earmarked for the offices in the Development Plan is 60 hectares.

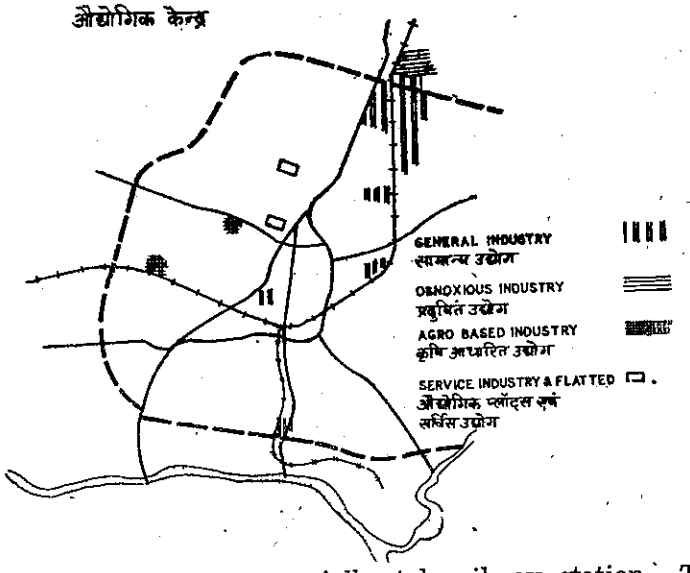
12.3 PROPOSED INDUSTRIAL AREA

Most of the heavy and medium industries at Jabalpur are concentrated on recently developed industrial estate and industrial area along with

JABALPUR

12-3 INDUSTRIAL CENTRES

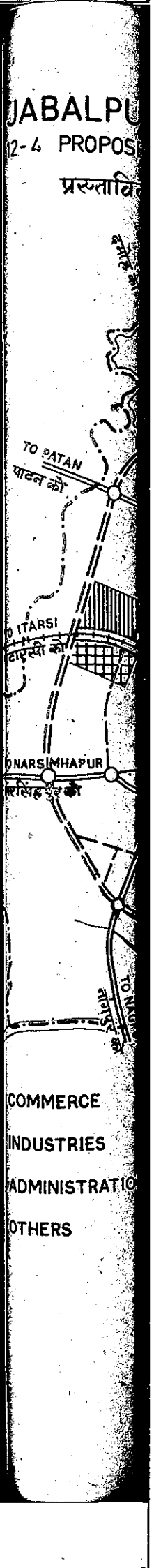
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the Heavy Vehicles Factory near Adhartal railway station. The other large and medium industries are located along National Highway No. 7 towards Madan Mahal. Some small scale industries are scattered in the central area of the city. It is essential to built up industrial infrastructure including the industrial water requirement by Bargi subsidiary canal so as to accommodate heavy and medium industries in an organised manner with lucrative incentives. The disorderly located industries in the city not only create environmental problems but are also deprived of basic services required for functioning efficiently. The Development Plan envisages the allocation of industrial land based on area covered by type and size of the industries and the existing employment pattern thereof. Four categories of industrial sites have been earmarked to accommodate small industrial units to large and extensive industries. Total area allocated for the industres is 707 hectares. This is exclusive of Shaw liner factory located on the fringe of planning area on the Narsinghpur Road.

12.31 General Industries

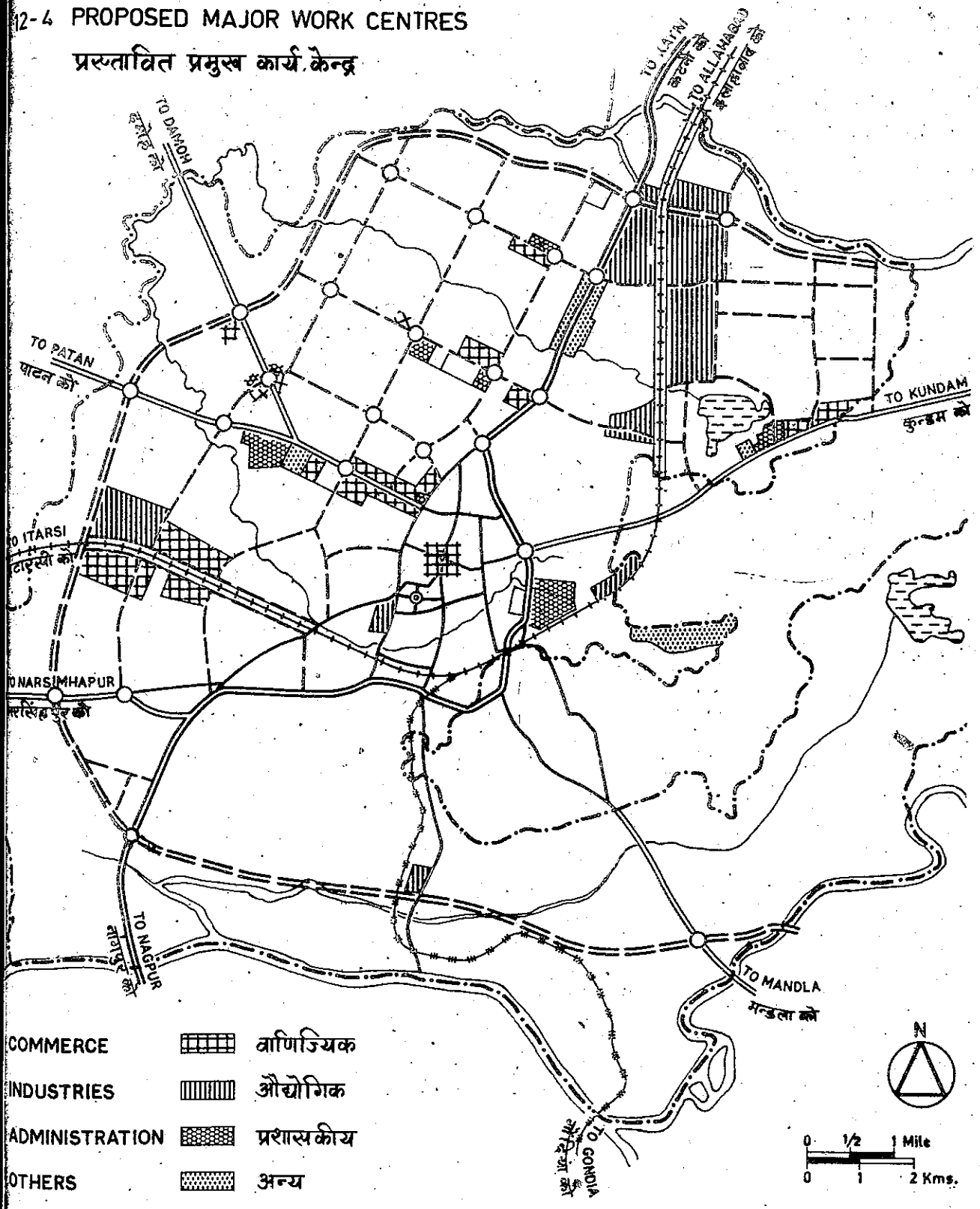
The total area earmarked for general industries excluding household and service industries is 435 hectares, out of which allocations are made for heavy industries (including Heavy Vehicles and Grey Steel industries), heavy-medium industries, medium and small scale industries. The grouping earmarked is such so as to intermix different categories wherever necessary. Heavy industries are proposed to be expanded along with Heavy Vehicles Factory and industrial area in Planning Unit No. 2 near Adhartal railway station as well the existing Perfect Potteries at Gwarighat Road in Planning Unit No. 9. In addition to above an area of 65 hectares has been earmarked in village Kandrakheda for heavy industries.



JABALPUR

12-4 PROPOSED MAJOR WORK CENTRES

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12.32 Obnoxious Industries

In order to avoid air pollution and to preserve environmental conditions, obnoxious industries are proposed to be located in the northern part of the proposed industrial area, in the vicinity of Pariyat, thus, the air pollution is prevented. An area of 60 hectares is earmarked for this purpose.

12.33 Agro-Based Industries

At present dal mills and oil mills under these categories are scattered in Tamrahi, Motinalla, Ghodhanakash and on old Mirzapur Road. Being grouped in congested residential localities, these units are proposed to be shifted on new sites (i) adjoining new grain mandi, and (ii) adjoining the railway line to the west of Kachhpura in Planning Unit No. 7. The total area allocated for these categories is 42 hectares.

12.34 Forest Based Industries

Jabalpur being the regional centre for timber and timber product, saw mills and other forest-based industries are necessary to be considered. Saw mills and other timber yards associated with these activities are at present grouped mainly at Madan Mahal and Gorakhpur. Suitable sites for forest-based industries which will not only include processing of timber but also the particle boards, fly-flush door industries. This has been proposed in Planning Unit No. 8.

12.35 Household and Service Industries

These units are at present located near Sahkari Bazaar, Satna quarters, existing bus stand and in different parts of the city. Provision is made for these units in various planning unit centres and existing city centre. These units will be housed in a flatted unit closed to central area, and work centres so as to reduce journey time to work-place. The total area earmarked for this purpose is 40 hectares.

12.36 Extractive and Allied Industries

The activities such as mining, ceramics, brickkilns, stone quarry and crushing are covered under this category. The brickkilns are at present located near Adhartal industrial estate, Madan Mahal hills near Sangram Sagar, valley of plains between Gupteshwar hills etc. shall have to be discontinued since these operations convert land into derelict rendering the land unsuitable for any other purpose. The ceramic industries have been already accounted for under medium industries and the present location of Gwarighat shall continue. A new site for these activities is also proposed in Lalpur, Jamtara and Umariya villages. The following table gives the account of the land proposed for various categories of industries as per their performance characteristics.

JABALPUR : INDUSTRIAL WORK CENTRES

12-T. 3.

Serial No.	Industries	Location	Approximate Area (in hectares)
(1)	(2)	(3)	(4)
1	General Industries		
	(a) Heavy	Industrial area at Richhai, Madai, Imalia, Pipariya and towards east of railway line.	245
	(b) Medium	Madai, Richhai, Maharajpur, Imaliya & Khari	230
	(c) Small including services	Industrial Estate at Bhadpura, Adhartal, Betla, Kachpura, Old Mirzapur Road, Polipather area.	90
2	Obnoxious	Extension to industrial area to the south of Pariyat.	60
3	Agro based industires	Damoh Road and Near Kachpura Road.	42
4	Household and service industries including flatted factories.	Existing city centre, link-city centre in Planning Unit Nos. 3 & 4.	40
		TOTAL	707

Note.—In addition to above an area of 100 hectares has earmarked for extractive allied industries at village Lalpur Jametra and Umariya.

13.1

CHAPTER 13

HOUSING, PUBLIC FACILITIES AND SERVICES

A study of living conditions in terms of housing shortage, residential-density pattern, tenure status and identification of sub-standard areas has been discussed in Chapter 5. The future requirements in terms of dwelling units by type, requirements of land and related amenities etc. have been discussed in Chapter 9. Keeping in view both the present problems and future needs determined for Jabalpur city, the following main considerations have emerged which will form the basis of planning proposals in respect of housing and allied facilities :—

(a) Allocation of land for housing to meet back-log of nearly 21,700 dwelling units in addition to future requirement till 1991.

(b) Allocation of specific areas for economically weaker section of society and low-income group as well as Government housing keeping in view home-work relationship.

(c) Allocation of specific areas for re-settlement of slum dwellers proposed to be shifted during the plan period.

(d) Integration of villages in planning area with future Urban development.

(e) Development of housing area as composite entity ensuring basic amenities within the residential sector.

In planning the residential areas, the hierarchy of relationship between residential entities such as dwelling unit, group of houses, residential sector, planning unit and the city, has been maintained by providing amenities and work centres at various levels while planning for residential areas. These will function as economic, social and cultural inter-links and will foster a sense of belongingness to the community without loosening emotional and functional with site the city.

13.1 RESIDENTIAL ZONES

Residential areas are distributed in residential zones corresponding to the respective planning units of the city as described in Chapter 10. Each residential zone in future will comprise residential sectors which are essentially self-contained entities in respect of basic community needs. Nearly 3635 hectares of land for housing (excluding residential amenities and shopping areas) have been provided in the Development Plan.

Physical growth trends and limiting factors described in Chapter 4 reveal that the city could be extended towards Katni, Damoh and Patan Roads. Future residential development is mainly planned in the northern part of Katni Road and eastern part of Damoh Road. Some residential areas have also been proposed near Ranjhi on Kundam Road.

13.11 Description of Residential Zone

There are nine residential zones which have been sub-divided into 58 residential sectors. Except main city which comes in Planning Unit No. 1 the number of sectors in each zone varies between 3 to 15 depending on the size of residential zone.

The residential zone 1 which accommodates the main city has been divided into 15 sectors. Residential zones 3 and 5 which correspond to the unit where wholesale commercial activities are proposed has been divided into 6 and 7 sectors respectively.

A brief description of each reesidential zone is as under :

Residential Zone 1

This zone corresponds to the main city area which is already housing people with a high-residential density. It covers nearly 530 hectares of land which accounts for 14.60% of total area. This zone is meant to cater to nearly 2.2 lakhs population at an average residential density of 415 persons per hectare. Necessary provision is made to reduce the high occupancy rate by allowing higher F.A.R. and also by making available housing sites to the workers living in central area close to their work centres and nearby.

Residential Zone 2

This zone corresponds to the existing Ranjhi area, Gun Carriage Factory and Engineering College etc. The new residential areas are proposed near industrial estate. This zone will primarily contain housing sites for economically weaker section. It will accommodate a population of 1.00 lakhs in 7 residential sectors at an average residential density of 262 persons per hectare.

Residential Zone 3

This residential zone comprises 6 sectors and covers an area of about 280 hectares. It is meant to accommodate a population of 0.94 lakhs with an average density of 335 persons per hectare. This area corresponds to Agriculture University along old Mirzapur Road and proposed new development including new link city centre. Density near City Centre will be comparatively higher, land for low-income group and economically weaker section will be provided in this zone.

Residential Zone 4

This zone comprises 2 residential sectors and covers an area of 133 hectares to accommodate a population of 0.25 lakhs. The average density would be 187 persons per hectare. The entire zone is proposed for new development.

Residential Zone 5

This zone comprises 7 residential sectors and covers an area of about 296 hectares and accommodates a population of 1.42 lakhs at an average

residential density of 479 persons per hectare. This area is in close proximity of old Mirzapur Road and Damoh Road with proposed major commercial activities. Thus, the density within this zone will be a bit higher.

Residential Zone 6

This zone corresponds to the area located along Damoh-Patan Road having 4 residential sectors and covers an area of 395 hectares to accommodate 0.84 lakhs population. The average density would be 212 persons per hectare. The entire zone is proposed for new development.

Residential Zone 7

This zone corresponds to the area near new grain mandi, I.T.I. and Ukhri area and comprises 6 residential sectors to accommodate 1.22 lakhs population on 400 hectares. The average density would be 385 persons per hectare. This residential zone will accommodate low-income group and economically weaker sections.

Residential Zone 8

This unit corresponds to the existing Garha area, Improvement Trust Scheme No. 11, State Bank Colony, Dhanwantari Nagar etc. Total area covered in this unit will be 315 hectares in order to accommodate 92 thousand population in 3 residential sectors with an average residential density of 292 persons per hectare.

Residential Zone 9

This zone comprises 8 residential sectors and covers an area of 832 hectares. It will accommodate a population of about 2.02 lakhs. The average density would be 242 persons per hectare. This zone includes Gorakhpur, Rampur and other new developments along Gwarighat Road and Nagpur Road beyond Medical College and will accommodate more of middle and high-income groups.

13.12 Distribution of Population and Areas

The distribution of population in residential areas is based on the following considerations :—

(a) In view of the rising cost of development of land it is necessary to plan the residential areas on a relatively high-density.

(b) The areas for low-density range housing are kept at the minimum.

(c) A high-density range is proposed in areas situated adjacent to work centres e.g. city centre and industrial areas.

(d) A high-density range is maintained in the existing built up areas near the present city centre, although it is proposed to relieve this area from overcrowding and necessary land for this purpose has been earmarked.

(e) The area earmarked for rehabilitation of slums is also to be developed at high-density so that the residents are near to the present slum areas and that they do not have to travel long distance to their work centres and amenities.

13.14

JABALPUR : DISTRIBUTION OF POPULATION

Residential Zone No.	No. of Residential Sectors	Area		Population		Average Residential Density (Persons per hectare)
		Area (in thousand)	Percentage	Population (in thousand)	Percentage	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	15	530	14.60	220	20.00	415
2	7	455	12.50	119	10.80	262
3	6	280	7.70	94	8.50	335
4	2	133	3.70	25	2.30	187
5	7	296	8.20	142	12.90	479
6	4	395	10.70	84	7.60	212
7	6	400	11.00	122	11.10	305
8	3	315	8.70	92	8.40	292
9	8	832	22.90	202	18.40	242
Total	58	3635	100.00	1100	100.00	303

13.15

13.2

13.13 Residential Zones and City-Centres Relationship

Residential zones in Planning Unit Nos. 1, 2, 8, 9 and part of 7 will be served in respect of city-level needs by the present central-city core, while residential zones in Planning Units 3, 4, 5, 6 and part 7 shall be served by new-linked city centre proposed along MR-1. Broadly command area of both the city centres in terms of residential area will be as follows, though the present city centre will continue to function as main city centre for a long time.

13.21

JABALPUR : COMMAND AREA OF CITY CENTRES 13 T.2

Name of the city Centre	Residential Zones (Planning Units)	Housing Areas (Hectares)
(1)	(2)	(3)
Existing city centre (Fawara)	1, 2, 8, 9, 7 (Part)	2300
New-linked city centre	3. 4. 5. 6 and 7 (part)	1336
Total		3635

13.14 Co-ordination of Residential Colonies

Most of the private colonies established during the last decade have come up in un-co-ordinated manner. These colonies lack in basic infrastructure and amenities and have created pockets of developed land separated by agriculture land such as State Bank Colony, L.I.C. Employees Colony, Yadav Colony, Sanmati Colony, Vijaya Nagar etc. Most of them are not developed properly.

It is proposed that Development Authority or Municipal Corporation should prepare a comprehensive scheme in order to develop vacant pockets and solve the problems of inter-connection among different areas. All the colonies should be taken over by the Municipal Corporation for providing services where the development of land by private colonizers is sub-standard. The Corporation or Development Authority may levy development charges for the same.

13.15 Integration of Villages

The planning area of the city covers 53 villages. Integration of villages in planning area with urban development is essential in order to provide urban facilities to these villages. Care will be taken to co-ordinate the existing villages with the proposed development at the time of preparation of zoning plans for the different residential sectors. The villages located in green belt will also be connected with the developed areas at least by fair-weather road.

13.2 RESIDENTIAL DENSITY

Residential density is a measure which is used as basis for assessment of requirement of land for provision of amenities and services. It is also used as a measure for study of living conditions in the existing residential areas. Normally net residential density[1] is used for study of existing residential areas and also for preparation of lay-outs for sub-sectors and small areas. Gross density[2] is, however, used to work out requirement of amenities, services etc. at sector-level and for preparation of Development Plan.

13.21 Residential Density Ranges

A study of existing built up area has revealed that net residential density varies between 67 to 1800 persons per hectare. However, high-density would continue in and around central area. A gross density of 303 persons per hectare has been adopted as a basis of assessment for requirement at sector-level.

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1. Population divided by the area including dwellings and gardens, any incidential open space (e. g. childrens play space or parking space) and half width of surrounding roads (up to maximum of 6 mts.) but excluding local shops, primary schools and most open spaces and all other types of development.
2. Population divided by residential area including land covered by houses, gardens, roads, local shops, primary schools and most open spaces excluding all other urban uses such as industrial, secondary schools, city park etc.

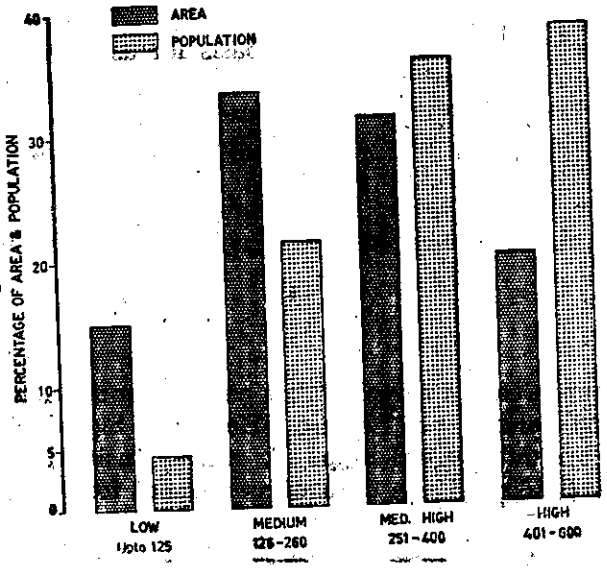
The density ranges adopted for planning proposals at sector-level are given below :—

Low	Up to 125 persons per hectare.
Medium	126-250 persons per hectare.
Medium-High	251-400 persons per hectare.
High	401-600 persons per hectare.

13.22 Residential Density (Zone-Wise)

The maximum area under high-density range has been provided in residential zone 1 which contains the present city centre in and around Fawara and adjoining areas and residential zone 2 which will provide accommodation to industrial workers being situated near industrial areas. Maximum area under medium-high densities have been provided in residential zone in planning unit 1 which mainly contains, area around Fawara, Milloniganj, Sarafa, the traditional central area. In residential zone Nos. 3 and 5 the high and medium-high density areas have been provided which contain a new linked activity centres since most of the wholesale and other allied activities are proposed in this zone. Area allocation under high and medium-high densities in planning units 2 and 6 will provide accommodation to industrial workers. Concurrently these units coincide with the industrial and major work centres of second order. Medium-high and medium densities have been proposed in planning units 6. 7, 8 and 9. The city will contain 15.8% of total area in low-density range accommodating 5.3% of the total population. About 33.0% of the total residential area is earmarked for medium-density range sharing 20.8% of the total population while 31.4% of the total area is proposed in medium-high residential density accommodating 34.3% of the population. Whereas 22% of the total area has been proposed under high-density range which will accommodate 39.6% of the total population. In other words nearly half of the total area is earmarked for low and medium density ranges to accommodate 26.1% of the total population, while three-fourth of the population shall be accommodated within remaining half of the area for residential purpose. More area under low and medium densities is due to defence establishments.

JABALPUR
13-1 AREA AND POPULATION BY DENSITY RANGES
(PERSONS PER HECTARE)



Details of provision of areas under various density ranges are given in the following table :—

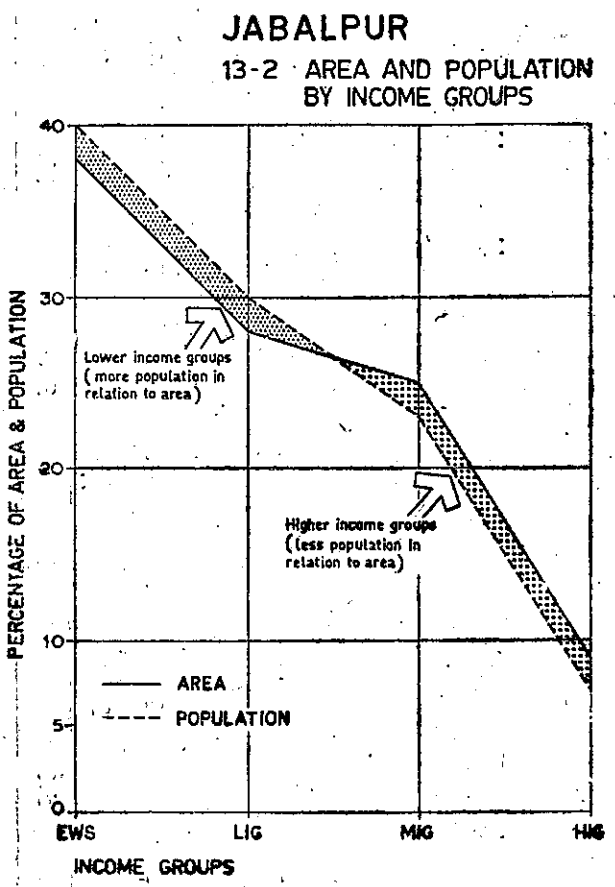
JABALPUR : RESIDENTIAL DENSITY RANGES (ZONE WISE)

13-T. 3.

(Area in hectares & Population in thousands)

Residential Zone	Low up to 125		Medium 125-150		Medium-High 252-400		High 401-600		Total	
	Area	Population	Area	Population	Area	Population	Area	Population	Area	Population
1	2	3	4	5	6	7	8	9	10	11
1.	..	..	135	27	175	65	220	128	530	220
2.	..	..	202	26	155	43	97	50	454	119
3.	..	..	88	16	82	28	110	50	280	94
4.	40	3	48	9	45	13	--	--	133	25
5.	..	..	27	6	113	41	156	95	296	142
6.	81	6	174	30	125	38	15	10	395	84
7.	115	14	115	28	124	56	46	24	400	122
8.	92	13	115	30	73	30	35	19	325	92
9.	245	22	297	57	171	63	119	60	832	202
Total ..	573	58	1201	229	1063	377	798	436	3635	1100
Area%	15.8	..	33.0	..	29.2	..	22.0	..	100	..
Population%	..	5.3	..	20.8	..	34.3	..	39.6	..	100

13.3 DISTRIBUTION OF AREA AND POPULATION BY INCOME GROUPS.



In the present socialistic society, segregation on the basis of income groups is not desirable. In planning and allocation of areas for various income groups, an attempt has been made to create conditions which will foster social integration. Requirement of houses by type and size depends upon paying capacity of the people in various income groups. Allocation of areas to the various income group have been guided by the following considerations :—

(a) Provision of common amenities.

(b) Judicious inter mixing of various income groups in residential zones, mainly :—

(i) Economically weaker section.

(ii) Low income group.

(iii) Middle income group.

(iv) High income group.

The desired inter-mixing of the groups has been achieved to a reasonable extent as is evident from the table given on the next page :—

JABALPUR : DISTRIBUTION OF AREA AND POPULATION BY INCOME GROUPS

13-T. 4

(Area in hectares and Population in thousands)

Residential Zone	INCOME GROUP									
	E. W. S.		L. I. G.		M. I. G.		H. I. G.		TOTAL	
	Area	Population	Area	Population	Area	Population	Area	Population	Area	Population
1	2	3	4	5	6	7	8	9	10	11
1.	201	88.00	148	66.00	138	56.35	43	9.65	530	220
2.	172	41.50	127	35.50	119	33.50	36	8.50	454	119
3.	106	37.60	79	28.20	73	21.60	22	6.60	260	94
4.	51	10.00	37	6.30	37	6.95	8	1.75	133	25
5.	113	56.80	82	42.60	77	32.70	24	9.90	296	142
6.	151	33.60	110	25.20	113	19.30	21	5.90	395	84
7.	154	58.15	114	45.95	...	..	132	17.90	400	122
8.	120	36.80	88	27.60	82	21.15	25	6.45	315	92
9.	316	80.80	233	60.60	209	46.50	74	14.10	832	202
Total ..	1384	443.25	1018	337.95	848	238.05	385	80.75	3635	1100
Area% ..	38.1	..	28.9	..	23.3	..	10.6	..	100	..
Population % ..		40.3	..	30.7	..	21.7	..	7.3	..	100

The table reveals that nearly 66% of the total area has been proposed for economically weaker section and low income groups which will accommodate 71% of the total population, while 34% of the total residential area has been earmarked for middle and high income groups which will contain 29% of the total population. The graph reveals the comparison between the area and allocation and population groups.

13.4 GOVERNMENT AND SEMI-GOVERNMENT HOUSING

Residential accommodation for the Government and Semi-Government employees are located in planning units 1 and 9 which also contain Government offices. It is proposed to earmark additional area for housing in Government sector in planning unit No. 1, that will be used after vacating the Central Jail area. In planning unit Nos. 8 and 9, additional area for housing is also earmarked for housing activity.

13.5 SLUM SETTLEMENTS

The problems of slums created by poor living conditions, overcrowding, lack of amenities and public conveniences has been discussed in detail in chapter 5. Nearly eleven settlements have been identified as slums which accommodate nearly 75000 population covering an area of nearly 220 hectares. Most of these slums are in existing city core and surrounding areas.

Action plan for prevention, improvement, clearance and rehabilitation will be necessary to tackle the complex problem of slums which envolves physical, social and economic factors. A four-pronged approach is proposed :—

1. Modification of building bye-laws, formulation of zoning regulations and strict enforcement of the same.

2. Development of land specifically for economically weaker section of the society in advance so that at least house sites and services within reasonable cost are made available. This will prevent haphazard squatting and encroachment on public land.

3. Environmental improvement and provision of services and amenities so as to improve living condition of the slum areas.

4. Clearance of slums and rehabilitation of the same at new sites. The slum settlements are divided into two broad categories :—

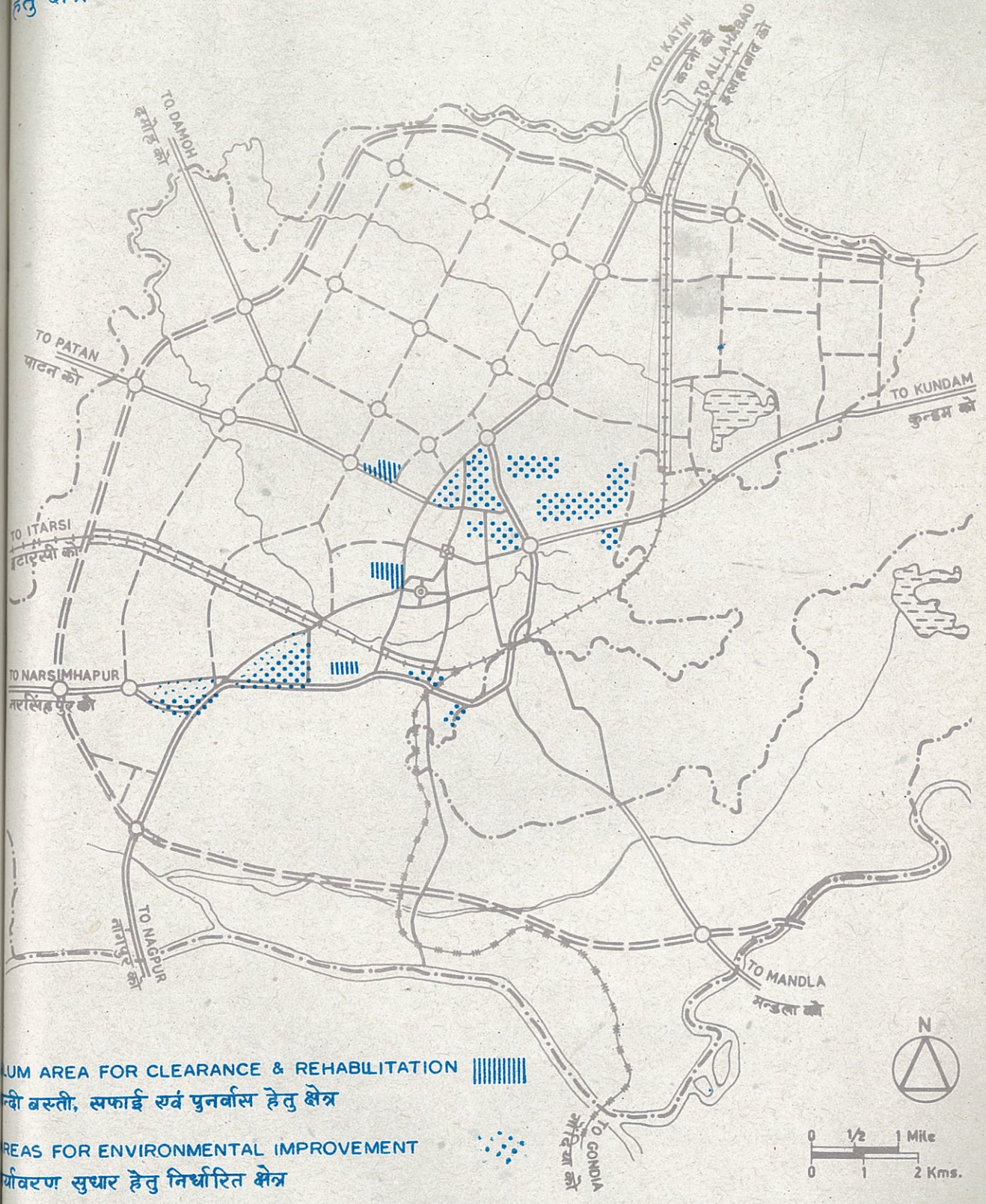
(a) Slum settlements which are to be improved by provision of services and amenities and by partial clearance.

(b) Slums which are required to be cleared and resettled at new sites.

Clearance of slums is often difficult because process of clearance disturbs social life, economic linkage between slum area and the work places, involves emotional attachments to the place of residence, particularly in case of residents who have been living there for a considerable time. Besides this clearance also involves many administrative and financial difficulties. In view of these factors, only those slum areas have been

जबलपुर

सुधार सफाई एवं पुनर्वास हेतु क्षेत्र



UM AREA FOR CLEARANCE & REHABILITATION

ंदी बस्ती, सफाई एवं पुनर्वास हेतु क्षेत्र

REAS FOR ENVIRONMENTAL IMPROVEMENT

र्यावरण सुधार हेतु निर्धारित क्षेत्र

earmarked for clearance which are either difficult to improve i. e. low lying areas, or areas situated on the land which is required for other uses essential for proper functioning of the city life.

The site for rehabilitation of these slums are selected as near to the present site as possible so as to cause minimum dislocation to their economic and social life.

The following slum areas are earmarked for clearance and rehabilitation.

JABALPUR : SLUM EARMARKED FOR CLEARANCE AND REHABILITATION

13.T-5

Name of Slum Area	Present Location (Planning Unit No.)	Proposed Location (Planning Unit)
1	2	3
(a) Kachhi basti near Improvement Trust Scheme No. 9	5	5
(b) Sweepers colony near Damoh naka adjacent to Municipal quarters.	5	5
(c) Near Ranital tank and sweepers colony.	7	7
(d) Slum area near Ganga Sagar.	9	9

The following slum areas are earmarked for environmental improvement :—

1. Ghamapur
2. Lalmati
3. Kanchghar
4. Gohalpur (Badhaiya Mohalla)
5. North and South Milloniganj
6. South Motinallah
7. North Motinallah
8. Area adjacent to North Hanumantal (Ghoda Nakkhas)
9. Bhantalaiya
10. Behind Narsinghji-ka-temple
11. Dewaraka Nagar
12. Parts of Garha and Purwa
13. Kumhar Mohalla in Gorakhpur.

13.6 FACILITIES AND SERVICES

People like to live in cities because, besides employment, it provides higher order of facilities and amenities. The nature and character of facilities are related with the size of a city. A city of regional importance like Jabalpur, not only caters for the needs of its citizens but it also serves the region as well as the state for certain amenities. The various facilities must satisfy this requirement and cater for the needs of all age and sex groups and ensure enough freedom of choice to its users.

The facilities and services include education, health, social and cultural, public utilities etc. whereas recreational amenities are dealt separately in Chapter 14. It is pertinent to ensure that facilities and services at all levels viz. city level, planning unit level and sector level are provided at convenient places and are available at the right time to make city life enjoyable and meaningful.

The problems in respect of inadequacies of facilities and services have been discussed in Chapter 8. The assessment of future needs has been made in Chapter 9. The provision of sites for these facilities, therefore, covers existing inadequacies as well as growing needs of the city.

13.61 Health Facilities

Jabalpur has developed specialised medical service catering for the population of the region as a whole. The existing health facilities have been described in chapter 8. The Medical College-cum-General Hospital is located at intersection of National Highway-7 and State highway No. 22 in planning unit No. 9. It is supplemented with cancer unit which is yet to come in operation. In addition to this, the Victoria General Hospital, Lady Elgin Hospital, Railway Hospital and Seth Munnalal Charitable Hospital are located in planning unit No. 1. The Government Ayurvedic Hospital is located in planning unit No. 9. However the location of this hospital is not functionally suitable hence it is proposed to be shifted at new site of 8 hectares in the same unit. The existing hospital have 1200 beded capacity. In order to meet the future requirement, two sites have been earmarked with an area of 10 hectares in planning unit No. 4. The city will require nearly 2200 hospital beds against 1200 beds available at present. To meet this requirement, additional area of 37 hectares has been provided for new sites. 13.62

Dispensaries, nursing homes and maternity homes are regarded as health facilities at planning unit level. Large dispensaries, Nursing homes and Maternity homes are regarded as health facilities at planning unit level. At present there are 13 dispensaries including the Ayurvedic dispensaries dispersed in planning units 1, 7, 8 and 9. Eleven new sites for large dispensaries are proposed in planning unit Nos. 2, 3, 4, 5, 6, 7, 8 and 9. There are seven nursing homes existing in the city and nine nursing homes are proposed in various planning units.

In Jabalpur there are only 42 existing small dispensaries. In order to meet the future requirement 31 small sector level dispensaries are proposed. At present an area of 25 hectare is under health facilities earmarked for future health needs. The total, additional area proposed

in the Development Plan for this purpose is nearly 62 hectares. The table below gives existing and proposed health facilities in respective planning units.

JABALPUR : HEALTH FACILITIES

13-T.6

Planning Unit No.	City Level				Planning Unit Level				Sector Level
	General Hospital		Specialised Hospital		Dispensary Unani and Ayurvedic		Nursing Homes, maternity centres		Small dispensaries
	E	P	E	P	E	P	E	P	P
1	2	3	4	5	6	7	8	9	10
1.	3	..	2	..	9	..	6	..	15
2.	..	1	..	..	..	2	..	1	8
3.	..	1	..	..	..	2	..	2	6
4.	..	..	..	..	..	1	..	1	2
5.	..	..	...	...	...	2	..	2	9
6.	...	...	...	...	...	1	...	1	6
7.	..	...	...	..	1	1	1	..	8
8.	..	..	..	..	1	1	..	1	6
9.	1	..	..	1	2	1	..	1	13
Total	4	2	2	1	13	11	7	9	73*

* Including 42 existing dispensaries.
E stands for existing and P stands for proposed.

13.62 **Education Facilities**

Jabalpur has developed traditionally as an important educational centre not only at the regional level but at the state at large due to the establishment of Jabalpur University and Jawaharlal Nehru Agriculture University. The existing education facilities have been extensively dealt in Chapter 8. Standards for assessment of future education need has been made in Chapter 9. The existing Universities will not only serve the present needs in respect of education but continue to serve the needs of the city in future also. Besides this, four technical colleges and institutions exist in the city. They will cater the needs at the city level. The N.E.S. college presently located near Hathital is proposed to be relocated in the planning unit No. 9. Besides the existing colleges, sites for colleges covering an area of 2/3 hectares in planning unit Nos. 2, 3,5 and 6 have been provided. Higher Secondary, Primary and Nursery schools are proposed to be located in residential sectors which have not been indicated in proposed Development Plan. The sites for these schools will be earmarked in the residential sectors at the time of preparation of zoning plans. An additional area proposed for educational facilities is nearly 390 hectares. The distribution of existing and proposed educational facilities is given below.

Planning Unit No.	City Level				Planning unit level				Sector level	
	University		Technical & Professional college		College	Higher Secondary	Middle School	Primary school	Pre-Primary School	
	E	P	E	P	E	P	P	P	P	P
1	2	3	4	5	6	7	8	9	10	11
1.	1	..	1	..	16	..	18	37	55	44
2.	1	..	1	..	..	2	12	20	30	24
3.	1	..	..	..	..	2	7	15	23	19
4.	..	..	..	..	..	..	2	4	6	5
5.	..	..	..	..	..	2	12	32	35	28
6.	..	..	..	..	..	1	7	14	22	18
7.	..	..	1	..	1	1	9	20	31	24
8.	..	..	..	..	..	1	7	15	23	18
9.	..	..	1	..	2	1	15	33	50	40
Total ..	3	..	4	..	19	10	89 (59)	181 (70)	275 (177)	220 (93)

Note—1. Figures in brackets indicate Existing sector-level amenities.
2. 'E' stands for existing 'P' stands for proposed.

13.63 Social and Cultural

The Development Plan takes care of the social and cultural needs of the city at all the three levels i.e. city level, planning unit level and sector level.

The studies made in chapter 8 highlight the social and cultural life of the city; it is already endowed with art gallery, museum, town hall, library and clubs. It is proposed to develop socio-cultural and recreational complex at city level in planning unit No. 7 after reclaiming Ranital.

Each planning unit centre will contain space for cultural activities for community hall, clubs, libraries etc. An area of 31 hectares is proposed for social and cultural use in Development Plan.

13.64 Public Utilities

(a) Water Supply

The requirement of water to meet the water supply demand of the city for the plan period has been worked out in Chapter 9. Public Health Engineering Department has framed a comprehensive water supply scheme at an estimated cost of Rs. 18 crores. This scheme envisages the additional water supply of 18 MGD supplementing the existing 12 MGD. The scheme is worked at a rate of 30 MGD so as to meet the future requirement, however, for the estimated population of 1.1 million by 1991, the requirement will be 44 MGD. The scheme shall have to be revised in the light of the future needs so as to ensure the adequate water supply.

Design of distribution system is related to land-use zoning and population densities in various residential zones. Proposals regarding land-use zoning as well as planning unit wise densities have been worked out and are contained in the Development Plan. It will now be possible to work out a detailed distribution system for the city. The system will no doubt, have to cater for the immediate needs as well as for future needs of the city at least up to the year 2001.

(b) Sewerage

Even for designing an effective sewerage system for any city, details regarding land-use pattern and population densities in various residential sectors are required. The Development Plan has spelled out both in detail. The Public Health Engineering Department will have to make the necessary revision in the comprehensive sewerage and sewage disposal scheme keeping in view the proposals particularly in context to the sewage disposal beyond the development extent of the city. The scheme framed by the P. H. E. Department envisaged laying of underground sewerage lines to an extent of 305 kilometers with five pumping stations of 10 MLD capacity.

(c) Power

The distribution system of electric supply for industrial as well as commercial use is dependent on land use pattern and circulation pattern

Note—1. Figures in brackets indicate Existing sector-level amenities.
2. 'E' stands for existing 'P' stands for proposed.

which have now been finalised. The distribution system can be worked out in detail. The electric lines will have to follow the major road pattern of the city.

13.66

(d) Flood Control

The natural drainage and storm water drains have been described in Chapters 1 and 8. The present Omtinalla which flows through the city is not capable to cope with draining off the storm water and poses flood threats in neighbouring areas. A composite scheme has been worked out in collaboration with Irrigation and Agriculture Departments to meet this problem. The scheme envisages removal of the silts from Omtinalla channelising the water flow. The effluent water shall be utilised for market gardening and agricultural persuits as indicated in planning unit 7.

(e) Dhobighat

The existing dhobighats are functioning at Ranital, Supatal and at other water bodies creating water pollution. It is proposed to provide sites for Dhobighat in planning unit No. 7 and 9 along Khandari nalla. The existing dhobighat near Hathital shall continue.

(f) Dairy Farm

The sites for dairy farms are earmarked in villages Jamtara, Paraswara and southern bank of Pariyat river beyond planning unit area. These areas are ideally suited for the dairy farms since they are in the proximity of the pasture land, water bodies with convenient approaches to the city. The existing dairies scattered in the city areas are proposed to be shifted in dairy site.

(g) Poultry Farm

The existing poultry farm on Mandla Road and within the Agricultural University complex shall be continued. Besides this, an area of 4 hectares is earmarked in planning unit No. 7.

13.65 Cremation and Burial Grounds.

The city has 14 sites of cremation grounds. The following four sites are proposed to be discontinued as they do not fit in the environment of the surrounding areas :—

1. Chandalbhata.
2. Hathital.
3. Deotal.
4. Near Medical College.

The existing two grave yards listed below are proposed to be discontinued after utilising space fully.

1. Nasiabad Gohalpur.
2. Shahinaka.

The new sites are proposed in planning unit Nos. 4,6 and 7.

13.66 Other Services

The city also needs many other services like Telephone Exchange, Fire Station, Police Station, P & T offices etc.

(a) Telephone Exchange

A new Telephone Exchange recently commissioned in Wright Town shall meet the requirement of the city.

(b) Fire Station

At present the city has one fire station in the Municipal Corporation premises. A new site for fire station is earmarked near proposed whole-sale activities in planning unit No. 3.

(c) Police Stations

Main police station is presently located in planning unit 1. One more police station of city level is proposed in new linked city centre. 10 zonal police stations have also been proposed in planning unit Nos. 2,3. 4, 5 and 6 (2 each in planning unit Nos. 2,3 and 4 and one each in planning unit Nos 1, 5, 6 and 7). There are 15 sub-police stations in the existing city (Planning unit 1) and 58 more are proposed in remaining sectors (one in each sector.)

(d) Post and Telegraph Office

The General Post Office is presently located in Civil Lines in planning unit No. 1. The site for new city post office is earmarked in planning unit No. 4 and there are 46 zonal post offices in the city in planning unit Nos. 1, 2, 3, 4, 5, 8 and 9. However to cope with the future need of the city remaining 30 sub-post offices are proposed in the new residential sectors.

CHAPTER 14

LANDSCAPE, WATER BODIES AND RECREATION

Environmental studies reflect and represent the descernible patterns of inevitable inter-actions between biological and physical elements of the ecosystem. In the planning process it is imperative to understand the potentials of Nature's endowments which can be advantageously well-knitted while evolving the physical plan for the city. It means the conservation and exploitation of bio-physical elements so as to ensure the necessary change and conservation for creating a satisfying quality of livibility of city.

During the process of growth urban activities invade quality of natural landscape. It is essential to take conscious and active part in conservation and evolution of meaningful balance. An attempt is, therefore, made to analyse the various factors involved in the study of this system in order to prepare a well-knit plan for conservation and improvement of environment, development of potential areas and provision of recreational amenities.

14.1 LANDSCAPE INDICATORS

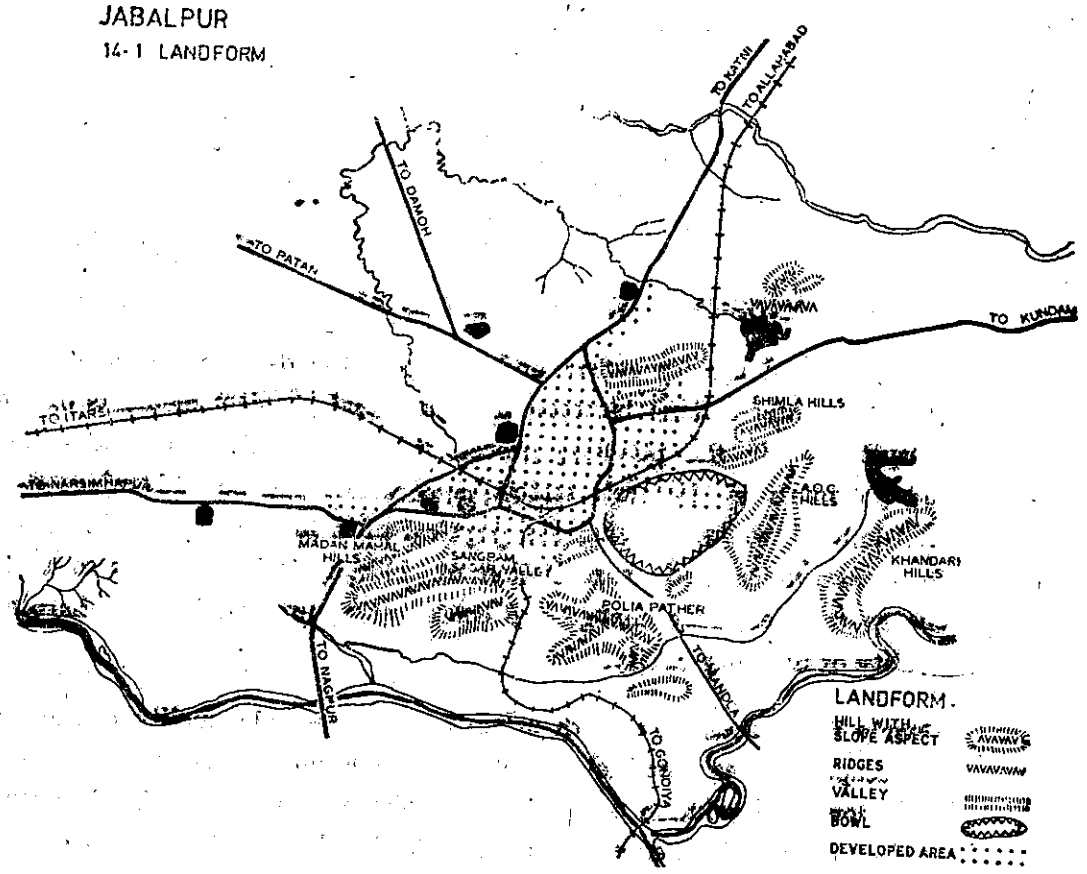
The environs of Jabalpur essentially need the landscape treatment and conservation so as to exploit the natural potentials advantageously for various needs. Therefore, it is essential to identify the areas for landscape planning on the basis of study of landscape indicators.

14.11 LANDFORM

The landform of Jabalpur is significant because of Madan Mahal hills to the south with double ridge formation having narrow Sangram Sagar Valley. The A.O.C. hill ranges are situated on the east with significant plateau on top while Madar Tekri, Kariapather, Sohagi on north-east have slopes towards north and south. Besides these, isolated

hillocks are located at Galgala, Richhai, Ranjhi, Bada and Chhota Simla and Poliapathar.

JABALPUR
14-1 LANDFORM



The hills play a major role for indentification of planes. These planes are situated alongwith railway 'U' clamp and slope gently towards north-west. The second plane is in the form of a bowl between A.O.C. hills and Mandla Road ridge.

The southern plane is situated from Mandla Road to National Highway with gentle slope. The general landforms are indicated in the illustration.

14.12 Natural Drainage

The surface run-off and the landforms define the water channels i.e. natural drainage.

In context to Jabalpur the natural drainage is further classified in two categories.

1. Regular drainage.
2. Irregular drainage.

The regular drainage is sub-classified on the basis of forms and structures as shown below—

JABALPUR : NATURAL DRAINAGE

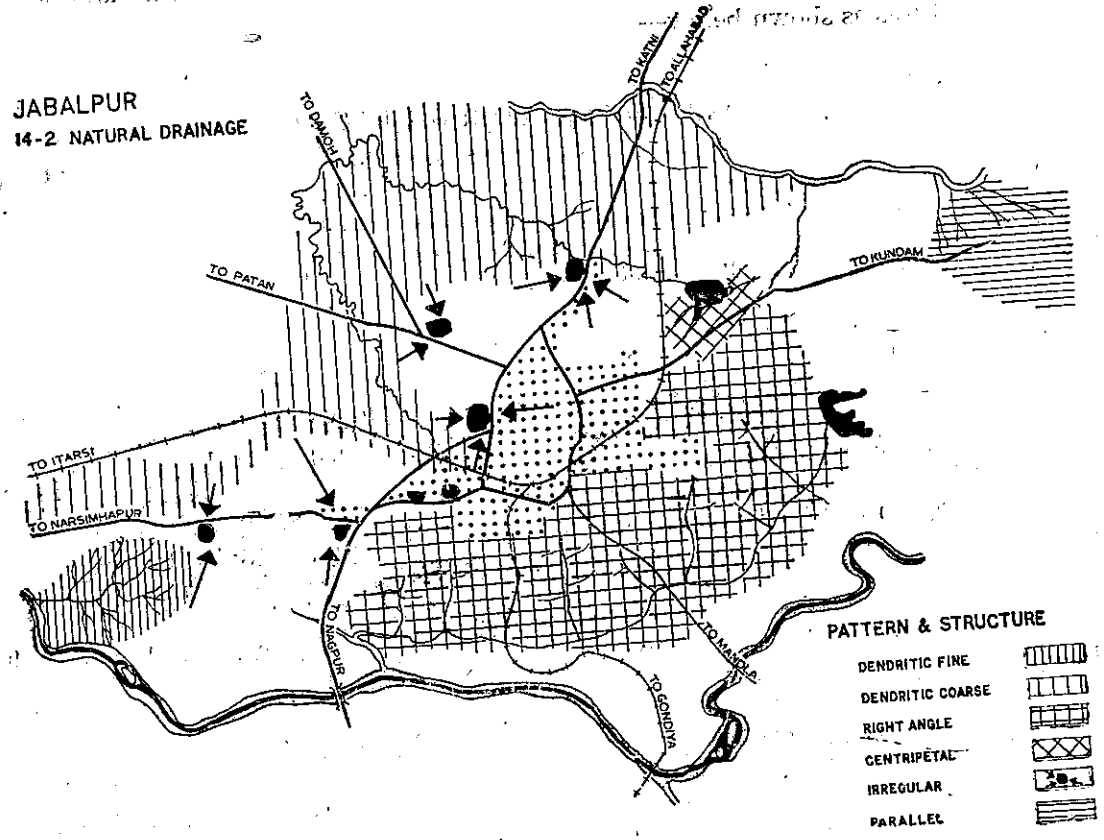
14-T.1

S. No.	Pattern of drainage	Location
1	2	3
1.	Centripatal	Jabalpur tank.
2.	Dendritic fine textured	Right bank of Narmada (Madan Mahal Hills) Lameta ghat.
3.	Dendritic coarse textured	Between Patan road and Damoh road.
4.	Rightangle	Poliapather.
5.	Parallel	Kundam road, G. C. F. area.

Irregular drainage signifies poor disposal of surface run-off and is in the form of lakes and ponds. Many of the significant ponds are situated in north and north-west planes, with reference to National Highway No. 7 which is the major water divider of Jabalpur Planning Area. The major ponds and tanks are Adhartal, Madhotal, Hanumantal, Ranital Gangasagar, Gullava, Supatal, Gangatal, Balsagar, Sagra and Sangram Sagar, while minor ponds are numerous with insignificant water spread. The form and structure of natural drainage as mentioned above are the indicators of soils and sub-surface geology.

14.13 Geology and Soils

In context to Jabalpur, Narmada river is distinct divider between Deccan Trap to the south and alluvial Gondwana system to the north.



The table given on the next page gives broadly the co-relations between the natural drainage pattern and Geological, soil formation in context to location :

JABALPUR : NATURAL DRAINAGE AND GEOLOGY

14-T.2

Sr. No.	Pattern of Natural Drainage	Geological Formation	Top Soil Character	Local Name	Location
(1)	(2)	(3)	(4)	(5)	(6)
1.	Dendritic fine textured	Sandstone Granite with partly trap	Sandy soil Coarse	Sehra	Lametaghat Madan Mahal areas
2.	Dendritic coarse textured	Sandstone at depth deposit hard core soil	Sandy silt Silty clay Silty Sandyclay	Barra Kaban Mund Domata	Near Pariyat river between Katni road to Patan road

(1)	(2)	(3)	(4)	(5)	(6)
3.	Right angle	Sandstone	Sandy clay Fire clay Refractory soil	.. ..	Polipathar Kanchghar
4.	Parallel	Strata diversified	Sandy clay with variations	..	Kundam road near G. C. F.
5.	Centripatal	Granite	Gravaly Sandyclay		Near Jabalpur tank

14.14 VEGETATION

Vegetation is essentially a product of soil, water, solar energy and aspects of landform. The growth and development of plant species will offer stratification of vegetation which have intrinsic suitabilities for various living organism. Significant symbiosis of vegetation and living organism is apparent which offers food, shelther and recreation.

In context to Jabalpur it is observed that to the south of Narmada the took forest belt is predominent while the vegetation to the north of Narmada is characterised with diversified species of tropical dry decidious forest, while in urban areas the plant materials are of selective nature suited to individual acceptance. The close observation of the growth and development of such plantation offers heterogenous character. However, the conscious planting is absent.

The significant vegetation is apparent at south and south-east of Jabalpur including defence areas. The sparse vegetation is found in the surrounding of ponds and tanks and natural water channels.

The existing plant materials at Jabalpur show the following species and their associations :

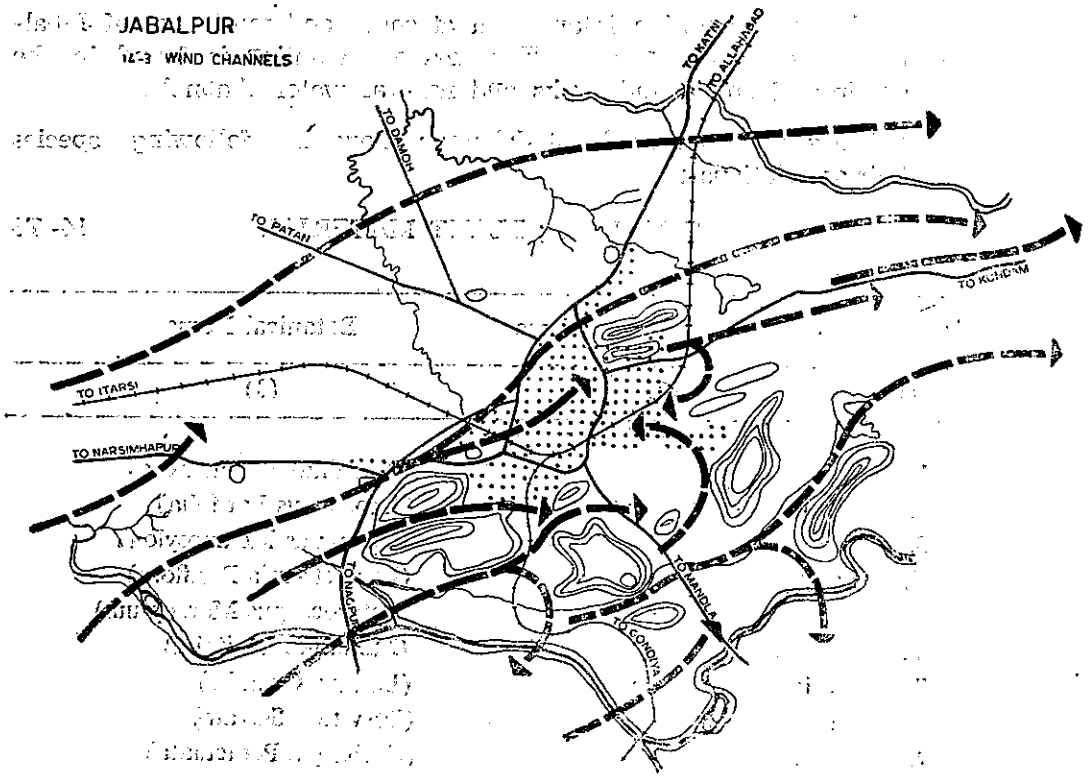
JABALPUR ; PLANT MATERIAL 14-.T3

Sr. No.	Common Name	Botanical Name
(1)	(2)	(3)
1.	Saj	(TerminaliaTomentosa)
2.	Dhaora	(Anogeissus Latifolia)
3.	Tendu	(Diospyras Melanosylon)
4.	Lendia	(Lagerstremia Parifiora)
5.	Bija	(Peterocarpus Marsupium)
6.	Mahua	(Madhuka Latifolia)
7.	Gunja	(Lannea Grandis)
8.	Salai	(Boswellia Serrata)
9.	Dhobin	(Dalbargia Peniculata)

(1)	(2)	(3)
10.	Haldu	(Adina Cardis)
11.	Koha	(Terminalia Arjuna)
12.	Harra	(Terminalia Chebula)
13.	Jamun	(Eugenia Jambolana)
14.	Siris	(Albizzia Lebbek)
15.	Achar	(Buchanania Lanzan)
16.	Aonla	(Emblica Officinalies)
17.	Amaltas	(Cassia Fistula)
18.	Bel	(Aegle Marmelos)
19.	Tinsa	(Ougeria Dalbergioides)
20.	Dhana	(Grewa Tilifolia)
21.	Palasa/Chheola	(Butea Monosparma)
22.	Bamboo	

14.15 BIO-CLIMATE

The major components of Bio-climate at micro level are temperature, humidity and air movement. The leastline of bio-physical comforts for the living organism can be identified which will further indicate the symptoms that will help to prescribe remedial measures.



In context to Jabalpur the bio-climate data as illustrated shows the strain limits, and remedial measures. The proper study of solar path will not only indentify the various recreational areas but will lay down the guidelines for site planning. It further spell out spatial distribution of structures and plant materials.

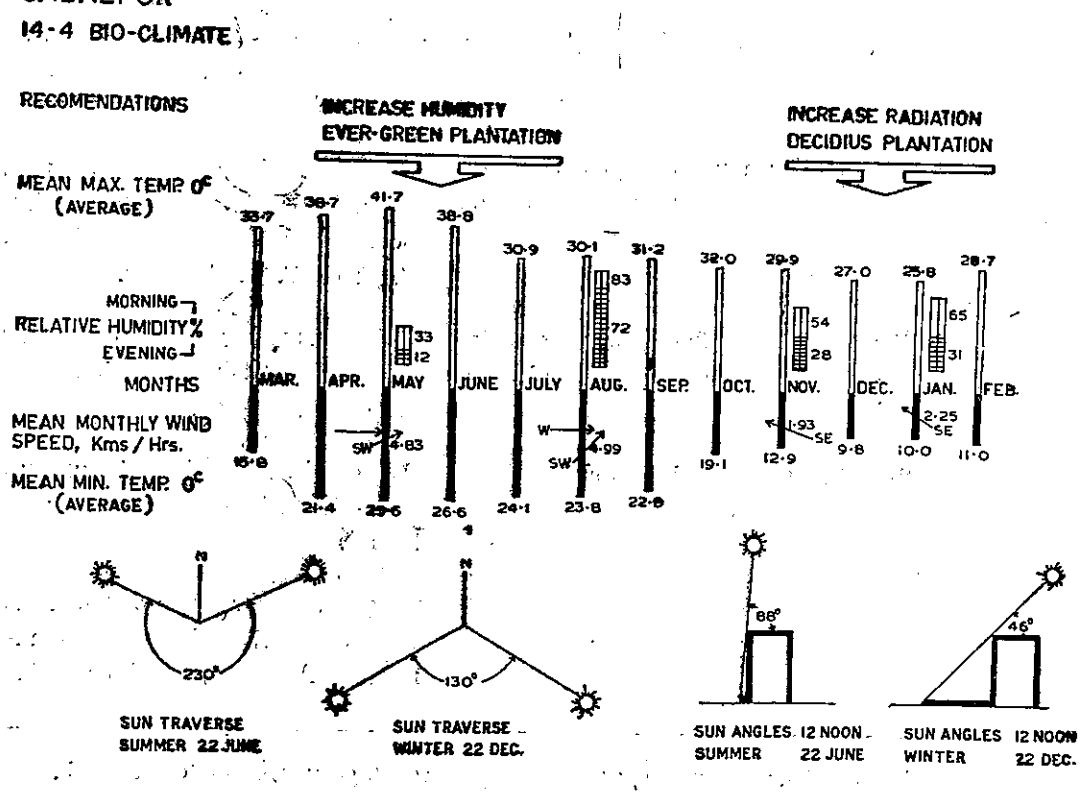
The solar path at Jabalpur during summer (21 June) and winter (22 December) is shown on the next page.

JABALPUR : SOLAR PATH

14-T.4

Period	Season	Sun rise Azimuth	Sun Traverse	Altitude at 12.00 noon	Sun set Azimuth
(1)		(2)	(3)	(4)	(5)
Summer	..	65° East of North	230°	88° 65°	West of North.
Winter	..	115° East of Nort	130°	46° 115°	West of North.

The site planning at micro level for various uses will be carried out by studying the landscape indicators advantageously for the comfort of users that will provide shelter, food, recreation to human and non-human population.



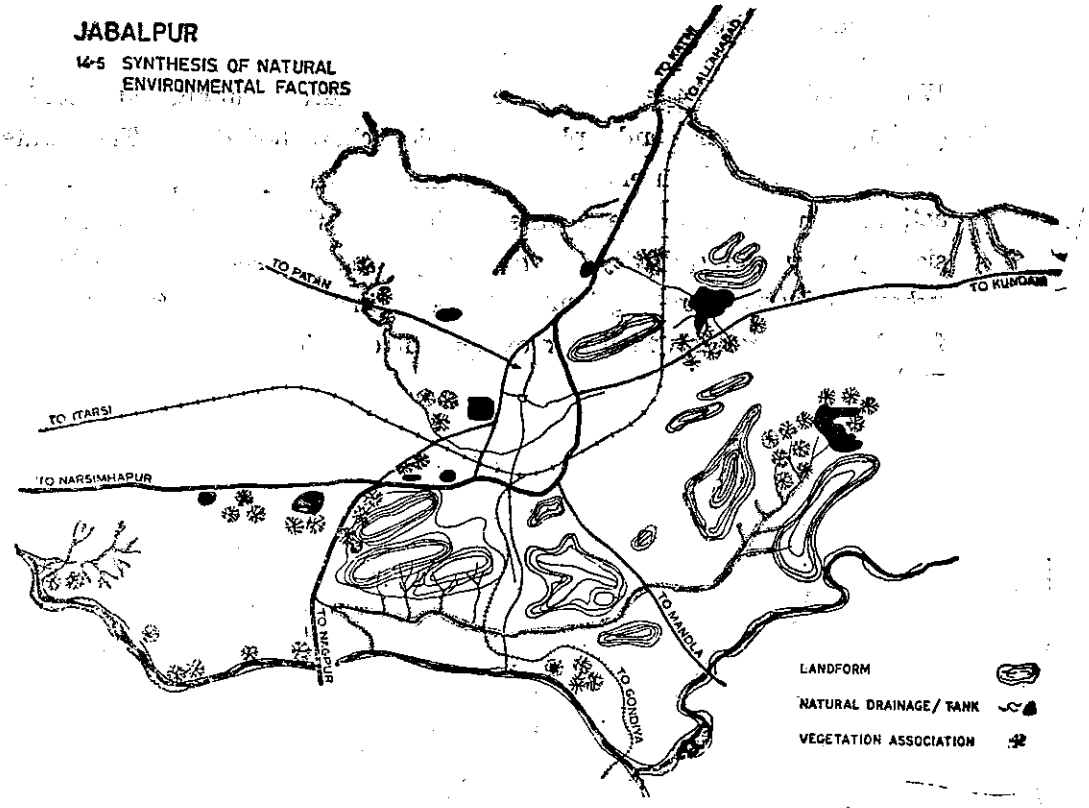
14.16 SYNTHESIS

A synthesis of environmental indicators i.e., landform, natural drainage, Geology and soil, vegetation, bio-climate, has been studied and helped in identifying the areas suitable for conservation and recreation.

JABALPUR ; IDENTIFICATION OF LANDSCAPE POTENTIAL AREAS FOR CONSERVATION 4-T-5

S. No.	Landscape indicators	Criteria	Identified areas for conservation
(1)	(2)	(3)	(4)
1.	Land form	Predominent ridges and valleys views Sky lines Aspects*	Pisanhari complex, Madan Mahal complex, Khandari Sidha Baba ki Toria, Madan Tekri, Galgla Hill Chota Simla, Bada Simla, Ranjhi Hill.
2.	Natural Drainage	Major channel of higher order Oligotrophic ponds/tanks	Khandari Nalla, Omti Nalla, Karonda Nalla, Jabalpur tank, Khandari tank, Bal Sagar, Gangasagar, Devtal, Supatal, Adhartal, Hanumantal, Gullava tank, Sangram Sagar, Thakur Sagar, Sagra, Lametaghat, Tilwaraghat, Gwarighat.
3.	Geology and Soils	Geological interest Agricultural produce	Madan Mahal, Outcrops, Simla, Polia Pathar, Richai, Ranjhi, hillock, Jabalpur tank, Khachpura, J. N. K. V. V. Complex.
4.	Vegetation	Succession, association and stratification	Khandari valley upto Tilwaraghat Sangram Sagar Valley to hill slopes of southern aspects.*
5.	Bio- climate	Environmental conditions	Wind channels through valleys, wind channels sweeping over water bodies. Sangram Sagar valley, Khandari valley, Sagra, Bal Sagar, Hanumantal, Adhartal, Jabalpur tank.

* Aspect of land from in context to slope percentage in relation to solar path.

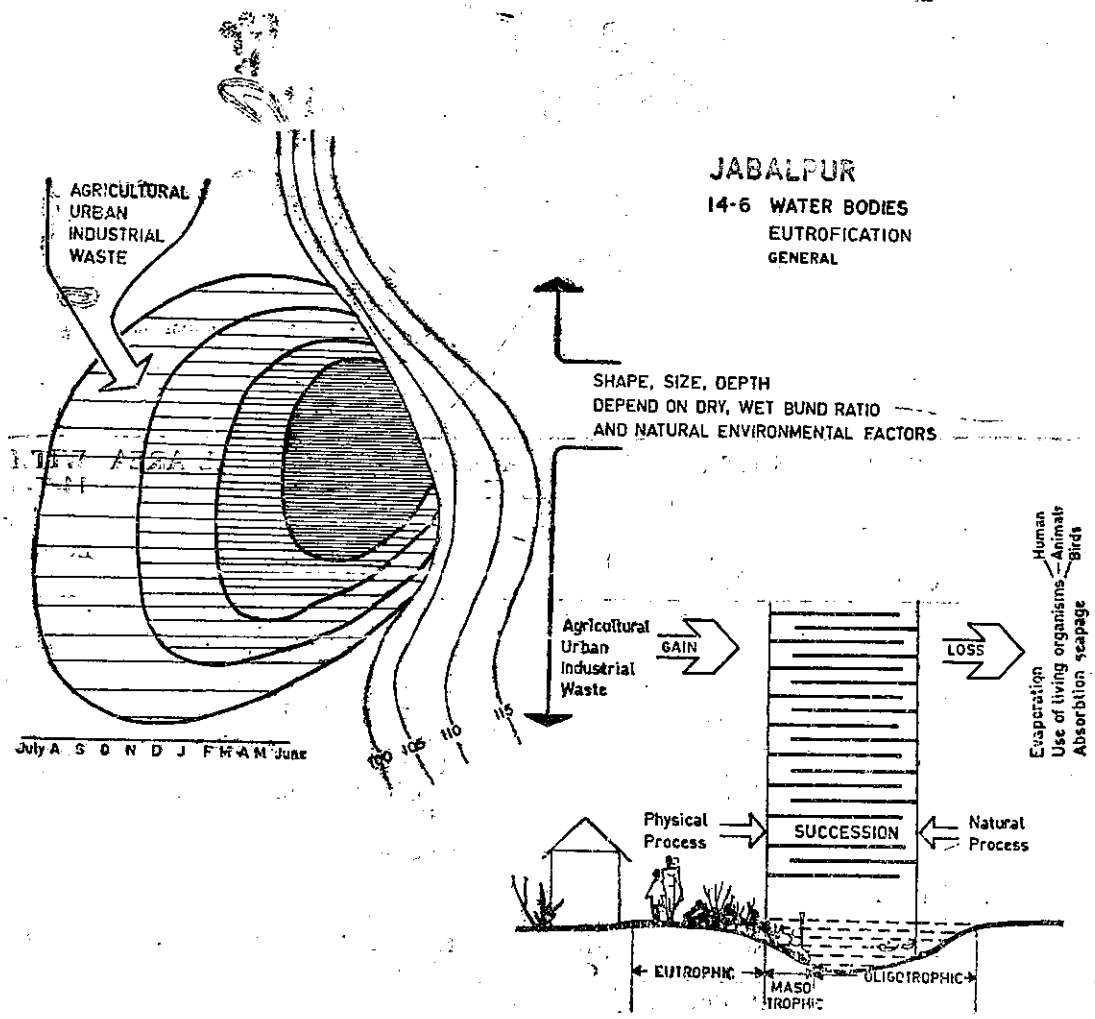


JABALPUR : SUITABILITY OF LANDSCAPE POTENTIAL AREA WITH LEVELS 14-T-6

Environmental Factors	Value Ranking	Suitable For	Potential areas	Level
1	2	3	4	5
Landforms	Steep slope above 8%	Recreation	Khandari Valley, Sangram Sagar valley, Madan Mahal Ridge.	Regional
	Medium Slope 5 to 8%		Ranital complex, Balsagar Jabalpur tank, Central jail Kanchghar area, Lametaghat	City
Natural Drainage Geology and Soils	Flow Spread quality Scenic, Educational Productive	Market Gardening	Kachpura, outlaying areas along Omti Nala	City
Vegetation	Quality Visual	Plantation	Madan Mahal, Polia Pather Sangram Sagar valley, Madar tekri Sidhababa Tekri Ranjhi Hills, Galgala Tekri, Road side	City
Bio-Climate	Stress	Mela Ground	Tilwaraghat, Gwarighat, Pisanharikimadya, Guptes - war Madhatal, Idgah, Ranital, Bade Mahavir, Gurudwara, Hanumantal, Badikhermai, Sarda Mandir, Kachariwale baba, Agha Chowk.	Regional City

14.2 Water Bodies

Water bodies are created as a result of surface run-off, sub-surface discharge of water and physiographic characteristics. The water bodies manage themselves within the natural process, but due to activities in the basin these water bodies are affected in terms of shape, size, quality and quantity. The change due to additional intake of urban, industrial and agricultural waste increases the nutrient values for plant production which is known as eutrofication.



In this context Jabalpur is dotted with lakes, tanks and ponds. There are 52 such water bodies with an area 386.00 hectares, within the planning area. However, the significant water bodies within the plan coverage are 29 in number.

RANGE	NAME	AREA (in hects.)
1	2	3
21 Hectares and above	.. Jabalpur tank	76.00
	Ranital	40.00
	Barsagar	65.00
	Amkhera	24.00
	Madhotal	25·00
		230.00
5 to 20 Hectares	.. Adhartal	9.50
	Hanumantal	7.00
	Ukhari	8.00
	Bashya	5.10
	Gullava	5.00
	Ganga Sagar	18.70
	Supatal	8.60
	Sangram Sagar	12.00
	Mahanada	5.10
		79.00
2 to 4 Hectares	.. Katra	2.50
	Benisingh-ki-talaiya	2. 0
	Choti Ukhari	4.10
	Bagha tal	3.50
	Nanwara tank	2.50
	Suraj tank	3 70
	Kakaarahi tank	2.50
	Cherital	3.70
		25 00
In Significant tank	.. 30	52.50
	Total ..	386.00

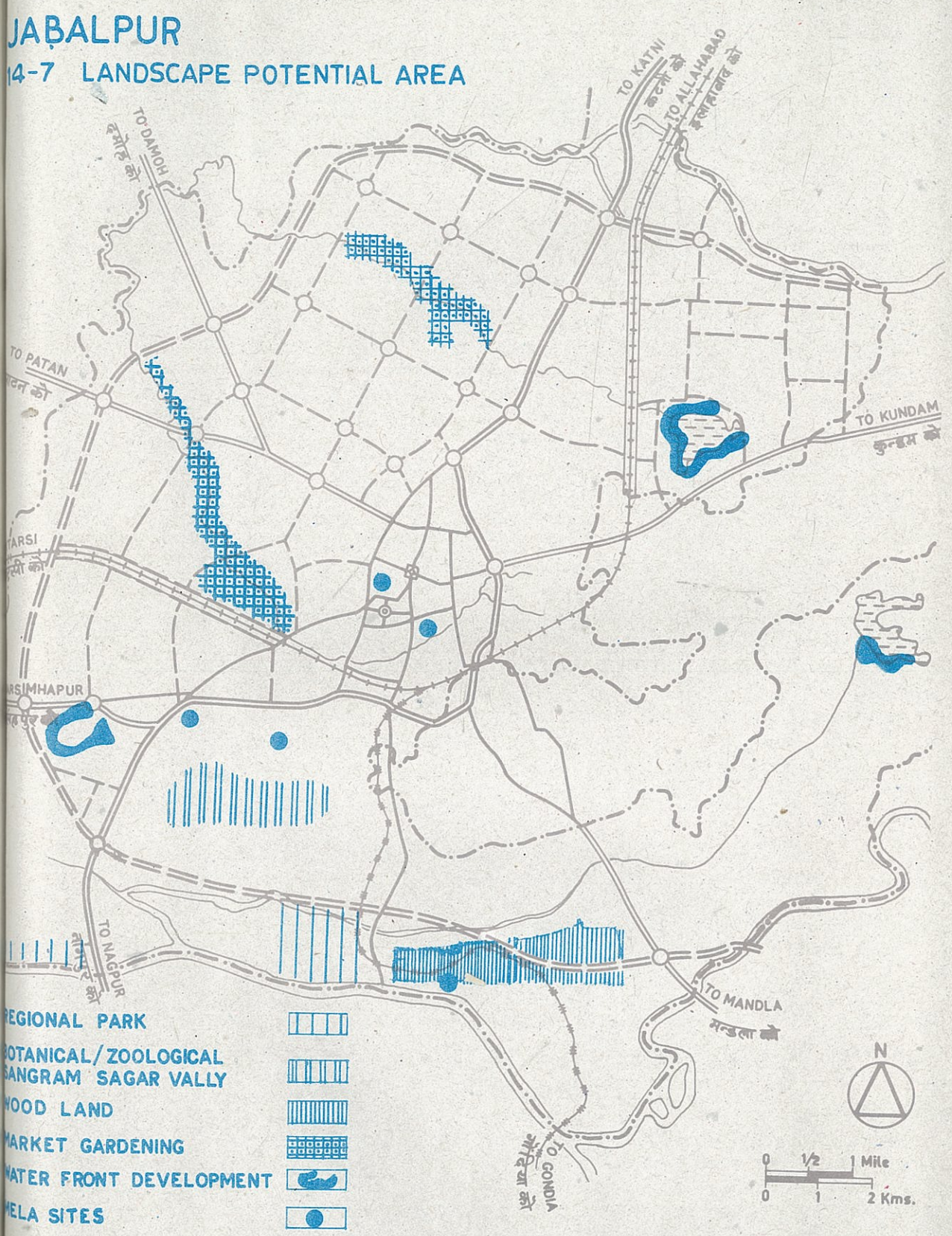
14.21 Uses of Tanks

Criteria for retention or reclamation of tanks have been examined On the basis of nutrient status, water bodies may be divided into two groups i.e. Oligotrophic and Eutrophic. The Oligotrophic water bodies are relatively unproductive and poor in plant nutrient. In contrast Eutrophic water bodies possess high amount of nutrient and, therfore, support more aquatic plants. Application of these indicators are in context to the observation of water bodies. The water bodies under Eutrophic state are proposed to be reclaimed and reutilised for other uses. While the oligotrophic water bodies are proposed to be retained for recreational and other uses. The spatial distribution of water

bodies, their identified characteristics and proposed uses are given in the following table—

JABALPUR : SPATIAL DISTRIBUTION OF WATER BODIES AND PROPOSED USE 14-T-8

Sr. No. & Name of tank	Area (in Hect.)	Indicator	Proposed for	Proposed use.
1	2	3	4	5
1. Jabalpur	76.00	Oligotrophic	Retention	Water front Development.
2. Ranital	40.00	Eutrophic	Reclamation	City level recreation.
3. Bal Sagar	65.00	Oligotrophic	Retention	Water Front Development.
4. Amakhera	24.00	Eutrophic	Reclamation	Parks, playgrounds, Commercial.
5. Madhotal	25.00	Part Eutrophic	Part Reclamation	Bus terminus, Commercial.
6. Adhartal	9.56	Oligotrophic	Retention	Pisciculture.
7. Hanumantal	7.00	Oligotrophic	Retention	Religious and recreation.
8. Okhari	8.00	Oligotrophic	Retention	Irrigation, Market Gardening.
9. Bansa	5.10	Oligotrophic	Retention	Agriculture.
10. Gullava	5.00	Part Eutrophic	Reclamation	Parks and recreation.
11. Ganga Sagar	18.70	Oligotrophic	Retention	Water front Development.
12. Supatal	8.60	Oligotrophic	Retention	Recreation and Religious.
13. Sangram Sagar	12.00	Damaged	Restoration	Water orient recreation.
14. Mahanada	5.10	Eutrophic	Reclamation	Parks.
15. Katra	2.50	Eutrophic	Reclamtion	Parks, Playfields.
16. Benisingh-ki-talaiya	2.50	Eutiophic	Reclamation	Commercial/ Residential and Parks.
17. Cherital	3.70	Eutrophic	Reclamation	Residential.
18. Choti Ukhari	4.10	Oligotrophic	Retention	Agriculture, Market Gardening.
19. Baghatal	3.50	Eutrophic	Reclamation	Parks & Commercial.
20. Nanwara tal	2.50	Eutrophic	Reclamation	Parks and Commercial.
21. Sunaj tank	3.70	Eutrophic	Reclamation	Commercial.
22. Kakarahi tank	2.40	Eutrophic	Reclamation	Commercial.


JABALPUR
14-7 LANDSCAPE POTENTIAL AREA
TO KATNI
TO ALLAHABAD
TO DAMOH
TO PATAN
TO KUNDAM
TO NAGPUR
TO MANDLA
TO GONDIA
N
0 1/2 1 Mile
0 1 2 Kms.
REGIONAL PARK
BOTANICAL/ZOOLOGICAL
SANGRAM SAGAR VALLY
WOOD LAND
MARKET GARDENING
WATER FRONT DEVELOPMENT
MELA SITES

The above table reveals that 10 water bodies shall be retained and proposed to be used for water oriented and water front recreation, religious, pisciculture, market gardening purposes. These water bodies shall be reclaimed since the Eutrophic state of these water bodies tend to have detrimental effect on the urban environment. The water bodies reclaimed are proposed to be used as parks, playgrounds, public and semi-public uses.

14.3 RECREATIONAL AMENITIES

Recreation is an integral part of life. Open space, play field, parks are the lungs in context to city metabolism, they ensure the relief to the urbanities, where he can enjoy the natural beauty and relieve himself from mental and physical strains. Type and characteristics of recreation vary in accordance to age structure, interest and desire. The development of tanks and other recreational potential areas have been dealt in the previous paragraphs. The other recreational amenities are dealt at different levels.

It is proposed to provide green strip on either sides of Omti Nala that traverses through north west, along this proposed express cycle track passing through nearby developed areas. This plantation programme will provide comforts through out the year. Among the existing parks, Bhanwartal, Corporation park, Shaheed Smarak park and Gandhi memorial parks are of importance, even though these parks need extensive development and are inadequate in number. The recreational amenities are extremely inadequate except Gandhi Memorial at Tilwara ghat and parks and picnic spot at Pariyat and Khandari. The recreational amenities are extremely inadequate. The recreational amenities at regional and city level and planning unit level are discussed in subsequent paragraphs.

14.31 Regional and City Levels

(a) Lower Khandari Valley Development

It is porposed to develop a regional park at Lower Khandari Valley starting from N. H. No. 7 to the west upto Gwari Ghat on the right bank of Narmada. In this park selective plant material of local flora, herbs and medicinal plants, social forestry programme and agricultural operations shall be permitted. The valley is on the threshold of wind channel, hence, these activities shall relieve the bio-climatic stresses in urban areas.

(b) Sangram Sagar Valley Development

The damaged Sangram Sagar bund is proposed to be restored for retaining water and increasing the water spread area. At present dry and barren valley is dotted with brick kilns. Incidentally this valley acts as wind channel that sweeps over the city. The existence of these kilns is deterimental to the urban environment, specially severing the bio-climatic stress during summer. Hence, it is essential to stop brick kiln operation and

reutilize the valley for water oriented recreational activities developing birds nesting areas, exploiting the south slope aspect for botanical garden and northern slopes for Zoological Park. The old monuments of Madan Mahal, Gupteshwar are proposed to be linked up with this development. The development of this valley will not only satisfy the recreational needs at city level but also act as an effective measure to relieve the bio-climatic stress and improving the environmental qualities.

(c) Woodlands

It is proposed to have vegetative cover and succession of plant community as woodland along right bank of Narmada stretching from Bhedabhat, Lameta ghat, Tilwara ghat, Gwari ghat to Gauraiya ghat. This sketch will include major mela sites and ghats.

(d) Water Front Development

It is proposed to develop the adjoining areas of water spread mainly of Jabalpur tank, Khandari reservoir and Balsagar as major recreational development at city level.

14.32

(e) Picnic Spot

The important picnic spots mainly Khandari, Bhita track, Gandhi Memorial park at Tilwara ghat, Kataiya ghat are proposed to be developed and provided with proper landscape and recreational infrastructure. All these spots have commanding visual aspect offering panormic views.

(f) City Parks

In addition to the existing city parks as stated earlier it is proposed to develop 8 parks, at city level on the sites namely, Benisingh-ki-Talaiya, Gopal Bagh, Part of Ranital, Nanwara tank, Bagha tank, Gulava tank, part of Madhotal, Amakhera tank with an area ranging 8 to 10 hects. each. This will meet the future needs for recreational purposes.

(g) Stadium

14.4

Jabalpur has to stand as a host for state level tournaments and national level games meets. The existing facilities are inadequate. It is proposed to develop composite sports complex comprising of stadia each for cricket and atheletic needs at Ranital covering an area of 20 hects. The stadium facility of 2nd hierarchical order is proposed at out-skirt area of jail premises and youth centre at Shankar Nagar.

(h) Swimming Pool

It is proposed to provide a swimming pool of international standard and specification at Ranital sport complex so that swimming sports competition at regional level could be organised. In addition to this two more swimming pools are proposed at jail area and Madhatal civic centre.

(i) Exhibition and Mela Places

At present there is only one ground at Madhatal that is devoid of maintenance and other facilities. In Madhatal civic centre complex, it is

proposed to develop 5 hectares of land for Exhibition ground which will meet the requirements to a certain extent. In addition to this it is proposed to develop land to an extent of 10 hects. at Ranital complex for exhibition and ground for public meetings. With regard to religious melas the places where these are held are as follows :—

Bheda Ghat	Kartik Poornima	Gupteswar	Mahashivratri
Tilwara Ghat	Makar Sankranti	Hanumantal	Dussehra
Gwari Ghat	Srawan Somwar	Gurudwara	Gurunanak Jayanti
Sharada Devi Mandir	Navratri	Idgah	Idd
Badi Kher Mai	Navratri	Kacheriwale Baba	Urs Sharif
Pisanhari Ki Madhia	Kartik Poornima	Agha Chowk	Urs Sharif

These places need to be reorganised by providing essential amenities which are needed for periodical congregation and suitable environment.

14.32 Planning Unit Level

It is proposed to develop parks at each planning unit level, general standard for parks and major play grounds are 4 to 6 and 2 to 3 hectares respectively. This will meet requirement of recreational need at planning unit level.

Sector Level

It is proposed to have one park & one play ground for each sector. Besides adequate provisions for children park and totlots shall be made in each sector. The detail planning of these sector level parks shall be carried out at the time of preparation of zoning plans. It may be mentioned that the play grounds are included in the area earmarked for educational institutions.

14.4 ROAD SIDE PLANTATION

Roads and streets in Jabalpur are not totally devoid of road side plantation but synchronised road side plantation programme is necessary to be implemented on the existing and proposed major roads and communication links.

Criteria for selection of plant material for road side plantation shall be in sympathy with orientation of roads, road widths and inherent qualities of plant species. It will be essential to have selection of species from local flora.

Chapter 15

CENTRAL AREA

The main hub of activities of a city is often the earliest settlement which attains city-level functions in the process of growth. It retains its central location by physical growth in all directions. It is this area that is subjected to great changes in terms of physical as well as socio-economic character. The central area of Jabalpur is not an exception to the above fact. In the past the central area activities were confined around and within Kamania, Kotwali, Sarafa and Chhota Fawara with malguzars residential area near Hanumantal. The activities in this confined area suffered adversely during the course of time and could not retain its functional importance due to overcrowding and acute shortage of space. The central area activities, subsequently shifted around Fawara, and Andherdeo Road, Baldeobagh Marg, Jayaprakash Narayan Marg, Ghanta-ghar Chowk and Gurandi. The recently developed areas are around Shahid Smarak. In terms of physical characteristics, the residential growth pattern within the central area is around Hanumantal, the old commercial area within Kamania and intensive commercial activity area around Fawara and residential area in Wright Town with Shahid Smarak as focal point. The overall development of the city has intensified expansion of central area activities and the growth impact has brought about the following process of change.

1. Baldeobagh Marg, Jayaprakash Narayan Marg, Andherdeo Marg and localities around Fawara attained intensive commercial character, while Garha Phatak Road, Purana Machharhai Marg, Normal School Road, Sardar Harisingh Marg, Ravindranath Marg, Malviya Road, Victoria Hospital Road gradually changed its character accommodating commercial activities and Jawaharganj Mandi faced obsolescence.

2. Residential use of buildings continuously changed into non-residential uses such as shops, godowns, workshops etc. without consequential change in the infra-structure resulting in functional inefficiency of these activities.

3. Cramping of intensive central area activities within restricted space resulted in rising land values, coupled with maximum coverage of land with vertical development. This in turn has lead to congestion in this area.

4. Central area has also undergone radical changes in terms of socio-economic character.

15.1 CENTRAL AREA AND ITS PROBLEMS

15.11 CENTRAL AREA LIMITS

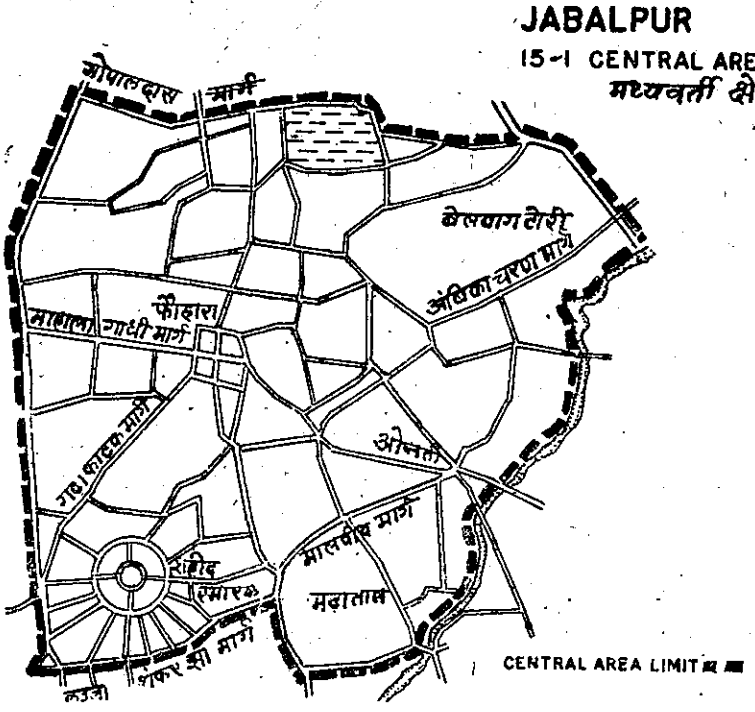
The administrative and industrial areas situated on the eastern side of the central area, influences its growth and functional aspect. All these extra central area activity focal points obviously can not be included within the central area limits. The central area has been delineated on the following considerations :—

1. Homogeneity and inter-relationship of uses and functions such as trade, commerce, service industries, social and cultural institutions.

2. Similarity of character in terms of performance characteristics and requirement of services.

3. Physical cohesiveness.

Keeping the above factors in view, the area bounded on north by Gopal Bagh Marg from Damoh Road crossing further extended Gorha Nakhas Marg and road joining National Highway No. 7 near Sidda Baba-Ke-Toriya, on east by National Highway No. 7 up to Omti Nullah further along with Omti Nullah up to Naudra Bridge to the south rounded by Nehru Marg, Nagar Nigam chauraha part of Shastri Marg from Nagar



Nigam chauraha to Gurudwara further extended to Pandit Lajja Shankar Jha Road, inter-secting old Mirzapur Road at gate No. 2 to the west bounded by old Mirzapur Road from Telegraph Workshop gate No. 2 to Damoh naka has been included in central area. The total area works out to 333 hectares which includes ward Nos. 12, 13, 14 (part), 17, 18, 19, 20, 21, 23, 24 (part), 30 (part) 33, 34, 38 and 39 (Marhatal area).

15.12 CENTRAL AREA FUNCTIONS

The central area of Jabalpur has multiple functions. The area reflects concentration of higher order of central activities, most of the specialised markets are concentrated in the present central area. It has wholesale and retail market business office, banking institutions, transport and warehouses, household and service industries, besides these activities a socio-cultural activities thrive at Shahid Smarak and other social institutions. The religious activities are predominant at Hanumantal, Fawara and Idgah.

15.13 CENTRAL AREA PROBLEMS

The central area is situated between old Mirzapur Road and National Highway No. 7 to the east subsequently leaving the central area free from through-traffic unlike that of Raipur and Indore. The northern part of central area beyond Kamania up to Gorha Nakhas Road suffers obsolescence and the activities that exist in the locality prefer flock around Fawara. The area is crippled due to overcrowding coupled with narrow roads and alleys depriving vehicular movement. In spite of these facts Hanumantal situated in this locality retained the status of a focal point for socio-religious activities during Dashehra. The ceremonial processions move at snail's pace. Even the residential areas in the localities are not accessible by any vehicle. Gurandi market essentially of second order commercial activities is crippled due to inadequate approaches and direct links. This has not only hampered the functional performance of the activity but has created problems in the past when the market suffered serious fire hazards. Fawara and adjoining areas are mainly concentrated with intesive commercial activities. However, the subsidiary linkages to Fawara are very narrow, overcrowded and heavily congested rendering unsuitable for vehicular traffic. The main hub of central area is also deprived of the specific parking area. The road system in central area also suffers due to bottle-necks, inconvenient junctions etc. The continuous process of conversion of residential areas to commercial uses is the major functions of growing towns in India and Jabalpur is no exception to it. This coupled with increasing density and reduction in open spaces adversely affects the environmental character of the residential area. In central area the existing incompatible uses mixed with residential use such as cattle breeding, bamboo market causes environmental hazards and as such these uses are earmarked for shifting and relocation.

The major problems could be summed up as follows :—

1. Intermixing of commercial and residential uses with reduced functional efficiency and environmental qualities.
2. Poor accessibility, out-dated circulation pattern, with excessive congestion due to intermixing of fast and slow-moving traffic.
3. Absence of parking area.
4. Inadequate open spaces and parks.
5. Functioning of incompatible uses such as saw mills, soap factories cattle breeding etc.
6. Inadequate and unorganised Jawaharganj grain mandi.

15.14 CIRCULATION PATTERN AND RELATED PROBLEMS

The central area of Jabalpur is characterised by narrow and overcrowding streets and poor accessibility which is hazardous to present day vehicular movement. The points of entry to central area are as follows :—

1. Vallabh Bhai Patel Marg from Milloniganj Chauraha to Kamania is narrow and characterised with mixed-traffic.

2. Ambika Charan Marg from Ghamapur Chauraha winding through Sarafa up to Dixitpura is extremely narrow that needs widening and improvement in road geometrics.

3. Jagan Nath Prasad Marg from Omti square to Lakadganj square is narrow and the road junctions needs improvement.

4. Deepak Chand Marg from Omti to Galgala square is narrow, Galgala square needs improvement.

5. Victoria Hospital Marg from Omti square up to Tularam Chowk is narrow and Tularam Chowk needs improvement of junctions. Andher Deo Marg from Tularam Chowk to Khajanchi Chowk needs improvement.

6. Malviya Marg from Omti Chauraha up to Karam Chand Chauraha needs essentially widening since this road is major feeder road to the central area.

7. Jayaprakash Narayan Road from super market is major artery and caters for the traffic in central area. This road needs to be widened on priority basis along with the improvement of junctions of Ganjipura Chowk and Ghamandi Chowk so as to improve the mobility of the traffic.

8. Garha Phatak Road from Ranital Chauraha to Charahai and upto Ghamandi Chowk is vital feeder link to central area. This needs widening and improvement.

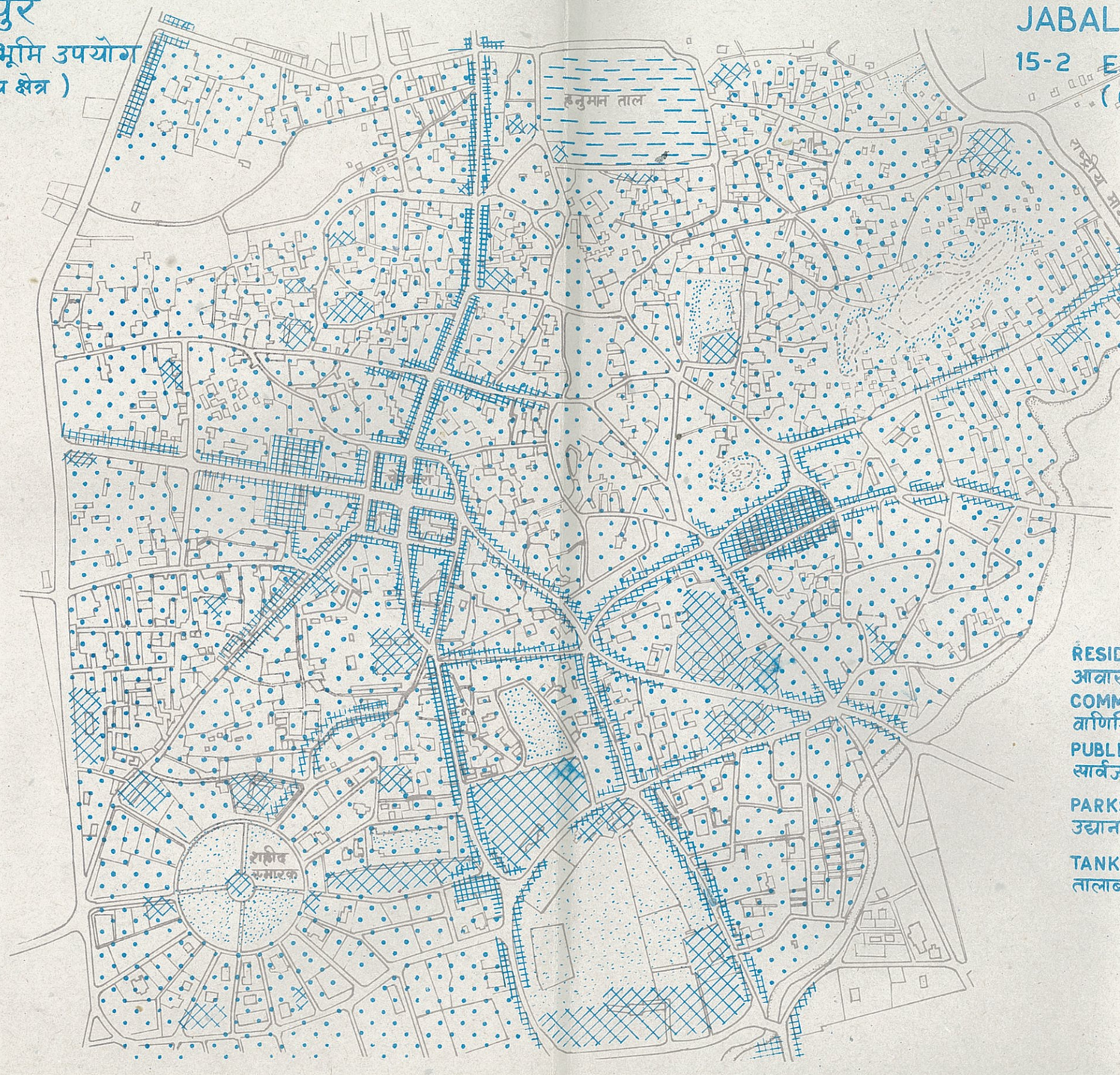
The part of central area within Kamania and Gopaldas Marg contains socio-cultural and religious places like Hanumantal and other centres and intensive commercial area like Sarafa Gurandi. These localities are deprived of access by means of bus due to narrow Roads. It is necessary to evolve a workable circulation pattern which will solve this problem. This will improve administrative efficiency also. Regional traffic does not pass through central area, it moves on the periphery of the central area alongwith old Mirzapur Road and National Highway No. 7 on the fringe. However, consideration shall have to be given for bye-passing the existing National Highway owing to inconvenient road geometrics and future growth of city.

15.15 PARKING PROBLEM

There is a total absence of proper parking space in the central area and the inner core. Even an artery like Baldeobagh Marg, peripheral road

जबलपुर
वर्तमान भूमि उपयोग
(मध्य क्षेत्र)

JABALPUR
15-2 EXISTING LAND USE
(CENTRAL AREA)



RESIDENTIAL
आवासीय

COMMERCIAL
वाणिज्यिक

PUBLIC & SEMI-PUBLIC
सार्वजनिक एवं अर्ध-सार्व.

PARKS
उद्यान

TANK
तालाब

0 330 660 Feet
0 100 200 Metres

along Fawara, Andherdeo Marg and Jayaprakash Narayan Marg particularly from Sahkari Bazaar to Fawara and also further on Vallabh Bhai Patel Marg suffer from lack of parking space. The details of parking spaces with type of vehicles parked along with the roads are as follows:

I. TRUCK PARKING

(i) Old Mirzapur Road	Damoh Naka to Agha Khan Chowk.
(ii) Gopaldas Marg	Near Damoh Naka
(iii) Mahatma Gandhi Marg	Pande Chowk to Baldeobagh square.
(iv) Subhadra Kumari Chauhan Marg.	Behind Bus Stand

II. CAR PARKING

(i) Jayaprakash Narayan Marg	(i) In front of Super market (ii) Near Shyam Talkies (iii) Near Fawara (iv) Near Aryaniwas Lodge
(ii) Omti to Ghantaghar	Near Chinese Hotel (Ghantaghar)
(iii) Ravindra Nath Marg	Opposite Plaza Talkies

III. RICKSHAW PARKING

(i) Old Mirzapur Road	(i) Damoh Naka (ii) Baldeobagh chowk in front of Chungi Chowki. (iii) Ranital square near Nursing building. (iv) Agha Khan Chowk
(ii) Gopaldas Marg	(i) Damoh Naka (ii) Chhota Fawara
(iii) Ambikacharan Marg	(i) Near Hitkarni Kanya Shala (ii) Near Munnalal Jagannathdas Trust Hospital. (iii) Near Lakadganj square (iv) Near Ghamapur square
(iv) Mahatma Gandhi Marg (Baldeobagh Marg)	(i) Pande square (ii) Near Baldeobagh Post Office
(v) Jeevanchand Mukherjee Marg (Old Machharhai Marg).	(i) Khajanchi square near Kashmir Store.
(vi) Vallabh Bhai Patel Marg	(i) Near Miloniganj square (ii) Near Kotwali
(vii) Jayaprakash Narayan Marg	(i) Super Market (ii) Opposite Shyam Talkies
(viii) Ravi Shankar Marg	(i) Near Malviya square (ii) In front of Anjuman School (iii) Near Rao X-Ray Clinic (iv) Opposite Riyaz Hotel
(ix) Victoria Hospital Marg	(i) Near Victoria Hospital
(x) Deepak Chand Marg	(i) Near Galgala Temple (ii) Behind Gandhi Bhawan

IV. CYCLE PARKING

(i) Vallabh Bhai Patel Marg	(i) Near Subhash Talkies (ii) Opposite Kotwali (City Dispensary). (iii) Kamania to Ghamandi Chowk. (iv) In front of Super market
(ii) Ravi Shankar Shukla Marg	(i) In front of Coffee house
(iii) Victoria Hospital Marg	(i) In front of Victoria Hospital (ii) Tularam Chowk (iii) Khajanchi Chowk
(iv) Babu Nathuram Marg	(i) Gurandi
(v) Baldeobagh Marg (Mahatma Gandhi Marg)	(i) Near Post Office (ii) Opposite Chungi Chowki

The proposals in respect of improvement of circulation pattern within the central area are given in detail in para 15.4.

15.16 Housing and Related Problems

In spite of reduction of living spaces owing to the change of use, the population in the central area has increased. During the last census decade it has increased by 17,162 persons. In 1961, the population in central area was 1,14,145 while in 1971 the population reached to 1,31,307 while the addition of residential houses was only 1030 for a population increase of 17,162. These phenomena have resulted in the increase of residential density from 640 persons per hectare in 1961 to 781 persons per hectare in 1971.

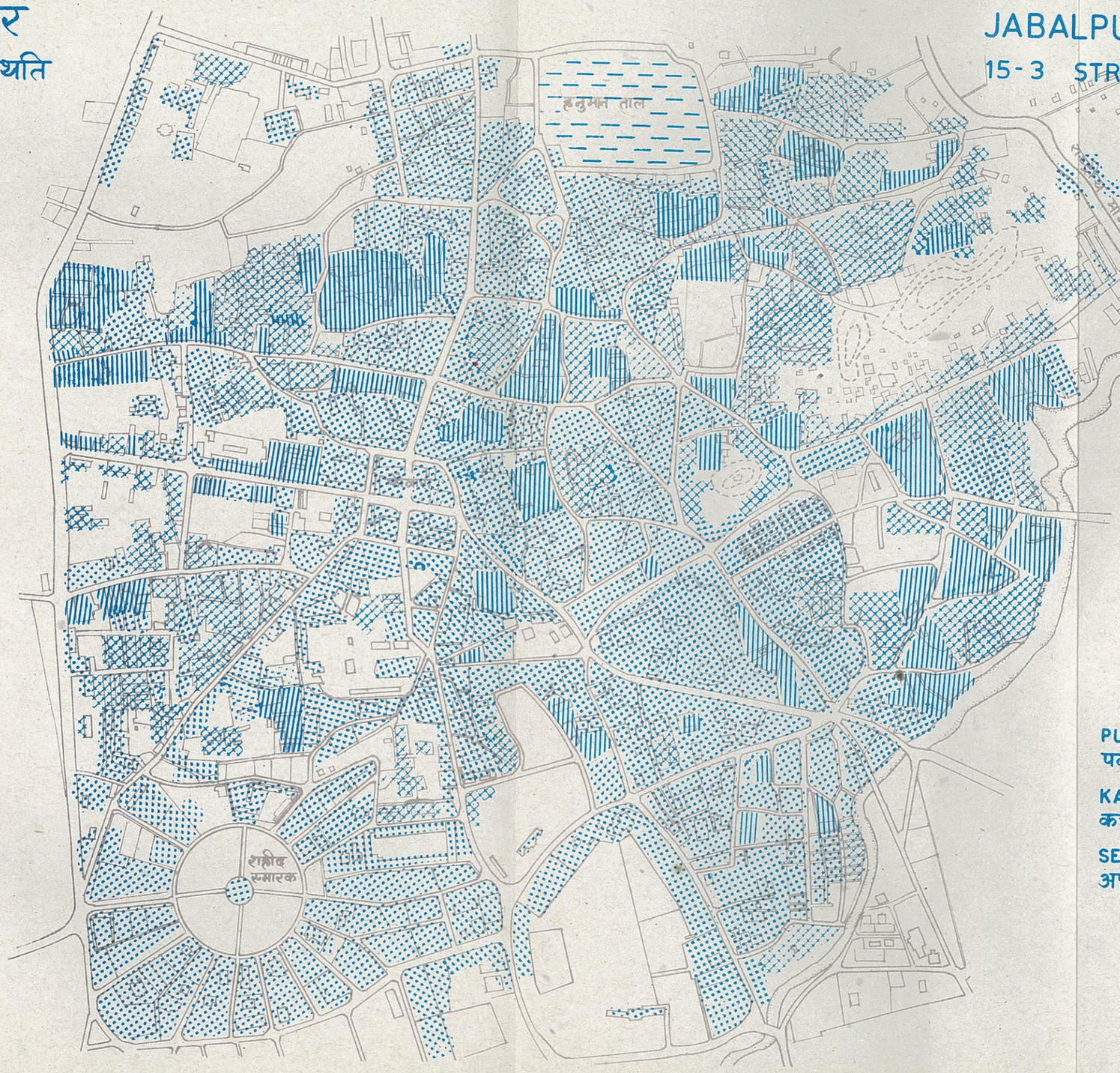
The residential density of central area is 781 persons per hectare as against 310 persons per hectare for the city. The household size in the residential area is 5.9 persons against 5.6 persons for the city. Nearly 78% of the population in central area is living in one-room and two-room tenements. This reveals that the area suffers from extreme overcrowding conditions. A survey in respect of vacant land katcha structures conducted by Town & Country Planning Deptt., reveals that about 33% are of katcha structures and 36% of semi-pucca structures exist in the central area. These are located along the main roads and streets. Katcha structures are mainly in Belbagh, Bhantalaiya, Khermai, Galgala, Khatikpura, Naya Mohalla along Omtinala. These localities have extremely unhygienic environmental conditions. The vacant land in central area are at Gopal Bagh, Footatal, Shri Nath-Ki-Talaiya, Tilak Bhumi Talaiya and Marhatal. These areas could be utilised for parking and other amenities like recreational spaces, civic centres etc. Possibility could be examined to re-align central area roads so as to provide new links and parking spaces, ultimately improving the circulation and accessibility within the central area.

15.17 Land-Use Pattern and Incompatible Land Uses

The central area contains predominantly mixed-land-use. Fawara is the hub of retail and wholesale trade, such as foodgrains, hardwares, provisions, stationery, cloth and general goods. Main traffic arteries

जबलपुर
वास्तु स्थिति

JABALPUR
15-3 STRUCTURAL CONDITION



PUCCA
पक्का

KATCHA
कच्चा

SEMI-PUCCA
अर्ध-पक्का

0 330 660 Feet
0 100 200 Metres

lending towards Fawara are used as commercial streets dealing in various categories of specialized goods such as Niwarganj and Macharhai Marg dealing in foodgrains, vegetable and fruits. Kotwali Marg near Kamania and Gurandi for utensils.

Banking and business activities are concentrated along Vallabh Bhai Patel Marg and Jayaprakash Marg. Small scale and household industries, educational and health institutions are also located within the central area. Land-use study for central area shows that 51% of land is under residential use as against 49% for the city. Land under commercial use in central area works out to be 10% as against 2% for the city. Land under open space including recreational use is only 1.6% which is very low and the land under roads and traffic lanes accounts for 16% which gets further reduction by stray parking, hawkers and footpath shops. For efficient movement within central area this percentage should be raised to 20% required for proper functioning of the central area.

On the basis of performance characteristics, need for specialized services, off space for efficient functioning and functional relationship with activities n neighbouring areas, some uses in the central area have been identified as incompatible. There are some uses which are not incompatible but these result in inefficient use of land. Such uses have also been taken nto consideration for relocation.

15.2 *BASIC CONSIDERATIONS FOR CENTRAL AREA PROPOSALS*

The main drawback and the problems existing in the central area need immediate remedial measures so as to revitalise its functions and activities. Study of structural condition indicates large portion of properties of city core and its surroundings in bad repairs. The higher values tend the transformation and reconstruction in the central area. It is necessary to guide the reconstruction activities. The proposals have been worked out to meet the urgent needs keeping in view the enforcement thereof with minimum dislocation.

1. Land Use

(a) Promotion of commercial activities at major nodes, Fawara Latkari Padav and the site cleared by shifting the grain mandi, re-planning of Gurandi market, permitting commercial activities in civic centre at Madhatal, and creating shopping complex along Shaheed Smarak Circular road.

(b) Retention of mixed-land-use in central area.

(c) Relocation of only incompatible and inefficient uses to suitable sites outside the central area and putting the land thus vacated to more appropriate uses.

(d) Clearance of only those slums and residential areas which are beyond improvement or removal of those which is essential for improving circulation pattern or where the land is required for other essential central area functions.

(e) Rehabilitation of persons affected in the process of relocation.

(f) Environmental improvement of such residential areas which are not proposed for clearance.

(g) Reduction of residential densities of overcrowded areas and improvement of living conditions with reduced strain on scarce amenities and services available in central area.

(h) Creation of open and breathing spaces in the central area.

II Circulation

(a) Provision of efficient bus routes to improve accessibility to the central area.

(b) Convenient circulation within the central core for light vehicles with limited and controlled accessibility whenever required.

(c) Provision of new road links and widening of existing ones requiring least possible demolition.

(d) Provision of street lines along roads which are not to be widened immediately, this increased width will be required in due course.

(e) Provision of proper pedestrian routes and channalisation of cycle traffic efficient mobility.

(f) Provision of adequate parking lost at convenient places for rickshaws, cars, scooters and cycles.

15.3 PROPOSED LAND-USE PLAN

The central area of Jabalpur will continue to function as the city centre for the city. General business and commercial activity together with retail and specialized market located along Jayaprakash Narayan Marg, Mahatma Gandhi Marg, Vallabh Bhai Patel Marg, Andherdeo Road, Normal School road, Machharhai road Ravindra Nath Marg, Ravishanker Shukla Marg, Sardar Harisingh Marg, Victoria Hospital Marg, Garha Phatak road and the roads around Fawara will continue to function as commercial hub of the city. The major uses proposed in the central area are as under :—

15.31 Commercial

The present character and form of central area does not require much change during the plan period. The commercial activities around Fawara and along emerging road will continue. New commercial areas are proposed to be re-planned and developed at the following places :—

(a) Gurandi Market.

(b) Existing grain mandi to be shifted and Kirana and retail market to be re-planned.

(c) Civic centre and commercial scheme at Marhatal. In addition to this commercial activity along new links between Khajanchi Chowk to Laxmi Talkies square and Omti to Hanumantal (Seth Vallabh Das Marg) is earmarked.

(d) Utility of shops in southern, eastern, and western segments along Chhatrapati Shivaji Marg to be provided to the residential areas and the open space around Shahid Smarak building shall be utilized for cultural use. This will enhance use of the space for social and cultural activities.

The present Kabadi market and bamboo market at Gurandi are proposed to be shifted and relocated in Lemagarden. The vacated land shall be re-planned as the organised commercial market. Wholesale fruit and vegetable market presently functioning at Biharilal Khajanchi Marg, Purana Machharahai Marg, Charahai and Latkari Padav is proposed to be shifted to planning unit No. 7, however, the area vacated is allowed for retail market. The retail fruit and vegetable market and Latkari Padav is allowed to continue. Provision for restricted godowns and storages are proposed on commercial roads and streets. The following roads and streets are proposed as commercial roads and commercial-cum-residential streets :—

Commercial Roads

1. Vallabh Bhai Patel Marg.
2. Ambikacharan Marg (Sarafa)
3. New link between Omti to Hanumantal (Seth Vallabhdas Marg, Seth Jagannath Prasad Marg).
4. Babu Nathuram Marg
5. Janki Prasad Marg
6. Andherdeo Marg
7. Deepakchand Marg
8. Victoria Hospital Marg
9. Sardar Harisingh Marg
10. Normal School Road
11. Ravishankar Shukla Marg (Malviya Marg)
12. Southern part of Ravishankar Shukla Marg
13. Ravindra Nath Marg
14. Jayaprakash Marg
15. Garha Phatak Marg from Fawara to Ranital chauraha
16. Mahatma Gandhi Marg
17. Peripheral road along Fawara. (Machharahai marg, Charahi marg; Badkul marg, Biharilal Khajanchi Marg).
18. Old Mirzapur Road (Damoh Naka to Madan Mahal Station)

19. Lajja Shankar Jha Marg
20. Gopal Das Marg
21. Ghora Nakkhas Marg
22. Narghaiya Marg
23. Mukadamganj Marg
24. Jeevan Chandra Mukherji Marg
25. Dattbhajan Mandir Marg
26. Kashi Prasad Choube Marg
27. Road joining to Vallabh Bhai Patel Marg and Kashi Prasad Marg (near Pathak shop)
28. Road joining Jagannath Prasad Marg and Deepakchand Marg
29. Ghantaghar Marg
30. Lane near Gulshan Hotel (Marhatal ward)
31. Shrinath-Ki-Talaiya Marg (near Anjuman High School)
32. Ch. Jagnnath Prasad Marg (Kadam Talaiya Road should be widened 24 metres

Commercial-cum-Residential Streets

1. Gole Bazar No. 8
2. Gole Bazar Road No. 9 (southern side)
3. Road No. 1 Gole Bazar
4. Road No. 19 Gole Bazar 15.3
5. Gole Bazar to Ranital square
6. Gole Bazar Road No. 17
7. Shaheed Smarak Marg (Kachiana Marg)
8. Pani Dareeba Marg
9. Keshav Prasad Marg 15.3
10. Chobaram Gulab Marg (from Sarafa to Radhika Prasad Marg)
11. Radhika Prasad Marg
12. Nunhai Marg
13. Ambika Charan Marg
14. Rajasagar Gali 15.3
15. Road from Ambikacharan Marg to Garhaphatak Road near Durga Sweet Mart (Dixistpura Marg, Latkari Padav Marg. Jagdish Mandir Marg)
16. Karbala Marg

17. Makhanlal Chaturvedi Marg from Vallabh bhai Patel Marg, Kashiprasad Chouba Marg

18. Raja Gokuldas Marg

19. Badikhermai Marg

20. Chaudhari Jagannath Marg

21. Lakkhana Marg

22. Dalsingh Marg

23. Naya Mohalla Marg (from Tonga stand to Ravindranath Marg in front of S. I. Association)

24. Road from Ravishankar Shukla Marg to Ravindranath Marg (from Rasidganj Masjid to Shivraj Photo studio)

The commercial establishments along other roads and streets already in the existence will be retained as such with strict control exercised in respect of permission for further construction of shops etc.

Wholesale Market

Wholesale grain mandi functioning at Jawaharganj Mandi is proposed to be shifted on new mandi site on Damoh road. The development of Mandi and shifting is recently taken up by the concerned authority. The space, thus, vacated is to be utilised for retail trade, kirana and grain market and will be re-planned so as to improve the shopping facilities and circulation space.

15.33 Civil Centre

Industrial units classified as incompatible are proposed to be shifted from central area. Service Industries and household units closely associated with central area activities would continue. However, a site for the flatted factory units is proposed in planning unit No. 5 to suit functionally.

15.33 Civic Centre

In order to meet the complex need for socio-cultural activities, recreational, commercial, business and administrative offices of autonomous, bodies, it is proposed to develop Marhatal Civic-Centre complex within a total area of 10 hectares.

15.34 Relocation of Uses and Development of Vacated Land

The incompatible and inefficient uses functioning within the central area are to be shifted and the space so vacated will be put to proper uses. The next table gives a list of such uses, their proposed location and use after vacation :

JABALPUR : RELOCATION AND USES AND DEVELOPMENT OF VACATED LAND

15-T-1

Sr. No.	Use to be Shifted	Proposed location	Use after vacation
(1)	(2)	(3)	(4)
A.	**INCOMPATIBLE USES :**		
1.	Jawaharganj grain mandi	Planning Unit No. 7	Kirana and Vegetable markets.
2.	Wholesale fruit and vegetable market and godowns	Planning Unit No. 7	Retail Shopping
3	Husk godown	Planning Unit No. 5	Retail Shopping
4.	Kabadi Market	Planning Unit No. 5	Retail Shopping
5.	Bamboo market	Planning Unit Nos. 5 and 8	Retail Shopping
6.	Printing Press and Paper godown	Planning Unit No. 1	Retai. Shopping
7.	Repair workshop	Planning Unit Nos. 1, 3, 5 and 9	Retail Shopping
8.	Oil Mills and Dal Mills	Planning Unit No. 7	Residential
9.	Bidi factory	Planning Unit No. 2	Resildential
10.	Slaughter house	Planning Unit No. 2	Park
11.	Soap stone factory	Planning Unit No. 9	Residentail
12.	Truck parking	Planning Unit Nos. 2 5. and 8.	Road
13.	M. P. S. R. T. C. Depo	Planning Unit Nos. 1 and 5.	Service industries P. S. P./Residential
14.	Tin goods furniture and Upholstery	Planning Unit No. 1	Retail shopping.
15.	Wholesale grain godowns	Planning Unit No. 7	Flatted industries and retail shopping
B.	**INEFFICIENT USES :**		
1.	Fruit and retail market	Planning Unit No. 1	Needs-re-planning
2.	Govt. and Private offices	Planning Unit No. 1	Residential
3.	Police quarters	Planning Unit No. 1	The area can be re-planned to accommodate more house.

जबलपुर

प्रस्तावित भूमि उपयोग

(मध्य क्षेत्र)

JABALPUR

15 4 PROPOSED LAND USE

(Central Area)



आवासीय	RESIDENTIAL
वाणिज्यिक	COMMERCIAL
सार्वजनिक एवं अर्ध सार्व.	PUBLIC & SEMI-PUBLIC
उद्यान	PARK
तालाब	TANK

0 330 660 Feet

0 100 200 Metres

15.35 Housing

The mixed character of living areas within the city centre is convenient in view of the socio-economic condition of the residents. It also helps in maintaining a proper relationship between the residential area and the work centres. Thus, it is considered appropriate to maintain this mixed-land-use characteristics of the central area.

The problems of housing are high occupancy rate resulting in high residential density, obsolescence, insanitary conditions and lack of amenities. It is proposed to reduce the rate of occupancy and residential density by encouraging shifting of persons from the central area to the fringes by rental housing and hire-purchase housing schemes at the fringes. Amenities which are at present not available in the central area are proposed to be provided on the fringe of the central area where open land is at present available.

Slum settlements where persons belonging to the economically weaker section are living in central area present very squalid conditions and are health hazard for the whole area. Proposals in this regard are given in Chapter 13.

15.4 PROPOSED CIRCULATION PLAN

Studies undertaken by the Department to analyse the circulation problems of the central area reveal that it suffers from defective circulation pattern which necessitates use of central area roads for through-traffic and use of the same roads for local traffic, shop frontages and parking even when the road width is not sufficient. Lack of traffic regulations and management adds to the congestion and chaos. Four roads, namely, Vallabhbhai Patel Marg, Jayaprakash Narayan Marg, Malviya Marg, Mahatma Gandhi Road are main traffic arteries of the city centre, which contain specilized markets. Study also reveals that most of the traffic generating points are located on both sides of M. G. Road, Vallabhbhai Patel Marg, and Jayaprakash Narayan Marg, yet the linkages from these sides are poor. The traffic is, therefore, required to follow along the above arteries, i.e. M,G, Road, Vallabhbhai Patel Marg and Jayaprakash Narayan Marg.

15.41 CONCEPT OF CIRCULATION PLAN

The central area of Jabalpur has some very interesting and peculiar features which will strongly influence the concept of circulation Plan for the area. Very intensive commercial activity has developed around Fawara where two roads running north-south and east-west meet.

Fawara situated on the crossing of these roads however, cannot be approached by fast-moving vehicles and these roads cannot function as bus route. Fawara area is also encircled by roads on all sides in the form of distorted ring. Within the central area there are a few socio-cultural and commercial nodes situated on the north, south and eastern sides of Fawara. These nodes need to be inter-connected with each other and with the city for convenient and efficient movement. The accessibility of central area also needs to be improved by making it approachable through public transport.

In view of these considerations it is necessary and possible to provide ring road enclosing the central area for use of public transport. Conceptually the central area will have a peripheral ring and an inner ring surrounding the intensive commercial activity at Fawara. Links between the inner and outer rings inter-connections between various nodes of socio-cultural and commercial activity within the central area, links between the city and the other ring from all direction will make the central area easily and conveniently accessible.

15.42 PERIPHERAL RING

On the western side the alignment of central ring is along old Mirzapur Road, which starts from the square near Swaroop Automobile and runs upto Damoh Naka. In the nor th it follows the existing Gopal Marg and Ghoranakas Marg upto Hanumantal. From this point it follows Seth Vallabhdas Gali in the eastern side upto Omti square. A portion of the road has to be widened from exising 5 mts. to 15 mts. approximately which is possible. On the southern side it follows from Omti square to Swaroop Automobile square.

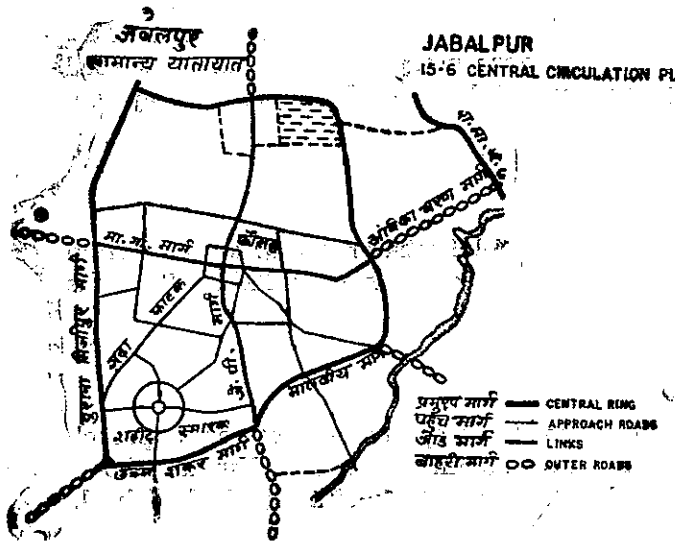
15.43 LINK ROADS AND APPROACH ROADS

(a) Link Roads

Two major link roads passing through the Fawara and following the existing alignment of Mahatma Gandhi Marg and Babu Nathuram Marg from Baldeo Bagh square to Lakkadganj square, Jayaprakash Narayan Marg and Vallabhbhai Marg from Millonigani square to Malviya Chowk

are proposed to be 18/20 metres. A new link is also proposed from Khazanchi Chowk to Narghai in order to complete the link road No. 1.

Link Road No. 1



This link road running north-south will join the inner ring at Malviya Chowk towards south and Milloniganj square towards north. The alignment of this road would be along the existing Vallabhbhai Patel Marg and Jaya-Prakash Narayan Marg passing through Fawara in Centre. This link road will carry the bulk of north-south intra-city traffic leading to and from Central area.

This link road running east-west will joint the inner ring at Baldeobagh gate is 10/12 metres from Kamania to Ganjipura is 18/20 metres and Ganjipura to Super bazar 9/11 metres, thus, giving scope for widening since most of the kuchha and semi-pucca structures are existing along the road side that are under the process of renovation.

Link Road No. 2

This link road running east-west will join the innerring at Baldeobagh square towards west at Gurandi square towards east. The alignment of this road would be along the existing Mahatma Gandhi Marg, Janki Prasad and Babu Nathuram Marg, passing through Fawara, Tilakbhumi-Ki-Talaiya and Narghat. This link will carry the bulk of east-west intra-city traffic leading to and from the central area. The existing width of this link road from Baldeo Bagh Chauraha to near Sabzimandi is 13/18 metres from Sabzimandi to Bada Mahavir is 11 metres, and from Bada Mahavir to Khazanchi Chowk 18/20 metres giving sufficient scope for widening. A new link is proposed from Khazanchi Chowk to Narghai, which is having Kutcha structures with narrow lanes and vacant areas such as Tilakbhumi-Ki-Talaiya etc. The existing width of road from Narghai to Gurandi i.e. Janki Prasad Marg and Babu Nathuram Marg is 9/12 metres giving sufficient scope for widening.

(b) Approach Roads (AR)

Approach roads from Ranital square, Omti square, Balbagh Chauraha and Nunhai Chowk are provided leading towards link roads. Rings are envisaged to mobilise traffic flow to and from Central area.

Approach Road 1

It starts from Ranital square (western portion of inner ring) and joins Fawara passing through Garha Phatak road and Old Charahai.

Approach Road 2

It follows the existing alignment of Andherdeo Marg and Victoria Marg starting from Omti square on the eastern inner ring and joins link road No. 2 at Fawara. It passes through Tularam Chowk and Khajanchi Chowk.

Approach Road 3

It follows the existing alignment of Ambikacharan Marg, starting from Football square and joins Sarafa Chowk on link road No. 1. It passes through Khatik Mohalla.

Approach Road 4

The present alignment of Nunhai Marg is proposed as west-east approach road, originating from old Mirzapur road (inner ring) at Nunhai Chowk on Damoh road to Sarafa Chowk. It passes along Hitkarini Girls School.

Approach Road 5

It starts from approach road No. 4 at Hardol Mandir and terminates at link road No. 1 at Ganjipura Chowk. Passing through Latkaripadav, Jagdish Mandir, approach road No. 1 and behind Lordganj police thana. This approach road follows the existing alignment of Latkari Padav Marg upto approach road No. 1 then follows new alignment for a small portion in front of Jagdish Mandir.

Approach Road 6

It starts from Karamchand Chowk on Malviya Road on southern side leading towards north passing through approach road 2 and terminates at approach road 3 near Khatik Mohalla Chowk.

15.44 OTHER ROADS AND PEDESTRIAN PATHS

Beside central peripheral ring, link roads and approach roads, few more roads have also been proposed, which are as follows :—

(a) 18 mts. wide : Shrinath-Ki-Talaiya Marg from Super market to Bengali Club.

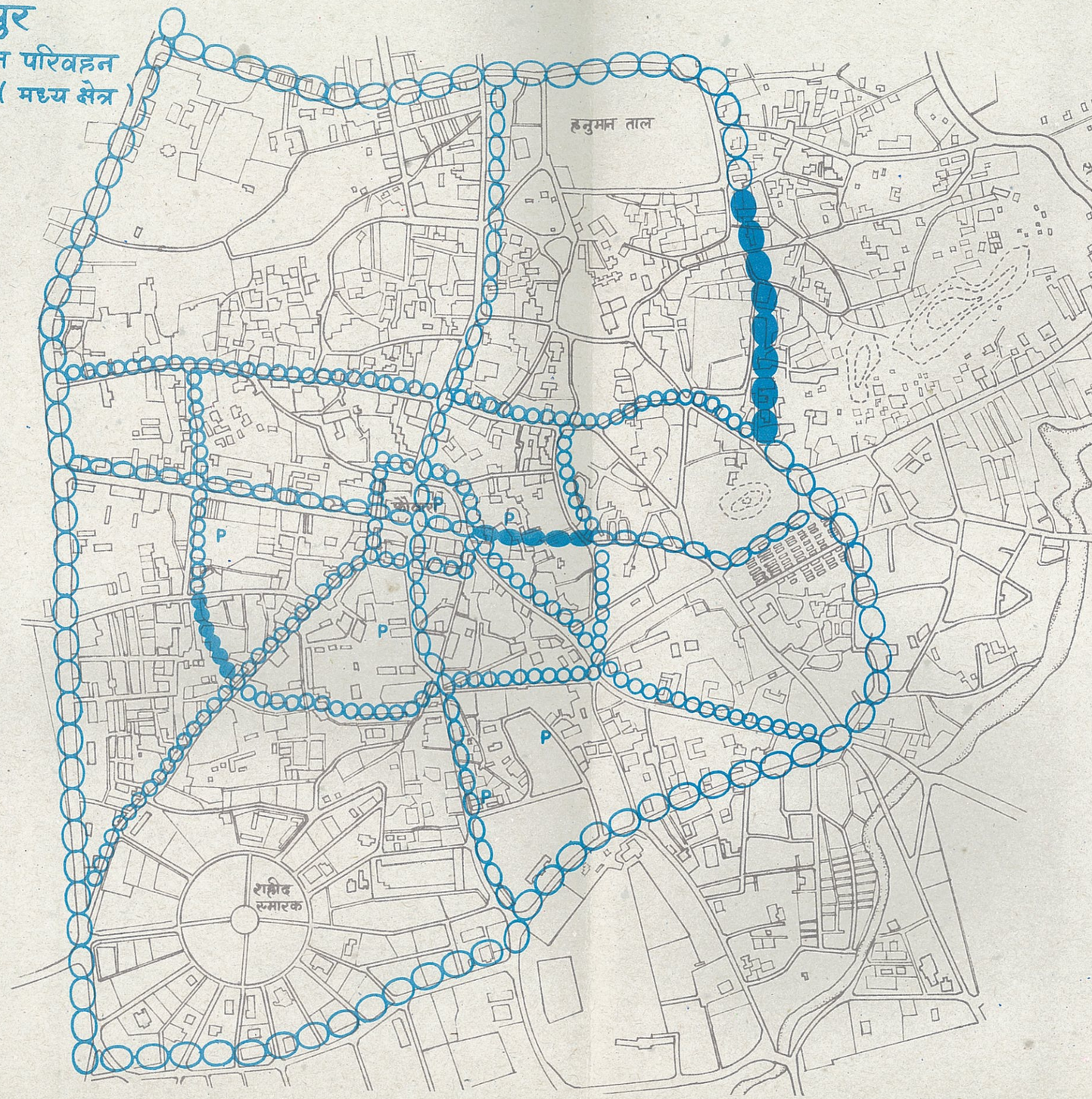
(b) 12 mts. wide : Acharya Narendra Deo Marg from Ganjipura Chowk to Tularam Chowk.

(c) 10 to 12 mts. wide : Peripheri road around Fawara. (Khowa Mandi Road retained as it is).

(d) 12 mts. wide : Deepak Chand Marg from Omti chowk to Galgala chowk.

जबलपुर
प्रस्तावित परिवहन मानचित्र (मध्य क्षेत्र)

JABALPUR
15-7 PROPOSED CIRCULATION PLAN (CENTRAL AREA)



PUBLIC TRANSIT ROUTE
जन पारनयन मार्ग

PROPOSED ROAD
प्रस्तावित मार्ग

LINK ROAD
जोड़ मार्ग

PROPOSED LINK ROAD
प्रस्तावित जोड़ मार्ग

APPROACH ROAD
प्रवेश मार्ग

PRO. APPROACH ROAD
प्रस्तावित प्रवेश मार्ग

PARKING
वाहन विराम स्थल P

0 330 660 Feet
0 100 200 Metres

(e) 9 mts. wide: New link front Tularam chowk to Galgala chowk.

(f) 9 mts. wide: Keshav Prasad marg from Vijai Cut-piece Bhandar to Narghai.

(g) 9 mts. wide: Pandariba Marg from Jain temple to Nunhai Marg.

(h) 9 mts. wide: Dutt Bhajan Mandir Marg from Super Bazar to Dutt Bhajan Mandir.

15.45 ROAD WIDTHS

Being in the midst of thickly built up area it will not be possible to provide uniform width throughout. However, a road width of 18/20 metres for inner peripheral ring, 14/20 metres for link road and 10/12 metres for approach roads have been proposed.

Based on various considerations the road widths prescribed for central area are as per the table given below. By fixing up street line and setback, deferred road widening schemes for roads other than the inner ring, link and approach roads should be taken up to effect the desired widths in the long run.

JABALPUR ; PROPOSED ROAD-WIDTHS IN CENTRAL AREA 15-T.2.

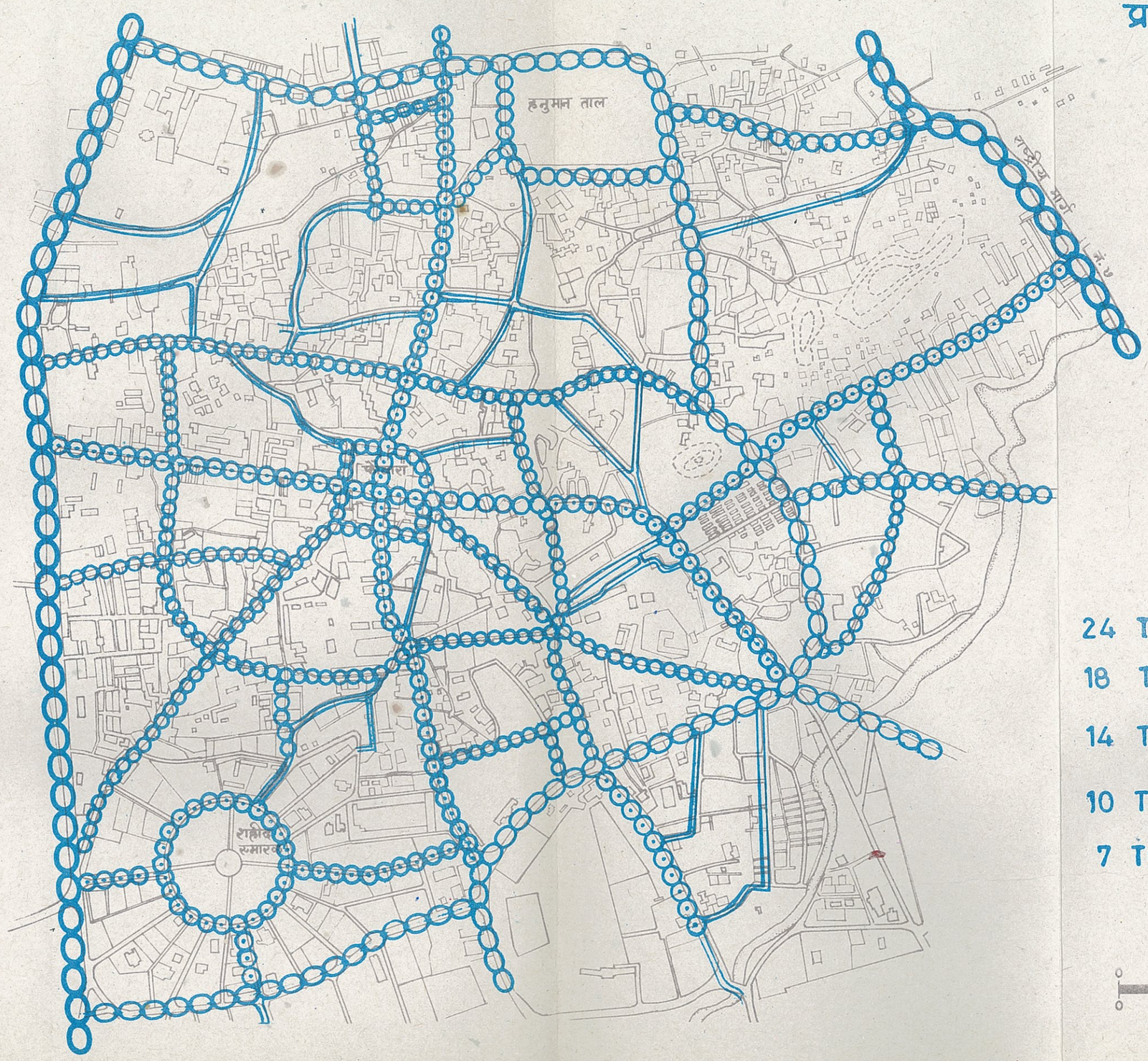
Sr. No.	Road or Street	Existing width (in metres)	Proposed width (in metres)
(1)	(2)	(3)	(4)
1.	Old Mirzapur road	18/24	37
2.	Bhantaliya-Vyoharbag (Pandey Hospital)		24
3.	Gopaldas Marg	9/15	18—20
4.	Ghorha Nakkhas marg	8/12	18—20
5.	Link joining Seth Vallabhadas marg and Jagannath Prasad Marg	9	18—20
6.	Malviya Marg	9/12	18—20
7.	Lajja Shanker Jha marg	12/15	18—20
8.	Ravindra Nath Tagore marg	15/18	18—20
9.	Shastri marg	12/20	37
10.	Jayaprakash Narayan marg	9/30	18—37 (Ganjipura Chowk to Super Market 14–20 and Super Market to malviya Chowk 37 metres)
11.	Mahatma Gandhi marg	10/18	14—20
12.	Karbala marg (Agha Khan Chowk to Latkarika Padava)	12/15	14—20
13.	Karbala marg (Latkarika Padava to Shanker Ghee Bhandar)	7/12	10—12

(1)	(2)	(3)	(4)
14.	Ghantaghar marg	9/12	14—20
15.	Shrinath-ki-Talaiya marg	9/12	14—20
16.	Link joining Janaki Prasad marg, Narad marg and Babu Nathuram marg.	10	14—20
17.	Garhaphatak marg	7/10	9—14
18.	Victoria marg	10/12	10—12
19.	Andherdeo marg	8/18	10—12
20.	Ambikacharan marg	6/9	10—12
21.	Nunhai marg	6/9	10—12
22.	Deepak Chand marg	10/12	14—20
23.	Purani Charhai marg	7/9	10—12
24.	Acharya Narendradeo marg	5/7	10—12
25.	Sardar Harisingh marg	9/12	10—12
26.	Narghai marg	8	10—12
27.	Latkali- ka- padav marg	10/12	10—12
28.	Hardol Mandir to Pande Chowk	8/12	10—12
29.	Karbala marg-Ganjipura chowk via Jagdish Mandir.	3/5	10—12
30.	Kachiana marg	9	10—12
31.	Lakkhana marg	10/12	10—12
32.	Dalsingh marg	8/10	10—12
33.	Chaudari Jagannath marg	7/9	10—12
34.	New link parallel to Mukadamganj marg.	..	7—10
35.	Pandariba marg	3/6	7—10
36.	Kashiprasad marg	5/7	7—10
37	Babasaheb marg	5/7	7—10
38.	Makkhan Teli marg	5/7	7—10
39.	Dutt Bhajan Mandir marg	3/7	7—10
40.	Radhika Prasad	4/8	9
41	Chobaram Gulab marg	5/6	7—10
42.	Makhanlal Chaturvedi marg	4/8	7—10
43.	Naya Mohalla marg	7/8	10—12
44.	Raja Gokuldas marg	7/9	10—12
45.	Newlink road from Sardar Hari singh marg to Shrinath-ki-Taliya	9/12	10—12
46.	Vallabh Bhai Patel Marg	10/14	14—20
47.	Ch. Jagnnath Pd. Marg (Kadam Talaiya Road)	..	24

Road widths prescribed here do not include space for footpaths and casual parking for scooters, cycles etc. Consideration for movement space required will have to be examined while granting permission in individual cases. The guidelines will work as an interim arrangement till such time as detailed scheme of regular street line is framed and adopted as a part of follow up action of Development Plan proposals.

JABALPUR

15-8 PROPOSED ROAD WIDTH
प्रस्तावित मार्ग चौड़ाई



24 TO 37 mts

18 TO 20 mts

14 TO 20 mts

10 TO 12 mts

7 TO 10 mts

0 330 660 Feet

0 100 200 Metres

No building permission of any sort, whether temporary or permanent, from the ground up or by projection will be given within the minimum prescribed road width.

15.46 Road Widening

Road widening, particularly in central area where the intensity of building activity is very high is always very expensive and it tends to dislocate large number of persons and activities at the time of widening. Number of roads proposed for widening has, therefore, been kept at minimum. Only those roads which form the inner peripheral ring, link roads, and approach roads are proposed to be undertaken for widening, while the remaining roads are proposed to be prescribed under deferred street scheme.

Here it may be clearly mentioned that unless there is a specific scheme for a new road, road widening means that subsequent constructions have to be given setback as per the prescribed street line so that over a period of time the road achieves the prescribed width. Normally it is not intended to go in for large-scale acquisition.

15.47 Street Lines

Prescribing street lines by undertaking deferred street schemes also help in achieving desired road-widths in the long run. Except for important roads such as inner ring, link and approach roads and other roads of the central area would be covered under deferred street scheme.

15.48 Bus Routes and Terminal Centres

The peripheral inner ring will mainly serve as city-bus route for public transport. Terminal centres for city-bus service have been provided at Gurandi, Shrinath-ki-Talaiya, Baldeobagh square.

15.49 Parking

Efficiency of road system can be achieved by providing parking lots at appropriate places. An exact road alignment and exact location of parking lot is a matter of detailed survey and therefore, while preparing zoning plans under the provisions of Nagar Tatha Gram Nivesh Adhiniyam, 1973. Care will have to be taken to cause minimum disturbance to inhabited areas. In other words, available vacant plots would be earmarked for parking eareas, whereas the plots where restructuring is feasible with the minimum disturbance would be considered for meeting additional requirement. Parking spaces have been provided at Tilak-bhumi Talaiya, Shrinath-ki-Talaiya, Sabzi Mandi, and behind Lordganj Thana.

15.5 TRAFFIC OPERATION PLAN

The proposals regarding circulation pattern contained in the Development Plan are likely to be implemented in stages. Some of the proposals are long-term. It will, therefore, be necessary that traffic in the central area is regulated so as to achieve maximum efficiency with the present

circulation system. The traffic operation plan will, therefore, be prepared which will contain main traffic regulations such as one-way streets, restriction regarding heavy vehicles on certain roads during day time, reservation of certain streets for cycle and pedestrian traffic, regulation of working hourse for workers in central area to distribute peak-hour traffic.

15.6 ZONING REGULATIONS FOR CENTRAL AREA

Zoning regulations are guide lines for developments within each zone or sector in respect of location height, size of building and structures, open spaces and uses to which such buildings, structures and land may be put. The zoning regulations will be separately framed for existing built up areas and for the new development proposals that are taking place and are likely to take place during the plan period. Moreover, the zoning regulations in the central area will be different from those applicable in other areas of the city. Zoning regulation for areas other than central area are given in the next chapter. Plot coverage and F.A.R.* which will regulate the size of the structure open space within plot and height of structure for different localities are given as below :

15.62

15.61 Residential Areas

In thickly built up area of the city it will not be possible to fix up regular size of the plot. The existing houses in the built up area are most irregular in size and shape but F.A.R. and plot coverage have been prescribed to achieve the required density and public health requirement for healthy living.

(i) Coverage (Maximum)

(1) Plot area not exceeding 90 sh. metres—75%.

(2) Plots are above 90 sq. metres but not exceeding 180 sq metres —66%.

(3) Plot area above 180 sq. metres—60%.

(ii) Floor Area Ratio

1.	Upprainganj	1.50	
2.	Chhota Fawara	1.75	
3.	Kotwali	1.75	
4.	Hanumantal	1.50	
5.	Sarafa	1.75	
6.	Narghai	1.50	
7.	Galgala	1.50	
8.	Bhartipur	1.50	15.47
9.	Gurandi	1.50	

Note *Floor Area Ratio = $\frac{\text{Floor Area (on all floors)}}{\text{Plot Area}}$

10.	Omti	1.50
11.	Badi Omti	1.75
12.	East and West Belbagh	1.50
13.	Bhantallalya	1.50
14.	Naya Mohalla	1.50
15.	Ganjipura	1.50
16.	Wright Town, Golbazar	1.20
17.	Kachhiana	1.50
18.	Garha Phatak	1.50
19.	Lordganj	1.50
20.	Niwarganj	1.75
21.	Fawara	1.50
22.	Baldeobagh	1.50

15.62 COMMERCIAL AREAS

The existing commercial area's have been identified in the following categories :—

1. Commercial Roads
2. Commercial-cum-Residential streets
3. Organised shopping centres

Commercial Roads

Those roads which have premises of commercial use on the ground and upper floors shall be identified as commercial roads provided that ground floor should have only one establishment have access from the road front.

F.A.R. FOR COMMERCIAL ROADS		
1.	Vallabh Bhai Patel Marg	2.5
2.	Ambika Charan Marg (Sarafa)	2.5
3.	New link between Omti to Hanumantal (Seth Vallabhdas Marg, Seth Jagannath Prasad Marg).	2.5
4.	Babu Nathu Ram Marg	2.5
5.	Janki Prasad Marg	2.5
6.	Andherdeo Marg	2.5
7.	Deepak Chand Marg	2.5
8.	Victoria Hospital Marg	2.5
9.	Sardar Harisingh Marg	2.5
10.	Normal School Road	2.5
11.	Ravishankar Shukla Marg (Malviya Marg)	2.5
12.	Southern part of Ravishankar Shukla Marg	2.5
13.	Ravindra Marg	2.5
14.	Jayaprakash Marg	2.5

15.	Garha Phatak Marg from Fawara to Ranital Chauraha.	2.5
16.	Mahatma Gandhi Marg	2.5
17.	Peripheral road along Fawara (Machharhai Marg, Charahai Marg, Badkul Marg, Beharilal Marg, Kharanchi Marg).	2.5
18.	Old Mirzapur Road (Damoh Naka to Madan Mahal Station).	2.5
19.	Lajja Shankar Jha Marg	2.5
20.	Gopal Das Marg	2.5
21.	Ghora Nakkhas Marg	2.5
22.	Narghaiya Marg	2.5
23.	Mukadam Ganj Marg	2.5
24.	Jeevan Chandra Mukerji Marg	2.5
25.	Datt Bhajan Mandir Marg	2.0
26.	Kashi Prasad Choube Marg	2.5
27.	Road joining Vallabh Bhai Patel Marg and Kashi Prasad Marg near Pathak shop.	2.5
28.	Road joining Jagannath Prasad Marg and Deepak Chand Marg.	2.5
29.	Ghantaghar Marg	2.5
30.	Lane near Gulshan Hotel (Marhatal Ward)	2.5
31.	Shrinath-ki-Tallaiya Marg (near Anjuman High School).	2.5

Commercial-cum-Residential Streets

1.	Gole Bazar Road No. 8	2.00
2.	Gole Bazar Road No. 9 (Southern side)	2.00
3.	Road No. 1 Gole Bazar	2.00
4.	Road No. 19 Gole Bazar	2.00
5.	Gole Bazar to Ranital Square	2.00
6.	Road No. 15 Gole Bazar	2.00
7.	Gole Bazar Road No. 17	2.00
8.	Shaheed Marg (Kachiana Marg)	2.00
9.	Pan Dareeba Marg	2.00
10.	Keshav Prasad Marg	2.00
11.	Chobaram Gulab Marg (from Sarafa to Radhika Prasad Marg).	2.00

12.	Radhika Prasad Marg	2.50
13.	Nunhai Marg	2.00
14.	Ambika Charan Marg	2.00
15.	Rajasagar Gali	2.00
16.	Chhatrapati Shivaji Marg west side (from Gole Bazar Road No. 1 to 10 in front of Nutan Marathi Vidyalaya).	2.00
17.	Road from Ambikacharan Marg to Garhaphatak Road near Durga Sweet Mart (Dixitpura Marg, Latkari Padav Marg, Jagdish Mandir Marg).	2.00
18.	Karbala Marg	2.00
19.	Makhanlal Chaturvedi Marg from Vallabh bhai Patel Marg, Kashi Prasad Choube Marg.	2.00
20.	Raja Gokaldas Marg	2.00
21.	Badikhermai Marg	2.00
22.	Chaudhari Jagannath Marg	2.00
23.	Lakkhana Marg	2.00
24.	Dalsingh Marg	2.00
25.	Naya Mohalla Marg (from Tonga stand to Ravindranath Marg in front of S.I. Association).	2.00
26.	Road from Ravishankar Shukla Marg to Ravindranath Marg (from Rasidganj Masjid to Shivraj photo studio).	2.00

Coverage

Each building abutting on commercial road or commercial-cum-residential street shall have maximum ground coverage of 80%.

15.63 FLATTED FACTORIES

The maximum coverage and F.A.R. for flatted factories will be 50% and 2 respectively.

15.64 PUBLIC AND SEMI-PUBLIC

Permissible coverage and F.A.R. for already existing congested area will be as follows :

JABALPUR ; COVERAGE AND F. A. R. FOR PUBLIC AND SEMI-PUBLIC

15-T-3

Sr. No.	Description	Coverage	F. A. R.
1	2	4	5
1.	Colleges	40%	1.5
2.	Higher Secondary and Secondary Schools	40%	1.5
3.	Primary Schools	50%	1.5
4.	Nursery Schools	50%	1.5
5.	Hospital	40%	1.5
6.	Health Centre (Dispensary)	50%	1.5
7.	Police Station	50%	1.5
8.	Fire Station	50%	1.5
9.	Community Hall	40%	1.0
10.	Government and Semi-Government Offices	40%*	2.00

*5% additional coverage may be allowed for Garage and Cycle Stands.

CHAPTER 16

PLAN IMPLEMENTATION AND ENFORCEMENT

The efforts in the preparation of the Development Plan and Zoning Plans will not improve the city life in any way, unless sustained efforts are made to enforce as well as implement these plans. In building a city, a major role is played by the citizens, individually or collectively by undertaking construction, reconstruction and development of land for various uses. Co-operation of citizens in city improvement and city building is, therefore, of utmost importance. The Town and Country Planning Department will provide necessary guidance by rendering technical advice and by arranging proper scrutiny so as to ensure that the proposed constructions conform to the proposals contained in the approved Development Plan or the Zoning Plans. Effective enforcement of the plan will now be possible because as per provisions of Madhya Pradesh Nagar Tatha Gram Nivesh Adhiniyam, 1973, all developments to be undertaken by individuals and public sector undertakings will be subject to technical scrutiny. Various provisions regarding control of development* and use of land are contained in Section 24 to 29 of the said Act.

Effective control, particularly on change of use of land within the planning area will be feasible, because existing land-use maps for Jabalpur have been duly published and adopted under Section 15 (3) of the M.P. Nagar Tatha Gram Nivesh Adhiniyam, 1973, dated 15-8-1973.

Zoning regulations in respect of various use zones, floor area ratio, coverage etc. are given in this chapter. These will facilitate planning and designing by the prospective developers and Government Departments, and will form the basis for scrutiny of these proposals.

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* Development with its grammatical variation means the carrying out of a building, engineering, mining or other operations in, or over, or under land, or the making of any material change in any building or land or in the use of either and includes sub-division of any land.

Implementation of the Development Plan will be undertaken exclusively by the Improvement Trust or Town and Country Development Authority likely to be established under Section 38 of the Madhya Pradesh Nagar Tatha Gram Nivesh Adhiniyam, 1973. Madhya Pradesh Housing Board is playing a very important role for the last four years in undertaking large scale construction of houses and shopping centres. It is hoped that these organisations will increase the tempo of their activities. Besides this, other Government Departments and autonomous bodies such as public Health Engineering, Public Works, Commerce and Industries, Education, Health, MPSRTC and Laghu Udhyog Nigam, etc. will also be undertaking construction work within their respective field of activity. This will also add to the process of implementation of Development Plan. It will, however, be desirable to co-ordinate constructional activities of various Government and Semi-Government organisations not only in terms of location, design, etc. but in terms of phasing and programming as well. This will ensure quicker returns and benefits.

16.1 IMPLEMENTATION OF DEVELOPMENT PLAN

The cost of implementation of various proposals contained in the Development Plan, estimated at current rates works out to Rs. 68.25 crores inclusive of Rs. 1.67 crores anticipated for establishing an airport. This includes acquisition of 57.2 hectares of land, inclusive of 300 hectares of land for the proposed airport and for various uses, and development of 4210 hectares within the plan period, inclusive of development of 210 hectares of land for the airport. This also includes clearance and environmental improvement of slums, redevelopment of old city measuring 220 hectares construction of roads and overbridges. The average cost of acquisition has been assumed at Rs. 12,400 per hectare. The development costs for various land-uses have been assessed according to the following norms :—

Land-Use	Rate per hectare (Rs. in lakhs)
Residential	1.12
Environmental Improvement of slums, slum clearance and Rehabilitation and city development.	2.47
Commercial, Public and Semi-Public	1.36
Recreational including Landscaping	1.2
Transportation	0.62
Industrial	1.61

Stage-I estimates of plan implementation covering cost of acquisition and development are given in the following table :—

JABALPUR : COST OF PLAN IMPLEMENTATION (PLAN SPAN 1976-91) 16-T.1

Sr. No.	Land-Use	Area (Hectares)				Development of 70% acquired land			Compensation for all items (Rs. in lakhs)	Total cost columns (6+9+10) (Rs. in lakhs)
		Proposed	Existing	Balance to be acquired	Cost of Acquisition @ Rs. 12,400 per hect. Rs. in lakhs	Area (Hect.)	Rate per Hect. (Rs. in lakhs)	Cost of Development (Rs. in lakhs)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	Residential	3415	1503	1912	237	1338	1.12	1499	..	1736
2.	Commercial	512	68	444	55	311	1.36	423	..	478
3.	Industrial	707	263	444	55	311	1.61	501	..	556
4.	Public and Semi-Public & Public Facility	1124	511	613	76	429	1.36	583	..	659
5.	Recreational and Landscaping	886	39	847	105	593	1.12	664	..	769
6.	Transportation	1785	645	1140	142	798	0.62	495	..	637
7.	City Redevelopment, slum clearance, rehabilitation & Environmental Improvement of Slums	220	..	..	..	220	2.47	543	..	543

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
8.	(a) Over-Bridge	4 Nos	2 Nos	..	..	2 New	L. S	120	..	120
	(b) Underpassage	8"	4"	..	..	4 New	L. S	100	..	100
	(c) Underpassage for slow-moving Vehicle	..	..	..	..	1 New	L. S	15	—	15
9.	Level Crossing	7 Nos.	5 to be improved	..	..	2 New 5 old	L. S	20	—	20
10.	New Railway Yard	2 Nos	..	..	..	2 New	L. S	120	—	120
11.	Old Railway Yard to be improved	3 Nos	3 Nos	..	..	Improved	L. S	25	—	25
12.	Railway Station improvements	..	..	..	..	..	L. S	50	—	50
13.	Narmada Bridge	..	..	..	..	..	L. S	90	—	90
14.	Shifting of Jail	..	..	..	..	..	L. S	200	—	200
15.	Flood control and other composite schemes-Motinalla and Omti Nalla	..	..	—	—	..	L. S	40	—	40
	Total-Excluding Airport	8649	3029	5300	670	400	..	5488	500	6658
16.	Airport (acquisition & development works only)	300	..	300	37	210	0.62	130	..	167
	GRAND TOTAL :	8949	3029	5702	707	4210	..	5618	500	6825

16.2 FIRST-PHASE PROGRAMME

The implementation programme hsa been divided into two phases *viz.* the first five years 1976-77 to 1980-81 and the remaining period of Development Plan. Total expenditure for executing the first-phase programme works out to Rs. 2209 lakhs including works to be executed by the Industries Department. This programme envisages mainly:

(a) Acquisition of 1786 hectares of land.

(b) Compensation for land and structures.

(c) Development of 1250 hectares of land.

(d) Construction of 38 Km. roads.

(e) Construction of one over-bridge, two level crossings and one Cycle underpass.

(f) Development of Recreational centres.

(g) Development of land for Public and Semi-Public services.

(h) Clearance of Slums, Rehabilitation of Slum evictees and Environmental Improvement of Slums.

(i) Development of sites for Commercial and Industrial uses (Refer table 16.T-2).

Land for industrial use is being acquired and developed by the Industries Department. The cost of acquisition of 300 hectares of land and development of 210 hectares of land for industries works out to Rs. 375 lakhs which has not been considered while calculating the cash-flow.

PROJECT APPRAISAL INVESTMENTS AND CASH-FLOW

The works under the First-Phase Programme are selected keeping in view the best rate of return on investment. It is considered necessary to associate various executing agencies which are working for the development of Jabalpur and to make them participate actively with the resources which are readily available with them. It is with this object in view that the finances of both the major Local Bodies, i.e. Municipal Corporation, Jabalpur and the Town Improvement Trust were assessed. It is observed that the Municipal Corporation, Jabalpur, can invest on an average annual surplus of Rs. 0.97 lakhs per year (Table 16-T.4). Receipts from Property Tax and Entertainment Tax work out to Rs. 8.96 lakhs and Rs. 50.33 lakhs respectively. Setting aside collection and establishment charges at the rate of 20% annual net surplus from property tax and Entertainment Tax are Rs. 7.27 lakhs and Rs. 40.24 lakhs respectively. Thus internal resources that could be gain fully mobilised for the development of Jabalpur. This may be assessed as follows:—

(i) Municipal Corporation, Jabalpur	Rs. 0.97 lakhs
(ii) T.I.T. Jabalpur	Rs. 1.39 lakhs
(iii) Net surplus from property tax	Rs. 7.17 lakhs
(iv) Net surplus from Entertainment Tax	Rs. 40.24 lakhs
Total	Rs. 49.77 lakhs
	Say Rs. 50.00 lakhs per year

A policy decision is necessary on this matter. Similarly the P.W.D., P.H.E.D., M.P. Electricity Board, Social Welfare Deptt, Medical Deptt, Education Deptt., Central Govt. departments and the Railways will have to make sufficient provisions in their Budgets to improve the city infrastructure so as to ensure a co-ordinated action for achieving the targets.

Table 16.T-5 shows total receipts from disposal of plots :—

JABALPUR : FIRST-PHASE COST OF PLAN IMPLEMENTATION

16-T.2

S. No.	Classification of work	Acquisition		Compensation for structures Rs. in lakhs)	Development Cost		Total cost Rs. in lakhs (4+5+7)
		Physical targat (in Hects)	cost. (Rs. in lakhs)		Physical target in Hect.	Cost (Rs. in lakhs.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	**Residential**	1001	124	..	701	781	905
2.	**Commercial**						
a.	Vegetable & Fruit market	5	1	..	3.5	5	6
b.	Grass Mandi	3	1	..	2.1	3	4
c.	Timber Market	70	9	..	49.0	67	76
d.	Warehousing, cold storage & Godowns	20	2	..	14.0	19	21
e.	Kabadi market	10	1	..	7.0	10	11
f.	Transport nagar	6	1	..	4.2	6	7
g.	Bus stand-*cum*-shopping centre	20	2	..	14.0	9	21
h.	Building material yard & steel yard	5	1	..	3.5	5	6
i.	City-level shopping centre and planning unit shopping centre	30	4	..	21.0	29	33
j.	Sector-level shopping centre	10	1	..	7.0	10	11
Total (Commercial)		179	23	..	125.3	173	196

(1) (2)	(3)	(4)	(5)	(6)	(7)	(8)
3. Industrial						
a. Heavy	80	10	..	56.0	90	100
b. Heavy-Medium	180	22	..	126.0	203	225
c. Agro-based	20	2	..	14.0	23	25
d. Obnoxious	20	2	..	14.0	23	25
Total (Industrial)	300	36	..	210.0	339	37
4. Public & Semi-Public Services						
a. Health	25	3	..	17.5	24	27
b. Education	75	9	..	52.5	71	80
c. Social & cultural	20	2	..	14.0	19	21
d. Cremation & Burial grounds.	4	1	..	2.8	4	5
TOTAL (PUBLIC & SEMI-PUBLIC SERVICE)	124	15	..	86.8	118	133
5. Recreational						
a. Park	5	1	..	3.5	4	5
b. Stadium	12	1	..	8.4	9	10
c. Picnic Spot	10	1	..	7.0	8	9
d. Swimming pool (one)	1	1	..	0.7	1	2
e. Tank Reclamation	60	7	..	42.0	47	54
TOTAL (RECREATION)	88	11	..	61.6	69	80
5. Transportation Road (Acquisition and part construction)						
a. Major Roads.						
1. MR-4 (50 M)	4.5 Km 3		..	..	16	19
2. MR-1 (60 M)	2.0 Km 1		..	..	8	9
3. MR-2 (45 M)	4.0 Km 2		..	..	12	14
4. MR-5 (45 M)	2.5 Km 1		..	..	8	9
5. MR-13 (25 M)	1.0 Km 1		..	..	2	3

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
6.	MR-7 (30 M)	1.0 Km	1	..	...	2	3
7.	MR-8 (40 M)	2.5 Km	1	..	...	6	7
8.	MR-9 (40 M)	2.5 Km	1	..	...	6	7
b.	Major Ring Roads						
1.	RN (60) Acquisition Part construction.	11	8	...	...	44	52
2.	RE (40 M) Acquisition & Part construction.	2.1	1	..	..	6	7
3.	RS (60 M) Acquisition & Part construction.	1.5	1	..	..	6	7
c.	Omti-Hanuman-tal road new link.	2.5	..	..	..	5	5
Total	(Transportation)	..	21	..	..	121	14
7.	**Clearance**	6	1	..	4.2	10	11
8.	**Environmental Improvement in slums**	88	..	..	61.6	152	152
9.	(a) Over-bridge	1 No.	..	..	..	90	90
	(b) Level Crossing	2 Nos.	..	..	..	10	10
	(c) 20 Cycle under-pass	1 No.	..	..	..	15	15
Total (Overbridges, etc.)		..	..	..	..	115	115
TOTAL		1786	231	..	1250.5	1878	2109
GRAND TOTAL		1786	231	100	1250.5	1878	2209

JABALPUR : MUNICIPAL CORPORATION, STATEMENT OF RECEIPTS AND EXPENDITURE ACTUALS

16-T-3

RECEIPT

	1972-73	1973-74	1974-75	1975-76	1976-77
Taxes	13799156	14282915	18430709	19498496	28479200
Rent	744542	634084	642761	750300	1537500
Fees	34961	50580	52155	51985	185700
Grant Non-recurring	1244000	..	..	849655	..
Recurring	1520054	1888754	1715432	3909810	3507200
Loan	..	..	..	2066600	..
Others	2506443	3453173	3111059	4507516	4677100
TOTAL	19849156	20309506	23952116	31634362	38386700

EXPENDITURE

	1972-73	1973-74	1974-75	1975-76	1976-77
Services	8330067	6633702	8955652	12938812	14883900
Maintenance work	1483146	2028076	1595852	5457098	5040800
Establishment	6540332	9146776	10122335	1931133	83373000
Road work	566273	189413	948946	543943	1000000
Building work	315985	54677	4583	20292	750000
Others	1038805	2241886	3083037	4743209	2854000
Total	18274608	20294530	24690405	32634487	37901700

Note ;
Average surplus Rs. 3,83,86,700—Rs. 3, 79,01,700—Rs. $\frac{4,85,000}{5}$—Rs. 0.97 lakh per year

* 1976-77 figures indicate probable receipt and expenditure.

* Expenditures and receiptsinclude revenue, Capital and Miscellaneous receipts.

* 20% of the surplus of Rs 4,85,000 Rs. 0.97 lakh to be mobilised for town development.

JABALPUR ; TOWN IMPROVEMENT TRUST RECEIPT (INCOME)

Year	Sale of Plots including residential building given on hire-purchase	Water Taxes	Ground-rent and Building rent	Income from fees.	Grant in Aid		Loan Raised	Total Receipt	Deposit Work	Total (Rs. in lakhs)
					Recurring	Non Recurring Capital				
1	2	3	4	5	6	7	8	9	10	11
1972-73	5.98	0.01	0.01	0.04	1.08	..	3.30	10.42	0.29	10.71
1973-74	11.45	0.01	1.04	0.02	1.08	..	3.59	17.19	0.17	17.36
1974-75	6.03	0.02	1.65	0.03	1.08	..	2.00	10.81	0.10	10.91
1975-76	9.75	0.04	1.43	0.03	1.08	..	7.50	19.83	1.63	21.45
1976-77	15.00	0.05	2.05	0.04	1.08	..	59.41	87.63	0.50	88.13
TOTAL :	48.21	0.13	6.18	0.16	5.40	..	75.80	145.88	2.69	148.57

EXPENDITURE

Year	Services on Amenities	Maintenance	Establishment including,collection of taxes etc.	Expenditure on project (continuing items).	Total	Deposit work	Total (Rs. in lakhs)
1	2	3	4	5	6	7	8
1972-73	0.02	0.04	0.95	14.08	15.01	..	15.01
1973-74	0.02	0.27	0.96	7.87	9.12	..	9.12
1974-75	0.02	0.13	1.23	16.68	18.06	0.36	18.42
1975-76	0.03	0.25	1.37	19.26	20.91	1.04	21.55
1976-77	0.04	0.25	1.42	59.92	61.64	0.50	62.13
Compensation to be paid for cases as and when award is declared.				15.00	15.00	..	15.00
TOTAL :	0.13	0.94	5.93	132.81	139.73	1.90	141.63

Average surplus Rs. 148.57 lakhs - Rs. 141.63 lakhs = $\frac{6.94}{5}$ = Rs. 1.39 Lakhs per year.

JABALPUR : FIRST-PHASE RECEIPTS (SALE OF PLOTS) (INCORPORATED IN CASH-FLOW 16-T.4) 16-T.5

S. No.	Source of Receipts	Corresponding Gross area under Acquistion (hect.)	Net Saleable area (hect.)	Saleable rates (Average per hect.)	Receipts (Rs. in lakhs).
(1)	(2)	(3)	(4)	(5)	(6)
1.	Residential Plot (Break-ups)				
a.	H. I. G. and M. I. G. Groups.	329.8	187.00	353000	660.11
b.	L. I. G. and E. W. S. Groups	640.2	363.00	250000	907.50
2.	Commercial Plots	179.0	50	1076000	538.00
	Total :				2105.61 Say Rs. 2105 lakh

It will be possible for the Development Authority to undertake implementation of the plan (First-phase) with a seed capital of Rs. 200 lakhs which may be raised through Government loans, institutional financing and public borrowings. The total expenditure including normal interest on the seed capital and nominal overhead charges (8%+2%) and contribution to sinking funds works out to be Rs. 2125 lakhs. Against this investment, total anticipated receipts from the sale of developed land for residential, commercial and other plots, borrowings and contribution from other departments work out to Rs. 2521 lakhs as per table 16-T.6 (cash-flow). This will give a surplus of nearly Rs. 376 lakhs after discharging all liabilities. In addition, the executing agency will be in possession of 535 hectares of undeveloped but acquired land for undertaking its second phase works. This establishes that the proposals are viable and financially sound. First phase of implementation will not only generate a capital for the next phase work, but also help the process of urbanisation in a planned and systematic manner. A cash-flow statement is given in table 16-T.6.

JABALPUR : FIRST-PHASE DEVELOPMENT PROGRAMME CASH-FLOW 1976-1981

(Rupees in lakhs)

16-T-6

Year	Loans from Govt., other sources	Contribution from Health education. PHE. deptts.	Contribution from T. I. T. Mpl. Corporation in works	Grants in aid for slums	Contribution from PWD/ Rly. for over-bridge	Sale of plots including advance	Receipts excluding loans. (3to7)	Receipts including loans. (8+2)	Expenditure on works (Dev.)	Payment of interest overhead charges 10%	Sinking-fund for repayments of loans.	Acquisition and compensation	Total Expenditure (Col. 10 to 13)	Excess(–) saving (+) (Progressive)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1976-77	50	..	..	5	..	..	5	55	200	..	..	97	297(—)	242
1977-78	100	5	2	10	..	200	217	317	300	5	..	98	403(—)	86
1978-79	50	5	2	20	15	500	542	592	420	15	..	100	535 (+)	57
1979-80	..	5	2	25	50	700	782	782	310	20	..	..	330(+)	452
1980-81	..	5	4	20	40	706	775	775	340	20	200	..	560(+)	215
Grand Total 1976-1981	200	20	10	80	105	2106	2321	2521	1570	60	200	295	2125 (+)	396

Notes :—

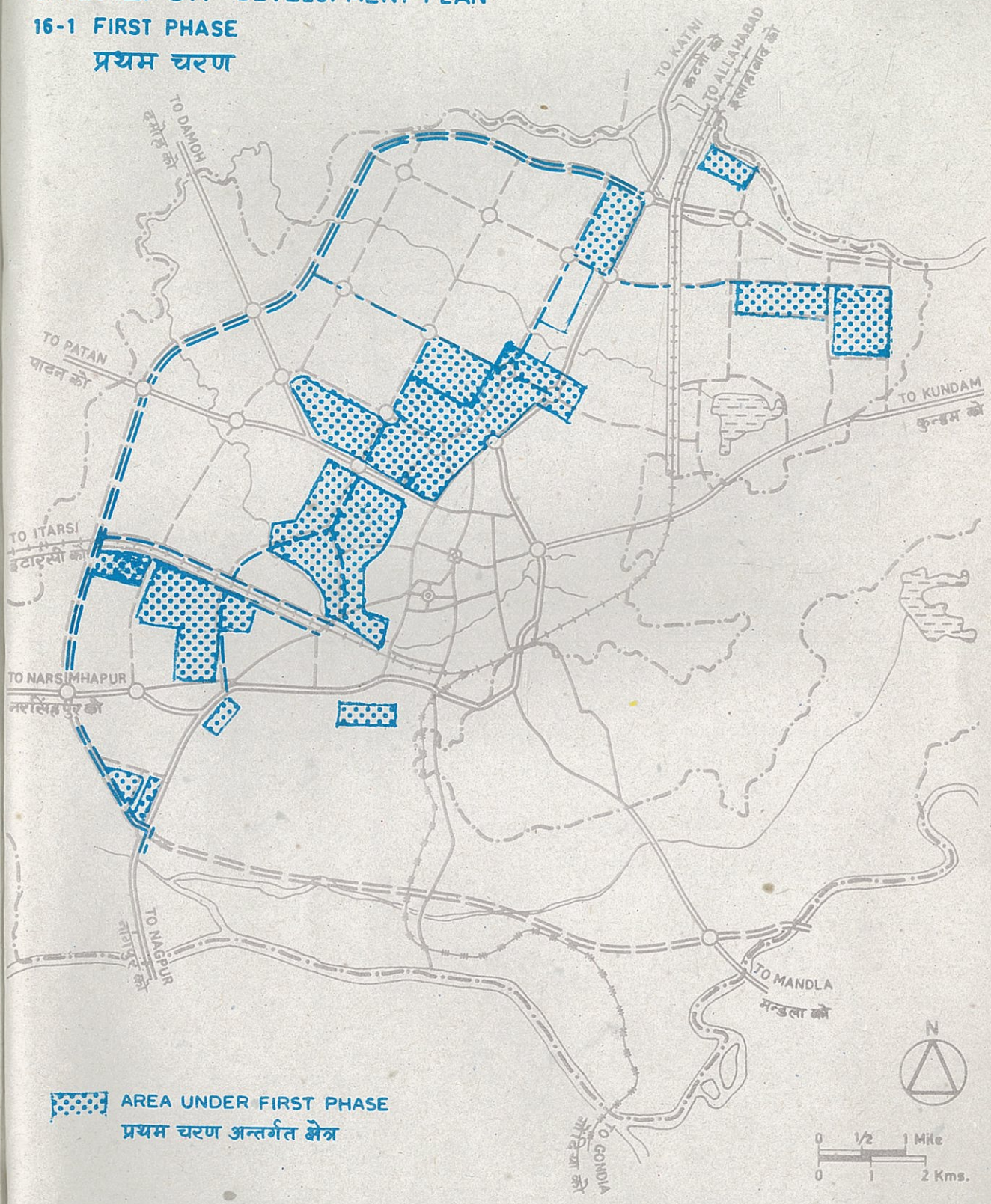
1. Receipts and Expenditures pertaining to Industries Deptt. have been deleted from cash flow as the works will be executed by them.
2. Cash-flow will be reviewed after watching the Receipts from all sources periodically.



JABALPUR - DEVELOPMENT PLAN

16-1 FIRST PHASE

प्रथम चरण



16.3 ZONING REGULATIONS

The zoning regulations shall be applicable to the entire city except central area for which separate regulations have been given in Chapter 15. The planning area has been divided into 7 broad land-use zones. Zoning regulations covered in this chapter are broad in nature. The detailed regulations will be framed at the time of preparation of zoning plans. Till then, zoning regulations prescribed here shall be effective.

16.31 Land-Use Zones

Various land-use zones have been prescribed in Development Plan for the land situated within planning area. The land earmarked for a particular use in the plan such as residential, commercial, industrial can only be used for the purpose for which it has been earmarked. Details of the same are given in the table 15.T.7.

Immediate conversation of present use to prescribed use (as per plan) is not intended. The present use of land can continue. The present use can, however, be changed to prescribed use only, e.g., if the present use of land is agriculture and prescribed use is commercial its use can be converted to only commercial and permission for a change of use can be obtained as per requirement laid down in this chapter and rules framed under the provisions of the M. P. Nagar Tatha Gram Nivesh Adhiniyam, 1973. Section 25 of the Adhiniyam regarding conformity with the Development Plan will apply to those uses which have been tested as incompatible and for non-conforming uses.

The future use of land prescribed in the Development Plan does not detract agriculture use to which land at present might be put. The prescribed use in the Plan is meant for future only. Its implications are as under :—

1. The present use of land for agriculture shall continue.

2. Any diversion from this use shall be in accordance with the future use prescribed in the Development Plan.

3. No diversion will be permitted except in accordance with the provisions of the Nagar Tatha Gram Nivesh Adhiniyam, 1973.

4. Notwithstanding anything contained in any future law and land ceiling of urban property, land presently in use for agriculture shall continue to be used for this purpose only and the use of land prescribed in the Development Plan will be deemed to be operative only after permission is accorded under the provisions of the Nagar Tatha Gram Nivesh Adhiniyam, 1973.

16.32 Permissible Uses

The uses in the seven land-use zones and permissible on approval by competent authority are given below :—

Land Use Zone	Uses Permitted in the Zone	Uses permissible on approval by competent authority
1	2	3
Residential	Residences, hostels, boarding houses with density limitations; nursery, kindergarden schools; temples, mosques, churches and other places of worship; clinics social and cultural institutions; recreational uses, clubs; public utilities and services; taxi and scooter stands.	Professional offices situated in the same premises; nursing homes, hospitals, clinics other than meant for contagious diseases; colleges, research centres; semi-government offices; poultry; household industry local and service shops, ata chakki, hotels; petrol filling stations, service station for light vehicles.
Commercial	Retail shops, business and professional offices, service shops like barbers, tailors, laundry repair shops; restaurants, entertainment places like cinemas and theaters; specialised markets, wholesale markets, mandis, warehousing and godowns which do not cause nuisance; residential dwellings and professional establishments.	Petrol filling stations and service station, coal, wood, or timber yards, octroi free zones, flatted factories, service industries which do not cause nuisance, small workshop and repair shops, agro-based insdustries adjacent to mandis.
Industrial	(a) General insdustries, such as heavy industries, medium industries, light industries flatted factories such as dal and oil mills, tinning, and bottling, milk dairies, fruit canning etc. Service industries such as repair workshops and service centre, public utility and services.	Petrol filling stations, transport companies, junk yards, show rooms, shops and restaurants godowns, warehousing and forwarding agencies.
	(b) Obnoxious industries like chemical plants, leather works, bone mills distillaries; effluent treatment plant and other services.	Industries complimentary to obnoxious industries, residential for essential staff only.
	(c) Extractive industries like lime kilns, brick kilns, moorrum and stone crushing, cutting and polishing industires; residences for incidental labour.	Service workshops, godowns and warehousing.
Public and semi Public	Central, state government, semi-government and other offices; social, religious, cultural institutions; libraries, museums, art galaries; educational institutions such as university, colleges, polytechnics, technical institutions, research laboratories etc; General and specialised hospitals, clinical laboratories, health centres; public utility and services.	Pettrol filling stations, parking areas, shops, restaurants, residential.

(1)	(2)	(3)
Recreational	All recreational uses such as parks, playgrounds, stadium, swimming pools and other areas allocated for recreational use including mela grounds and exhibition grounds.	Petrol filling stations, restaurants, hotels, motels, residences, incidental to recreation.
Transportation	Railway stations, goods yards, marshalling yards, city bus terminus, depots, workshops, truck stand, truck terminus, dryports, aerodrome air strips.	Forwarding agencies, warehousing godown cold storage, petrol and service stations repair work shops, dry accessory shops, restaurants, motels and hotels.
Agricultural	All the uses permitted as covered in definition of agriculture in M. P. Town and Country Planning Act, 1973.	Cemeteries, crematoriums, cremation grounds, sewage treatment plants trenching grounds, brick kilns and pottery manufacturing stone crushing, quarrying and other extractive industries, warehousing and godowns.

Explanatory Note :

Hotels could be permitted in residential areas provided the plans are approved by the competent authority. Petrol pumps and service stations, organised shopping centres, cinemas could also be permitted in residential areas provided they are in conformity with the detailed approved are plans.

The existing land-use shall not be altered except to the extent that such changed uses are in compatible with the surrounding use.

Future development will be strictly in accordance with the prescribed land use.

General Recommendations :

It is recommended that all Government land which are scattered should not be leased to individuals and instead these should be handed over to the implementing authorities immediately for its proper and best use. It is assumed that by handing over such land to implementing authorities, much of the evil which exists today in the city could be avoided and encroachment which is being done on the government land by various vested interests could be stopped.

It is a tendency of various local authorities to utilise open spaces in the approved lay-out plans for various colonies for use other than shown in the plan.

This will be treated as an offence and action shall be taken against these local bodies as per the provisions of the M. P. Nagar Tatha Gram Nivesh

Adhiniyam, 1973. Open spaces which have been left out in an approved layout plan, garden, school and community hall etc. should be utilised for the specific purpose.

Granting of conditional permission for any development should be prohibited :

(1) Existing land-use will not be altered except to the extent of imcompatibility with the prescribed land-use.

(2) Future development will be strictly in accordance with the prescribed land-use.

(3) The location of sectoral and higher category shopping area in residential zones would be done according to the provisions of the zoning plan for a planning unit. Commercial activity as prescribed would be permitted in these specified shopping areas.

(4) Where the area is reserved for recreational purpose or is an open area, horticultural, silvi-cultural and agricultural operations would continue till such time as the specific scheme is prepared and implemented for the acquisition and development of the area for a specific recreational purpose.

16.33 **Requirement for Development Permission**

The following documents and particulars should accompany the application for permission for development under Section 29 of the Adhiniyam:—

(i) Description of land (location with name of road/roads on/off, which the property abuts and boundaries).

(ii) Khasra Plan (330 ft. to an inch scale) showing numbers of land in question and also adjoining Khasra falling within 200 Mts. from the outer limit of the land. The land applied for shall be shown in 'Red' in Khasra maps.

(iii) Location plan indicating the land in question to the scale of 82.5 ft. to an inch showing main approach roads and any other important buildings in the vicinity such as hospital, school, cinema etc. and existing uses surrounding the land.

(iv) Survey plan to a scale of 82.5 ft. to an inch showing the boundaries of land in question, natural features like nullah, ponds, trees, slopes, contour plan if the land is undulated, high tension line passing through the adjoining land upto a distance of 200 Mts. existing road showing the right of way and railway lines with their specification and railway boundaries, position of electric and telephone poles and all such other matters which need to be co-ordinated with adjoining areas.

(v) A plan showing all development proposals with respect to land in question with a general report. A model may be submitted so as to make it self-explanatory.

(vi) A plan showing details of utilities and services like water supply, drainage, electricity and in case a septic tank is provided the same shall be shown along with the disposal of sullage water.

(vii) Other architectural details required for proper scrutiny of proposals.

(viii) A note indicating the type of development proposed, viz., residential, commercial or industrial.

16.34 Residential Development

In already existing congested areas in the city it will not be possible to fix minimum and regular size of the plots because most of the houses in these areas have irregular sizes of plots but F.A.R. and plot coverage have been prescribed to achieve the prescribed density and public health requirements for healthy living.

Coverage for Existing Built Up Area

The maximum permissible coverage for plots in existing built up areas will be as follows:—

JABALPUR ; PLOT SIZE AND COVERAGE FOR RESIDENTIAL DEVELOPMENT 16-T.8

Sr. No.	Plot Size	Coverage (Maximum)	Remarks
1	2	3	4
1.	Plot area not exceeding 90 sq. metres.	75%	1% for every additional sqr metre or part of it.
2.	Plot area above 90 sq. metres but not exceeding 180 sq. metres.	66%	1% for every additional 18 sqr. metres or part of it.
3.	Plot area above 180 sq. metres.	60%	—
4.	Civil Lines	33%	Minimum plot area permissible 500 sq. metres.

F. A. R. for other Residential Area :

Floor area ratio for residential area proposed for development shall be as follows. The F. A. R. shall be governed by the residential density prescribed for the residential areas :—

JABALPUR ; DWELLING-UNIT DENSITY & F. A. R FOR RESIDENTIAL DEVELOPMENT (PROPOSED AREA) 16-T.9

D. U. Density Range per hectare	F. A. R.
1	2
Low (up to 10-25 D. U.)	0.75
Medium (26-50 D. U.)	1.00
Medium-High (51-75 D. U.)	1.50
High (Above 75 D. U.)	2.00

16.35 Sub-Division Regulation (Residential Area)

Sub-division regulation for development of land for residential area will be based on the following standard till zoning plans are published.

After publication of zoning plans, regulations provided in the zoning plans for specific area will be applicable.

Plot Size

The minimum size of the plots should be 75 square metres. However, the plots with area of 48 metres may be permitted to cater for the needs of economically weaker section in specific areas. The maximum size of plots should not be more than 750 square metres.

JABALPUR : PLOT-SIZE COVERAGE AND SETBACKS FOR RESIDENTIAL USE 16-T.10

Sr. No.	Size of plot (in metres)	Area (in sq. metres)	Percentage built up Area	Type of construction	Marginal Open Space (Metre)		
					Front	Side	Rear
1	2	3	4	5	6	7	8
1.	4×12	48	60	Row	3.0	0	1.5
2.	5×15	75	60	Row	3.0	0	1.5
3.	7×15	105	50	Row	3.0	0	1.5
4.	9×15	135	50	Semi-detached	3.0	2.5	1.5
5.	12×18	216	50	„	3.0	2.5	2.5
6.	12×18	216	42	Detached	3.0	2.5	2.5
7.	12×24	288	40	„	4.5	5/2.5	2.5
8.	15×24	360	35	„	6.0	3/3	2.5
9.	15×27	405	33	„	7.5	3/3	2.5
10.	18×30	540	33	„	9.0	3/3	3.0
11.	20×30	600	33	„	9.0	3.5/3.5	3.0
12.	25×30	750	33	„	12.0	4.5/4.5	3.0

The coverage for the plots in different planning units will be as per the plan approved for those areas by the competent authority and F.A.R. will be as per the density fixed for these respective planning sectors till zoning plans are finalised.

In case of irregular size of the plot setback shall be governed by the average width and the depth of the plot, and shall be governed by the setbacks prescribed for the corresponding regular plot size.

In case of corner plot, setback should be governed by the standard prescribed for each of the streets on which it abuts.

Setback on National Highway and other major transportation routes having width not less than 66 metres to keep a minimum of 16 metres.

Open Spaces

8 to 10 per cent of total land proposed for development should be provided as open spaces for gardens, tot-lots etc.

Schools

One primary school (0.5 hectare) should be provided for every lot of 300 to 400 residential plots. The proportionate space for school should be provided in case the development is not large enough to justify one school. In this way, it will be possible to ensure provision of essential space for a school by pooling proportionate space from adjacent residential areas.

Road Widths

The following road widths should normally be provided. In case, a Ring Road, Major City Road or Sector Road provided in Development Plan falls within the proposed area for development, space according to the right of way of those roads will have to be provided within the lay-out.

Widths of Roads in Residential Area	
Sub-Sector Roads	24 Metres
Collection Street	18 Metres
Local Roads	9/12 Metres
Loop Street	9 Metres
Cul-de-Sac	7/8 Metres

Shops

One per cent of the total area shall be earmarked for local shops.

Group Housing

Approach to multi-storeyed flats shall be provided by approach roads, walk-ways and pedestrian paths and their width will be governed by the design requirements. Adequate provision will have to be made for parking and servicing facilities. Lifts and suitable stair cases should be provided for more than four-storeyed high buildings.

Note.—Maximum length of loop street should not be more than 500 metres. Maximum length of Cul-de-sac should not be more than 170 metres.

Note.—1. The width of the plot for group housing or multi-storeyed structure should not be less than 24 metres.

2. Minimum distance between vertical blocks in Group housing and multi-storeyed buildings should in no case be less than half of the height of tallest block.

The height of building in group housing or in multi-storeyed structures in no case be more than 30 metres. The setbacks for such type of development will be as follows :—

Front Setback	Half of the height of building.
Side Setback	One-fourth of the building or 4.5 metres minimum.
Rear Setback	One-fourth of the height of building or 4.5 metres which ever is more.

16.36 COMMERCIAL DEVELOPMENT :

In already existing congested commercial areas, these uses have been identified in the following categories :—

1. Commercial Roads.
2. Commercial-cum-Residential Street.
3. Organised Shopping Centre.

Coverage for commercial roads and commercial-cum-residential street will be 80%. Permissible F. A. R. for these roads and streets has been covered in Chapter 15.

Organised Shopping Centre :

The areas which have been designated for commercial use and have area more than 400 sq. metres shall be treated as organised shopping centres.

Coverage :

Maximum coverage of area for commercial use shall not be more than 50%. The remaining area of the plot shall be used for parking lots, movement space and recreation. The location of parking area, movement area and recreational area shall depend on the size of the plot, its location and design.

Maximum permissible built up area for individual plot in these shopping centres shall not be more than 80% on the ground floor.

Maximum permissible F. A. R. for these shopping centres shall be 2.5.

Note :—Basement shall be allowed in an Organised Commercial Centre which shall not be counted F.A.R. calculations.

The permissible are coverage plot area coverage and F.A.R. for other proposed commercial areas in the Development Plan shall be as follows :—

JABALPUR : COVERAGE AND F.A.R. FOR COMMERCIAL DEVELOPMENT

16—T. 11

Sr. No.	Location	Area Coverage	Plot-Area Coverage	F. A. R.
(1)	(2)	(3)	(4)	(5)
1.	City Centre	50%	80%	2.5
2.	Trade Centre	40%	80%	2.5
3.	Planning Unit Centre	50%	80%	2.0
4.	Sector-Level Centre	50%	80%	1.5
5.	Convenient shopping	60%	70%	1.0
6.	Wholesale	50%	70%	1.5
7.	Warehousing and Storage	50%	70%	1.5

Note:— Basement shall be allowed in commercial area in city centre planing unit centre, wholesale; warehousing and storage and shall not be counted for F. A. R. calculations.

Cinema :

The plot area required for a cinema is directly related to auditorium capacity, adequate vehicular parking within premises, incidental shops and open space around the building for ventilation and safety measures against fire hazards. The area required for cinema plot shall be at the rate of 2.3 square metres per seat capacity of the proposed auditorium. The permissible coverage on plot shall be 50% of the total area of the plot and shall be subject to the necessary setbacks prescribed on the plot.

The front setback will depend upon the location of cinema plot and shall be between 10 and 15 metres. The side setbacks and rear setbacks shall be 4.5 metres. The incidental shops may be permitted in cinema premises provided the total coverage including cinema building and shops does not exceed more than 50% of the plot area. Adequate parking space for cars, scooters and cycles must be provided within the plot area.

16.37 INDUSTRIAL DEVELOPMENT :

A. Flatted Factories :

The minimum setbacks shall be provided according to the development along streets suggested setbacks are :—

Front	5 to 10 metres
Rear	4.5 metres
Side	4.5 to 6 metres

B. Other Industrial areas:

The permissible coverage and setback schedule shall be governed by the following table:—

JABALPUR : COVERAGE AND SETBACKS FOR INDUSTRIAL DEVELOPMENT

16-T.12

Type of Industries	Coverage	Setbacks (in metres)		
		Front	Side	Rear
(1)	(2)	(3)	(4)	(5)
Heavy	25%	30	3/3	6
Medium scale	30%	6	3/3	4.5
Small scale	40%	4.5	3/3	4.5
Household & Service	40%	4.5	2/2	4.5
Agro-based	40%	4.5	3/3	4.5

16.38 PUBLIC & SEMI-PUBLIC:

Permissible coverage and F.A.R. for existing congested areas are already given in the Chapter 15 on Central Area. Permissible coverage and F.A.R. for public and semi-public uses proposed in the Development Plan and not covered elsewhere shall be as follows:

JABALPUR : LAND REQUIREMENT, COVERAGE AND F. A. R. FOR PUBLIC AND SEMI-PUBLIC USES (PROPOSED AREA)

16-T.13

Sr. No.	Description	Minimum Land Requirements (Hectares)	Coverage	F. A. R.
(1)	(2)	(3)	(4)	(5)
1.	College	4	30%	1.00
2.	Higher Secondary & Secondary Schools	2	30%	1.00
3.	Primary School	1/2	40%	1.00
4.	Nursery School	1/4	40%	1.00
5.	Hospital	4	40%	1.50
6.	Health Centre	1/2	40%	1.00
7.	Police Station	3/4	30%	1.00
8.	Fire Station	1	30%	1.00
9.	Community Hall & Library	1/2	30%	1.50
10.	Religious Building	1/8	30%	1.00
11.	Govt. & Semi-Government Offices	..	25%	2.00

Note:—5% additional coverage shall be allowed for covered garages for cars and cycle stand.

Appendix I

Copy of the Notification No. 3192-FI-87-XXXIII-73

Dated 13th December, 1973, published in M.P. Gazette, Part II
Dated 11th January, 1974.

Under sub-section (1) of Section 13 of Madhya Pradesh Nagar Tatha Gram Nivesh Adhiniyam, 1973 (No. 23 of 1973), the State Government for the purpose of this Adhiniyam hereby constitutes Jabalpur Planning Area, the limits of which are defined in the schedule given below :—

SCHEDULE

Limits of Jabalpur Planning Area

1. North-East.—Suhagi, Chanti, Hathana, Kheri, Bilpura, Gohniya, Manegaon, Maharajpur, Imaliya, Piparia, Richai, Madai, Dumna, Chakjethi, Umariya, Pipariya, Sonpur, Kavra-Khedi, Kyolari, Lamti and up to the northern-eastern limit of Pipariya village.

2. East-South.—Paraswada and up to the eastern-southern limit of Jamtara village.

3. South-West.—Towar, Pindarai, Kunjwa, Vikrampur, Aahua, Bahdan, Paraswada, Chakital, Dalpatpur and up to the southern-western limit of Pandua village.

4. West-North.—Mohaniya, Semariya, Bansa Kacnari, Racksha, Rangwa, Nandna, Nandni, Rashiwan, Rewjha, Oriya, Koda, Kathanda, Amkheda, Kundbori, Khiriya Kalan, Khajari and up to the western and northern limit of Khur village.

By order and in the name of the Governor of Madhya Pradesh,

N. C. JAIN
Dy. Secretary,
Govt. of Madhya Pradesh,
Housing and Environment Deptt.

Appendix I

GOVERNMENT OF MADHYA PRADESH

TOWN AND COUNTRY PLANNING DEPARTMENT

NOTIFICATION

Bhopal, dated 15 January, 1975

No. 114/F-1-87/XXXIII/73.—Under clause (a) of sub-section (2) of Section 13 of Madhya Pradesh Nagar Tatha Gram Nivesh Adhiniyam, 1973 (No. 23 of 1973), the State Government hereby include the limits given in the following schedule in the Jabalpur Planning Area which is previously constituted by this Department's Notification No. 3192/F-1-87/XXXIII/73, dated 13 December, 1973.

SCHEDULE

Limits included in the Planning Area of Jabalpur :—

1. North.—Village Jhinna, Amhinata, Hinota and Piparia.
2. West.—Village Jhinna and Bilha.

By order and in the name of the Governor of Madhya Pradesh,

Sd/-

(N. C. JAIN)

Deputy Secretary to Government of Madhya Pradesh,

Town and Country Planning Department.

Appendix III

नगर तथा ग्रामीण क्षेत्र नियोजन विभाग, मध्यप्रदेश

सूचना

मध्यप्रदेश नगर तथा ग्राम निवेश अधिनियम, 1973 (क्रमांक 23 सन 1973) की धारा 15 की उपधारा (3) के अनुसरण में सर्व साधारण की जानकारी हेतु यह प्रकाशित किया जाता है कि संचालक, नगर एवं ग्रामीण क्षेत्र नियोजन विभाग, द्वारा निम्नलिखित अनुसूची में विनिर्दिष्ट क्षेत्र में भूमि का वर्तमान उपयोग संबंधी मानचित्र तथा रजिस्टर तदनुसार सम्पर्क रूप से अंगीकृत किये जाते हैं. इस सूचना की प्रति मध्यप्रदेश राजपत्र में प्रकाशन हेतु भेजी जा रही है. उक्त प्रकाशन इस बात का निश्चायक साक्ष्य होगा कि उक्त मानचित्र तथा रजिस्टर सम्यकसा रूप से तैयार तथा अंगीकृत किये गये हैं.

जबलपुर निवेश क्षेत्र में स्थित भूमि की सूची

उत्तर-पूर्व .—ग्राम सुहागी, चांटी, हथना, खेरी, बिलपुरा, लोहनिया, मानेगांव, महाराजपुर, इमलिया, पिपरिया रिछाई, मड़ई, डुमना, उमरिया, पिपरिया, सोनपुर कन्दराखेड़ा, क्योलारी, लामती तथा पिपरिया.

दक्षिण-पूर्व.—ग्राम परसवाड़ा तथा जमतरा.

दक्षिण-पश्चिम.—ग्राम तेवर, पिडरई, कंगुवा, विक्रमपुर, अहुवा, वेहदन, परसवाड़ा, चौकीताल, दलपतपुर, पुन्डुवा, आमहिनोता, छीतपार, हिनौता-बमरूहा, पिपरिया, कुन्दा, कुन्दन, बिलहा तथा झिन्ना.

उत्तर-दक्षिण.—मोहनिया, सिमरिया, बांसा, कसनारी, रक्शा, रंगवा, नदाना, नन्दनी-रोशवा, करमेता, रेक्शा, ओरिया कथेड़ा, आमखेड़ा, कुडवारी, खिरिया कला, खजूरी, गुरदा तथा सिरिया खुर्द.

उक्त अंगीकृत मानचित्र तथा रजिस्टर दिनांक 20-8-76 से 31-8-76 तक संयुक्त संचालक, नगर एवं ग्रामीण क्षेत्र नियोजन, 28 साउथ सिविल लाइन्स, जबलपुर के कार्यालय में कार्यालयीन समय में अवकाश के दिनों को छोड़कर अन्य दिन सावजनिक निरीक्षण हेतु खुला रहेगा.

हस्ताक्षर

संयुक्त संचालक

नगर एवं ग्रामीण क्षेत्र नियोजन

जबलपुर, मध्यप्रदेश

Appendix IV

Copy of the Notification No. 4367-5919-XXXII-78, dated the 21st November 1978 published in M. P. Gazette, Part II, dated the 23rd February, 1979.

Under clause (a) of sub-section (2) of Section 13 of the Madhya Pradesh Nagar Tatha Gram Nivesh Adhiniyam, 1973 (No. 23 of 1973), the State Government hereby exclude the limits given in the following schedule from the Jabalpur Planning Area which was previously constituted by the department's Notification Nos. 3192-F-1-87, dated the 13th December 1973 and 114-F-1-87, dated the 15th January 1973:—

SCHEDULE

West.—Village Amahinota, Zinna, Koodan and Bilha.

South.—Village Dalpatpur, Chowkital, Ramnagara and Tilwaraghat.

By order and in the name of the Governor of Madhya Pradesh,

Sd/-
(G. P. SHRIVASTAVA)
Dy. Secretary,
Govt. of Madhya Pradesh,
Housing and Environment Deptt.

Appendix V

मध्यप्रदेश शासन

आवास एवं पर्यावरण विभाग

(पर्यावरण शाखा)

क्रमांक 4042/बत्तीस/भोपाल, दिनांक 28 सितम्बर 1979 (मध्यप्रदेश राजपत्र दिनांक 8 फरवरी 1980, भाग 2 के अंक में पृष्ठ 268 पर प्रकाशित)

चूंकि राज्य सरकार ने संचालक, नगर एवं ग्रामीण नियोजन द्वारा प्रस्तुत की गई जबलपुर नगर की विकास योजना पर सावधानी पूर्वक विचार कर लिया है.

2. एवं चूंकि राज्य सरकार ने मध्यप्रदेश नगर तथा ग्राम निवेश अधिनियम, 1973 (क्रमांक 23 सन 1973) की धारा 18(2) के अंतर्गत संचालक द्वारा प्रस्तुत किये गये प्रतिवेदन पर विचार कर लिया है.

3. और चूंकि राज्य सरकार ने संचालक द्वारा प्रस्तुत की गई विकास योजना यथावत बिना किसी उपांतरणों के साथ अनुमोदित किया है.

4. इसलिये अब मध्यप्रदेश नगर तथा ग्राम निवेश अधिनियम, 1973 (क्रमांक 23 सन 1973) की धारा 19(1) द्वारा प्रदत्त शक्तियों को प्रयोग में लाते हुए, राज्य सरकार, विकास योजना मंजूर करती है.

5. राज्य सरकार आगे अधिनियम की धारा 19(4) के अंतर्गत आदेश देती है कि अधिसूचना की एक प्रति राजपत्र में प्रकाशित की जाए और एक प्रति ग्राम सूचना के रूप में निम्नलिखित स्थानों पर उपलब्ध कराई जाए :—

1. कार्यालय आयुक्त, जबलपुर संभाग, जबलपुर.
2. कार्यालय कलेक्टर, जबलपुर.
3. कार्यालय अध्यक्ष, विशेष क्षेत्र विकास प्राधिकारी, भेड़ाघाट.
4. संयुक्त संचालक, नगर एवं ग्रामीण नियोजन, जबलपुर.
5. मंजूर की गई विकास योजना की प्रति एवं प्रतिवेदन जिसे संचालक द्वारा अधिनियम की धारा 18 (2) के अंतर्गत प्रस्तुत किया गया है, उसे संयुक्त संचालक, नगर एवं ग्रामीण नियोजन, जबलपुर के कार्यालय में देखा जा सकेगा.

मध्यप्रदेश के राज्यपाल के नाम से तथा आदेशानुसार,

सही/-(के. डी. मोडक)
उप सचिव.
मध्यप्रदेश शासन,
आवास एवं पर्यावरण विभाग

Appendix VI

Based on observations for 30 years

JABALPUR : WIND AND WEATHER

Month		Weather Phenomenon: No. of days with Hail	Thunder	Fog	Dust storm	Squall	Percentage No. of days of wind from: N	NE	E	SE	S	SW	W	NW	Calm
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15
Jan.	I	0	1.5	2	0	0	5	8	4	33	9	1	1	2	37
	II						17	31	3	7	4	5	3	6	24
Feb.	I	02	2	0.2	0	0	3	5	3	36	9	3	3	2	36
	II						17	23	2	5	3	8	12	11	19
Mar.	I	0	3	0	0	0.1	3	5	4	32	12	6	3	3	32
	II						17	14	2	6	5	13	13	17	13
April	I	0	3	0	0.1	0.1	2	5	3	25	13	13	9	2	28
	II						14	9	2	5	5	14	16	23	12
May	I	0	4	0	0	0.3	2	2	1	10	11	29	26	3	16
	II						13	8	2	3	3	19	23	23	6
June	I	0	10	0	0.1	0.1	1	2	1	4	9	41	28	4	10
	II						8	8	3	6	6	28	21	12	8
July	I	0	10	0	0	0	0	2	1	4	7	41	31	4	10
	II						2	4	2	4	5	34	27	7	15
Aug.	I	0	9	0	0	0	2	3	1	4	6	38	31	3	12
	II						3	5	2	4	4	29	30	8	15
Sep.	I	0	6	0.1	0	0	2	6	4	9	9	25	21	4	20
	II						11	14	3	5	5	16	18	11	17
Oct.	I	0.1	2	1.5	0.2	0	2	8	5	30	15	4	4	1	3
	II						14	32	10	6	1	3	2	5	27
Nov.	I	0	0.4	0.5	0	0	1	4	4	48	11	1	1	1	29
	II						13	33	9	4	1	2	1	3	34
Dec.	I	0	0.4	0.5	0	0	3	4	4	44	8	1	0	1	35
	II						15	31	5	4	2	3	2	3	35
Annual Total	I	0.3	5.1	5	0.4	0.6	2	5	3	23	10	17	13	2	25
	II.						12	17	4	5	4	14	14	11	19

INDEX I—Observation at 08.30 hrs. I. S. T.

II—Obesrvation at 17.30 hrs. I. S. T.

Appendix VII

JABALPUR : NATURE OF TRAFFIC PREDOMINENT

S. No.	Name of Road	Volume
(1)	(2)	(3)
A—ANIMAL		
1.	Katra Naka to Ghamapur Chowk	31
2.	Ghamapur Chowk to Railway Stadium	726
3.	Katra Naka Chauraha to Ranital Chowk	3498
4.	Ranital Chowk to Railway Crossing	64
5.	Ghamapur Chowk to Katra Naka	43
6.	Kanchghar Chowk to Q-Type	1400
7.	Gorakhpur to Azad Chowk	594
8.	Azad Chowk to Gwarighat	194
9.	Subhash Talkies to Gohalpur Thana	50
10.	Bus Stand to Gorakhpur Crossing	1028
11.	Gorakhpur level Crossing to Howbagh Chowk	134
12.	Baluchistan Kirana Stores to Nagar Nigam Chowk	53
13.	Naudra Bridge to Railway Stadium	147
14.	Madan Mahal Police Station to Shastri Bridge	119
15.	Shastri Chowk to Banbina	32
16.	Omti Chowk to Dr. Rajendra Prasad Chauraha	364
17.	Omti Chowk to Galgala Chowk	30
18.	Fuwara to Baldev Bagh	210
19.	Fuwara to Ranital Chauraha	278
20.	Kanchghar to Bridge No. 1	177
B—PEDESTRIAN TRAFFIC		
1.	Ghamapur Chowk to Railway Stadium	10165
2.	Banbina Square to Shastri Bridge	2261
3.	Katra Naka Chauraha to Ranital Chowk	5622
4.	Ranital Chowk to Railway Crossing	5491
5.	Banbina Square to Empire Talkies	3006
6.	Empire Talkies to St. Alloysis College	3069
7.	St. Alloysis College Gauriyaghat Naka	1878

(1)	(2)	(3)
8.	Ghamapur Chowk to Katra Naka	7265
9.	Kanchghar Chowk to Q-Type	17247
10.	Gorakhpur to Azad Chowk	6027
11.	Bus Stand to Fuwara	9750
12.	Fuwara to Subhash Talkies	41334
13.	Subhash Talkies to Gorakhpur Thana	3971
14	Bus Stand to Gorakhpur level Crossing	20508
15.	Gorakhpur level Crossing to Howbagh Chowk	5249
16.	Fuwara via Tularam Chowk to Omti	16952
17.	Malviya Chowk to Omti	5492
18.	Azad Chowk to Howbagh Chauraha	6537
19.	Howbagh Chauraha to St. Alloysis College	3833
20.	Baluchistan Kinara Stores to Nagar Nigam Chowk	2646
21.	Nagar Nigam Chowk to Naudra Bridge	6121
22.	Naudra Bridge to Rly. Stadium	4621
23.	Madan Mahal Police Station to Shastri Chowk	2502
24.	Shastri Chowk to Banbina	2261
25.	Omti Chowk to Dr. Rajendra Prasad Chauraha	2323
26.	Omti Chowk to Galgala	8827
27.	Fuwara to Baldev Bagh	8468
28.	Fuwara to Ranital Chowk	7016
29.	Karam Chand Chowk to Naudra Bridge	8721
30.	Bridge No. 1 to Penti Naka	2995
31.	Allahabad Bank to Robertson College	1774
32.	Railway Stadium to C.S.P. Canteen	4459
33.	M.E.S. Bachelor Engg. Hostel to St. Thomas School Chauraha	851
C—TRUCK TRAFFIC		
1.	Katra Naka to Ghamapur Chowk	290
2.	Ghamapur Chowk to Railway Stadium	102
3.	Railway Stadium to Banbina Square	240
4.	Banbina Square to Shastri Bridge	62
5.	Katra Naka Chauraha to Ranital Chowk	4842
6.	Banbina Square to Empire Talkies	90
7.	Empire Talkies to St. Alloysis College	72
8.	St. Alloysis College to Gauriyaghat Naka	35
9.	Katra Naka to Katni	713
10.	Damoh Naka to Madhotal Chowk	186
11.	Ghamapur Chowk to Katra Naka	22

(1)	(2)	(3)
12.	Kanchghar Chowk to Q-Type	1207
13.	Gorakhpur to Azad Chowk	83
14.	Azad Chowk to Gwarighat	47
15.	Bus Stand to Gorakhpur Level Crossing	556
16.	Gorakhpur Level Crossing to Howbagh Chowk	16
17.	Madan Mahal Police Station to Shastri Chowk	199
18.	Shastri Chowk to Banbina	62
19.	Kanchghar to Bridge No. 1	309
20.	Bridge No. 1 to Penti Naka	20
	TOTAL	9153
	GRAND TOTAL	257436

D—CYCLE TRAFFIC

1.	Kanchghar Chowk to Satpula Bridge	10987
2.	Satpula Bridge to Ranjhi	4120
3.	Kamania Gate to Sarafa Chowk	3469
4.	Kanchghar to Gokuldas Dharamshala	3181
5.	Ghamapur Chowk to Kanchghar	2620
6.	Tularam Chowk to Khajanchi Chowk	2227
7.	Karamchand Chowk to Omti Chowk	2123
8.	G.C.F. Market to Mathura Sobhapur	1812
9.	Railway Bridge No. 1 to Allahabad Bank	1720
10.	Adhartal Naka to Katni Naka	1478
11.	Rajendra Prasad Chowk to Ghantaghar	1377
12.	Allahabad Bank to Laxmi Coffee House	1260
13.	Anand Bhandar to Arya Niwas	1136
14.	Ghamapur Chowk to Tahsil Office Chowk	1103
15.	Allahabad Bank to Robertson College	1100
16.	Fuwara to Ranital Chowk	1012
17.	Shyam Talkies to Shaheed Smarak	1007
18.	Karamchand Chowk to Nandra Bridge	1004

Appendix VIII

JABALPUR : TRAFFIC VOLUME AND CAPACITY OF ROADS (ROAD EFFICIENCY)

Serial No.	Road Section	Average width of Road in ft.	Available C.W. for fast vehicle in lane width	Peak Traffic 1975 PCU	Traffic Capacity of Road in PCU	Over-Burden in PCU	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Adhartal Naka to Katni Road	12.0	4	1043	2000	..	Adequate width
2	Damoh Naka to I. T. I.	12.0	4	1311	2000	..	Adequate width
3	Miloniganj to Damoh Naka	7.5	2	1239	1000	239	Widening is required due to existing mandi.
4	Miloniganj Chowk to Gohalpur Thana.	6.0	2	676	1000	..	Adequate width
5	Ghamapur to Katra Naka	6.0	2	443	1000	..	Adequate width
6	Baijanath Chauraha to Vehicle Factory.	6.0	2	3998	1000	2998	Widening is required due to increase in traffic.
7	Ranital Chauraha to Damoh Naka	12.0	4	6310	2000	4310	Road widening is essential due to heavy truck traffic of regional road with commercial activities.
8	Sarafa Chowk to Dixitpura	4.5	1	2324	500	1824	Street widening scheme is required for traffic movement.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
9.	Pande Chowk to Baldevbagh Chauraha.	9.0	3	1303	1500	..	The road width from Pande Chowk to Baldevbagh is adequate but widening of road is required for existing grain & vegetable market as the traffic from Fuwara Chowk to Miloniganj mandi is in adequate. This road is badly lacking for want of parking spaces.
10.	Kamaniya Gate to Sarafa Chowk	5.5	3	4509	1500	3003	Widening is required.
11.	Sarafa Chowk to Miloniganj Chowk.	4.5	2	2694	1000	1694	Busy commercial road vehicular traffic.
12.	Ghamapur Chowk to Kanchghar.	7.5	2	2232	1000	1232	Major city road needs widening.
13.	G C. F. Market to Shobhapur Colony.	3.0	1.5	664	750	..	Adequate width
14.	Kanchghar to Satpula Bridge.	9.0	3	6916	1500	5416	Major city road busy due to linkage to the work centres.
15.	Satpula Bridge to Ranjhi	9.0	2	3275	1500	1775	Major city road busy due to traffic from factories and defence establishments.
16.	C. O. D. to C. O. D. crossing No. 1.	7.5	2	578	1000	..	Adequate width.
17.	Ranital Chauraha to Garha Rly. Crossing.	12.0	4	2378	2000	378	Road widening is essential.
18.	Agha Chowk to Arya Niwas lodge.	12.0	4	1225	2000	..	Adequate width.
19.	Fuwara to Ranital	6.0	2	3011	1000	2011	Road widening is essential.
20.	Tularam Chowk to Khajanchi Chowk.	6.0	2	1584	1000	584	Commercial street needs widening.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
21.	Malviya Chowk to Fowara	4.0	1	2075	503	1575	Needs widening for bottle-neck from super market to lordganj police station and park ing amenities on wards.
22.	Karam Chand Chowk to Malviya Chowk.	12.0	4	3558	2000	1558	Road widening is required.
23.	Shyam Talkies to Shahid Smarak	9.0	3	1206	1500	..	Adequate width.
24.	Sarafa Chowk to Ghamapur Chowk.	4.5	1	2681	500	2181	Road widening scheme is required.
25.	Omti Chauraha to Galgala Chowk	12.0	4	6683	2000	4683	Traffic overburden due to existing vegetable Junk market and commercial Centre needs shifting Junk and vegetables market.
26.	Karam Chand Chowk to Omti chauraha.	9.0	3	1942	1500	442	Road widening is required.
27.	Rajendra Chauraha to Kanchghar.	12.0	4	2154	2000	154	Road widening is required for N. H. 7.
28.	Ghamapur Chauraha to Tahsil office Chauraha.	7.5	2	2935	1000	1935	Road widening is required for N. H. 7.
29.	Kanchghar Chauraha to Gokuldas Dharamshala.	9.0	3	3325	1500	1825	Road widening is essentail.
30.	Ranital Chauraha to Madan Mahal station.	6.0	2	669	1000	..	Adequate width
31.	Nagar-Nigam Chowk to old barfkhana.	12.0	4	1856	2000	..	,,
32.	Nagar Nigam Chowk to Arya Nivas.	12.0	4	1843	2000	..	,,

1	2	3	4	5	6	7	8
33.	Naudara Bridge to Anand Bhandar	13.5	4	1608	2000	..	Adequate width
34.	Shastri Bridge to Nagar Nigam Chowk	18.0	6	2548	3000	..	„
35.	Karam Chand Chowk to Naudara Bridge.	12.0	4	2140	2000	140	Road widening is essential.
36.	Kanchghar to Taiyaballi Chauraha.	4.5	1	1391	500	891	Road widening is essential.
37.	Taiyab alli Chauraha to Railway stadium.	12.0	4	2190	2000	190	Road widening is required.
38.	Nagrath Bal Mandir to Rly. stadium.	6.0	2	599	1000	..	Adequate width.
39.	Income-Tax Office to Taiyaballi Chauraha.	12.0	4	2026	2000	26	
40.	Income-Tax Chauraha to Banbina Chauraha.	7.5	2	1729	1000	729	Road widening is essential.
41.	Naudara bridge to Banbina Chauraha.	7.5	2	1818	1000	818	„
42.	Naudara bridge to Taiyaballi Chauraha.	9.0	3	1030	1500	..	Adequate width.
43.	Rajendra Prasad Chowk to Rly. bridge No. 2.	9.0	3	1125	1500	..	„
44.	Railway bridge No. 1 to Allahabad bank Chauraha.	18.0	6	5919	3000	2919	Road widening is essential.
45.	Railway Bridge No. 1 to Penti Naka.	9.0	3	707	1500	..	Adequate width.

1	2	3	4	5	6	7	8
46.	Allahabad bank Chauraha to Robertson College.	12.0	4	665	2000	..	Adequate width.
47.	Allahabad bank chauraha to Laxmi Cafe.	7.5	2	552	1000	..	,,
48.	Bank of India to caravs	7.5	2	1084	1000	..	Adequate width.
49.	Satpula Railway Crossing to Penti Naka.	7.5	2	778	1000	..	,,
50.	Madan Mahal Chowk to Panch Matha Temple	4.5	1	273	500	..	,,
51.	Madan Mahal Chowk to Bedi Nagar.	12.0	4	1817	2000	..	,,
52.	Madan Mahal Chowk to Gorakhpur Rly. Crossing.	12.0	4	2208	2000	208	Road widening is essentail.
53.	Shastri Bridge Chowk to Madan mahal Police Station.	12.0	4	1216	2000	..	Adequate width.
54.	Shastri bridge Chowk to Banbina Chauraha	9.0	3	2328	1500	828	Road widening is essential as the regional traffic use to pass.
55.	Shastri Chowk to Gorakhpur Crossing.	12.0	4	1735	2000	..	Adequate width.
56.	Gorakhpur Railway crossing to Howbagh Chauraha.	7.5	2	2186	1000	1186	Main shopping road mixed traffic lacks parking amenities.
57.	Railway Bridge No. 3 to Shivaji Park.	7.5	2	579	1000	..	Adequate width.

1	2	3	4	5	6	7	8
58.	Shivaji Park to Cantonment Board Office.	7.5	2	222	1000	..	Adequate width
59.	Modern filling Station to Railway Bridge No. 4	7.5	2	810	1000	..	,,
60.	Cantonment Board Office to Empire Talkies.	6.0	2	634	1000	...	,,
61.	Railway Bridge No. 2 to Caravs.	12.0	4	1753	2000	..	,,
62.	Caravs to Empire Talkies.	11.0	3	3716	1500	2216	Road widening is essential.
63.	M. E. S. Bachelor Engg. Hostel to St. Alloysis School.	12.0	4	1222	2000	..	Adequate width.
64.	M. E. S. Bachelor Engg. Hostel to St. Thomas School Chauraha. (Mandla Road)	7.5	2	460	1000	..	,,
65.	M. E. S. Bachelor Engg. Hostel to St. Thomas School Chauraha. (Indira Gandhi Marg)	9.0	3	324	1500	..	,,
66.	Railway Station to C. S. D. Canteen.	7.5	2	732	1000	..	,,
67.	Civil Lines Police station to Desauza Furniture Mart.	9.0	3	410	1500	..	,,
68.	Desauza Furniture Mart to St. Thomas School Chauraha.	9.0	3	939	1500	..	,,
69.	A. O. C. School Chauraha to Desauza Furniture Mart	12.0	4	1104	2000	..	,,

1	2	3	4	5	6	7	8
70.	Robertson College Chauraha to A. O. C. School Chauraha.	12.0	4	439	2000	...	Adequate width
71.	Robertson College Chauraha to University Marg.	12.0	4	278	2000	...	,,
72.	Howbagh Women College to Gorakhpur Rly. Crossing.	9.0	3	1424	1500	...	,,
73.	Howbagh Women College to Howbagh Chauraha.	7.5	2	2183	1000	1183	Road widening is essential.
74.	Howbagh Chauraha to Shivaji Park.	6.0	2	1353	1000	353	,,
75.	Shivaji Park to Ridge Road.	6.0	3	3508	1500	2008	,,
76.	Shivaji Park to St. Alloysis College.	7.5	2	878	1000	...	Adequate width.
77.	St. Alloysis College Chauraha to Gora Bazar.	9.0	3	3485	1500	..	Road widening is esseential as the road use to pass the regional traffic.
78.	A. O. C. School Chauraha to A. O. C. School.	9.0	3	739	1500	..	Adequate width.
79.	Howbagh Women College to Gwarighat.	9.0	3	744	1500	..	,,

Note:—Carriage road space available in each case is actually much less than actual road width because road is also used for display of goods, temporary shops, parking etc. The capacity has been worked out on the basis of road space available for vehicular traffic.

Appendix IX

JABALPUR : TRAFFIC ACCIDENT

S. No.	Thana	Name of place	Number of Accidents during last 5 years.		
			Fatal	Non-Fatal	Total
1	2	3	4	5	6
1.	CANTONMENT	M. P. S. R. T. C. Crossing	1	2	3
		Ridge Road	1	4	5
		Railway Bridge No. 2	0	9	9
		Near Empire Talkies	0	6	5
		Mall Road	1	8	9
		Penti Naka	2	9	11
		Bihari Road	1	8	9
		Kings Way Road (Sadar)	1	13	14
		Boys Regiment	0	7	7
		Narmada Road	2	8	10
	Total		9	74	83
2.	OMTI THANA	Railway Bridge No. 2	0	9	9
		Rassal Chowk Road	1	16	17
		Naudra Bridge	0	10	10
		Ghantaghar Road	1	10	11
		Naya Mohalla Omti Chowk	1	15	16
		High Court Chowk	1	10	11
		Tahsil Chowk	0	10	10
		Karam Chand Chowk	0	13	13
	Total		4	93	97
3.	KOTWALI THANA	Milloniganj Main Road	3	3	6
		Cherital Main Road	2	6	8
		Baldevbagh Turning	2	4	6
		Uprainganj Road	2	2	4
		Damoh Naka	3	11	14
		Katra Naka	3	12	15
	Total		15	38	53
4.	CIVIL LINES THANA	Railway Bridge No. 2	0	9	9
		Railway Bridge No. 2	5	6	11
		Near Empire Talkies	0	6	6
		High Court Chowk	1	10	11
		Tahsil Chowk		10	10
		G. C. F. State	1	22	23
		Satpula Crossing	1	15	16
	Total		8	78	86

1	2	3	4	5	6
	5. GOHALPUR THANA	Milloniganj Main Road	3	3	6
		Damoh Naka	3	11	14
		Imamwada Gohalpur	0	18	18
		Adhartal Road	8	51	59
		Katra Naka	3	12	15
		Madhotal Road.	1	24	25
	Total—		18	119	127
	6. GHAMAPUR THANA	Bhantallaiya Road	3	30	33
		Lalmati Chungi Naka	0	6	6
		Kanchghar Road Area	0	11	11
		Sheetlamai	1	8	9
		Beoharbagh Pande Hospital	0	10	10
		Bai-Ka-Bageecha	1	9	10
		Ghamapur Chowk	0	15	15
		Baghia Mohalla	1	5	6
		Satpula Crossing	1	15	16
		Krishna Colony	1	4	5
	Total		8	113	121
	7. BELBAGH THANA	Tahsil Chowk	0	10	10
		Bhantallaiya Road	3	30	33
		Beoharbagh Pande Hospital	0	10	10
	Total		3	50	53
	8. HANUMANTAL THANA	Bhantallaiya Road	3	30	33
		Lalmati Chungi Naka	0	6	6
		Sindhi Camp Road	0	9	9
	Total		3	45	48
	9. GARHA	Narmada Road	2	8	10
		Bheda Ghat Road	0	22	22
		Pisanhari-Ki Madhia	0	16	16
		Tripuri Chowk	1	10	11
		Deotal Hospital	1	4	5
	Total		4	60	64

1	2	3	4	5	6
10.	LORD GANJ	Chanchla Bai Tiraha	0	8	8
		Wright Town Stadium	1	7	8
		Motor Stand Road	1	14	15
		Garha Road	0	8	8
		Ranital Chowk	1	10	11
		Near Lord Ganj Thana	0	10	10
		Agha Chowk	2	4	6
		Malviya Crossing	0	8	1
		Telegraph Gate No. 1	1	6	7
		Karam Chand Chowk	0	13	13
		Madan Mahal Road	1	5	6
Total			7	93	100
11.	GORAKHPUR	Mahanada	1	9	10
		Narmada Road	2	8	10
		Chhoti line Phatak	3	11	14
		Gorakhpur Road	0	9	9
		Gwarighat	0	6	6
		Gulati Petrol Pump	0	7	7
Total			6	50	56
12.	KHAMARIA	West Land	0	8	8
		Panhera	1	7	8
		Engg. College	0	10	10
		Vehicle Road	7	12	19
		Ranjhi Bazar Road	4	24	28
		Satpula Crossing	1	15	16
		Khamaria Bazar	2	23	25
		Gokalpur Road	3	12	12
Total			15	111	126
GRAND TOTAL			109	970	1079

Source : City Superintendent of Police (Traffic) Jabalpur.

APPENDIX X

JABALPUR: PARKING REGULATED AND UNREGULATED

S. No.	Place of Parking Count	FAST												SLOW					
		Unregulated						Regulated						Unregulated				Regulated	
		Bus	Truck and Tractor	Car	Tempo	Scooter M. Cycle	Total	Bus	Truck and Tractor	Car	Tempo	Scooter M. Cycle	Total	Cycle & Cycle Rickshaw	Tonga Cart Thela	Total	Cycle & Cycle Rickshaw	Tonga Cart Thela	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	**Damoh Naka Chauraha.**																		
A.	Damoh Naka to Jabalpurgoods carriage.	2	20	1	3	3	29	..	..	..	..	..	..	56	14	70	..	..	..
B.	Damoh Naka to Sanskrit Vidya Peeth.	1	2	3	2	11	19	..	..	..	..	..	..	61	29	90	..	..	..
C.	Damoh Naka to city bus stop	..	..	..	..	..	..	5	5	2	5	1	18	..	..	..	44	18	62
D.	Damoh Naka to Pappu & Raju Transport Co.	1	3	1	6	1	12	..	..	..	..	..	..	64	19	83	..	..	..
2.	**Adhartal Chungi Chowki**																		
A.	Adhartal Chungi Chowki.	3	10	5	5	4	27	..	..	..	..	..	..	116	24	140	..	..	..

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3.	**Millonigunj Chauraha**																		
	A. Millonigunj to Chotta Fawara	..	4	..	..	3	7	..	..	..	..	..	..	60	32	92	..	..	..
4.	**Near Kotwali**	..	..	..	..	..	..	..	1	3	..	6	10	..	..	..	70	16	86
5	A Kamaniya gate to Sarafa Chowk	..	..	3	..	15	18	..	..	..	..	..	..	102	5	107	..	..	..
	B. Kamaniya gate to Vijay cut piece Bhandar.	..	1	6	..	19	26	..	..	..	..	..	..	131	26	157	..	..	..
	C. Kamaniya gate to Jain Mandir	..	..	6	1	9	16	..	..	..	..	..	..	173	23	196	..	..	..
	D. Kamaniya gate to Apsara Dresses.	..	..	5	..	12	17	..	..	..	..	..	..	105	11	116	..	..	..
6.	**Fawara**																		
	A. Fawara to Neelkamal cloth store	..	..	3	..	8	11	..	..	..	..	..	..	181	15	196	..	..	..
	B. Fawara to Bade Mahavir	..	..	2	..	8	10	..	..	..	..	..	..	197	15	212	..	..	..
	C. Fawara to Rajendra Medical Store.	2	2	4	..	10	18	..	..	..	..	..	..	75	11	86	..	..	..
7.	**Khandelwal Kirana Corner**																		
	A. Khandelwal Kirana Stores to Pande chauraha,	..	3	2	..	5	10	..	..	..	..	..	..	149	36	185	..	..	..
	B. Khandelwal Kirana Stores to Dr. P. C. Jain Dispensary	..	1	1	..	6	8	..	..	..	..	..	..	193	42	235	..	..	..

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
8.	**Ghamandi Chowk**																		
	A. Vijay cut piece to Mhd. Ali Baitry-wala Shop.	..	..	1	..	4	5	..	..	..	..	..	..	43	64	107	..	..	..
	B. Banarsi Panwala to Bank of Baroda	..	1	4	..	8	13	..	..	..	..	..	..	41	12	53	..	..	..
9.	**Jawaharganj Chauraha**																		
	A. Ashok Dresses to Bank of Baroda	..	1	5	..	8	14	..	..	..	..	..	..	145	15	160	..	..	..
	B. Rajendra Medical Stores to Bombay Sweet Mart.	..	1	2	..	5	8	..	..	..	..	..	..	80	14	94	..	..	..
	C. Lordganj Police Station	..	..	7	..	10	17	..	..	..	..	..	..	105	5	110	..	..	..
10.	**Malviya Chauraha**																		
	A. In front of Super Market	..	..	..	..	..	..	..	..	5	..	7	12	..	..	..	92	5	97
	B. Near Selection Centre	3	..	4	10	6	23	..	..	..	..	..	..	62	20	82	..	..	..
	C. In front of Shyam Talkies	..	..	..	10	7	17	..	..	..	..	..	..	67	9	76	..	..	..
	D. Arya Nivas Lodge	..	2	6	3	5	16	..	..	..	..	..	..	35	7	42	..	..	..
11.	A. **Jyoti Talkies**	..	..	..	..	..	..	..	..	5	..	6	11	..	..	..	37	5	42
	B. Hira Sweet Mart to Shanker Bhandar.	..	..	..	..	..	..	..	2	5	..	2	9	..	..	..	25	5	30

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
15.	**Nagar Nigam Chauraha**																		
	A. Bus Stand to Rajbagh	..	..	..	..	..	..	3	..	3	6	6	18	..	..	..	33	14	47
16.	A MohanTailors to	..	..	..	..	..	3	3	..	..	..	..	..	28	7	35	..	..	..
	R. S. Chopra Medical Stores.																		
	B. Ghamapur Chowk to Ramji Tailors.	1	1	2	2	4	10	..	..	..	..	..	..	47	10	57	..	..	..
1.	**Kanchaghar Chauraha**																		
	A. Khandelwal Bhavan to Prasad Tailoring shop.	3	2	1	6	4	16	..	..	..	..	..	..	18	7	25	..	..	..
18.	**Ghamapur Chungi** Chowk.	1	2	..	2	8	13	..	..	..	..	..	..	109	8	117	..	..	..
19.	G. C. F. Market to Satpula.		..	..	..	10	10	..	..	..	..	..	..	249	85	334	..	..	..
20.	Delite Talkies	..	..	2	..	4	6	..	..	..	..	..	..	47	2	49	..	..	..
21.	Jabalpur Rly. Station	..	..	..	..	..	..	..	26	..	14	22	..	..	..	..	65	..	65
22.	Gorakhpur Rly. Crossing.																		
	A. In front of sharda Talkies.	..	2	1	1	5	9	..	..	..	..	..	..	87	21	108	..	..	..
	B. M. P. E. B. Sub-Station to Adarsha Saw mills.	4	2	3	2	6	17	..	..	..	..	..	..	51	57	108	..	..	..

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
12.	**Galgala Chowk**																		
	A. Durga Mandir to Laxmi Talkies	..	..	2	..	3	5	..	..	..	..	..	..	51	8	59	..	..	..
	B. Ganesh Vishranti Graha to Laxmi Talkies.	..	..	2	..	7	9	..	..	..	..	..	..	78	13	91	..	..	..
	C. Jaiswal Medical Store to Digambar Hotel.	..	..	33	..	9	12	..	..	..	..	..	..	108	14	122	..	..	..
	D. Ganesh Vishranti Graha to Belbagh Chauraha.	..	..	2	..	9	11	..	..	..	..	..	..	208	18	226	..	..	..
13.	**Omti**																		
	A. Omti to Gandhi Medical Stores.	..	..	2	..	11	13	..	..	..	..	..	..	44	..	44	..	..	..
	B. Omti to Hotel Place.	..	..	7	..	10	17	..	..	..	..	..	..	40	..	40	..	..	..
	C. Omti to Jonesganj post office.	..	..	10	5	10	25	..	..	..	..	..	..	34	..	34	..	..	..
14.	**Karam Chand Chowk**																		
	A. Standard Hotel to Plaza Talkies	..	..	5	..	9	14	..	..	..	..	..	..	56	14	70	..	..	..
	B. Indian Coffee House.	..	..	4	2	14	20	..	..	..	..	..	..	85	..	85	..	..	..
	C. Bengali Club to Khandelwal Steel Works.	..	..	..	..	..	..	..	..	..	6	1	11	18	..	..	104	..	104

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
23.	**Madan Mahal Chaurha.**																		
	A. Jain Hotel to Sindh Timber.	..	15	6	..	12	33	..	..	..	..	..	..	378	..	378	..	..	..
	B. T. I. T. Shopping Centre	..	..	..	..	..	..	..	8	4	..	10	22	..	..	..	31	3	34
24.	**Rain Basera (Purya)**																		
	A. Rain Basera to Suresh Madhu Kunj.	1	..	3	2	3	9	..	..	..	..	..	..	53	7	60	..	..	..
25.	In front of Medical College main gate.	..	..	..	..	..	..	2	2	..	4	17	..	..	..	..	31	5	
26.	In front to Garha Hospital	..	..	..	..	4	4	..	..	..	..	..	..	107	7	108	..	..	..
27.	**Ranital Chowk**																		
	A. Subhash Medical Stores to Kamala Nehru Consumers Bhandar.	3	1	6	6	4	20	..	..	..	..	..	..	84	5	89	..	..	..
	B. Seth Narsinghdas Building to Bharat Tent House.	2	..	3	2	6	13	..	..	..	..	..	..	125	17	42	..	..	..

Source--Parking Survey conducted by Town & Country Planning Department, 1976.

JABALPUR: ANALYSIS OF HIGHER SECONDARY SCHOOLS

S. No.	Name of Higher Secondary Schools	Location	Approximate Area (in '000 Sq. Mts)	Pay ground	Future Expansion possibility	Building Ownership	Structural Condition	Locational suitability
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	L. N. Yadav H. S. S. Karondigram	Karondigram	11.55	Yes	Yes	M. Corp. Jabalpur	Good	Good
2.	Nagar'Nigam H. S. S. Gwarighat	Gwarighat	0.73	,,	,,	do.	,,	,,
3.	Nagar Nigam H. S. S. Tilwaraghat	Tiwaraghat	3.46	,,	,,	do.	,,	,,
4.	P. F. K. H. S. S. Khamaria	O. F. K. Estate	8.09	,,	,,	Owned	,,	,,
5.	A. P. N. H. S.S. Jabalpur	Jabalpur Cant.	12.14	,,	No.	,,	,,	,,
6.	Christian H. S. S. Jabalpur	Napier Town	24.28	,,	Yes	Trust	,,	,,
7.	St. Thomas H S. S. Jabalpur	Civil Lines	12.14	,,	,,	,,	,,	,,
8.	Christ Church H. S S. Jabalpur	North Civil Lines	24.28	,,	,,	Owned	,,	,,
9.	Maharashtra H. S. S. Jabalpur	Wright Town	1.04	No.	No.	Trust	,,	,,
10.	Mahakoshal H. S. S. Jabalpur	Gole Bazar	0.70	,,	,,	,,	,,	,,
11.	Kesharwani H. S. S. Jabalpur	Gole Bazar	0.70	,,	,,	,,	,,	,,
12.	D. N. Jain H. S. S. Jabalpur	Gole Bazar	2.79	Yes	,,	,,	,,	,,
13.	R. Anjuman H. S. S. Jabalpur	Marhatal	4.18	,,	Yes	Owned	,,	,,
14.	K. Hitkarini H. S. S. Jabalpur	Marhatal	4.65	,,	,,	Trust	,,	,,
15.	Hitkarini H. S. S. Jabalpur	Govindganj	6.97	,,	,,	,,	,,	,,
16.	Hitkarini H. S. S. Garha	Damoh Naka Garha	6.07	,,	No	Owned	,,	,,
17.	Hitkarini H. S. S. Gorakhpur	Gorakhpur	1.33	,,	Yes	,,	,,	,,
18.	De selva H. S. S. Jabalpur	Gandhiganj	1.86	,,	,,	Trust	,,	,,

15.	Hitkarini H. S. S. Jabalpur	Damoh Naka						
		Garha	6.07	„	No	Owned	„	„
16.	Hitkarini H. S. S. Garha	Gorakhpur	1.33	„	Yes	„	„	„
17.	Hitkarini H. S. S. Gorakhpur	Gandhiganj	1.86	„	„	Trust	„	„
18.	De selva H. S. S. Jabalpur							

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
19.	Shrikrishna Higher Secondary School ..	Seetlamai ..	1.01	No	No	„	Bad	Bad
20.	Navin Vidhya Bhavan, H. S. S. Gorakhpur ..	Gorakhpur ..	4.05	Yes	Yes	„	Good	Good
21.	Na vin vidhya Bhavan, Napier Town ...	Wright Town „	1.86	„	„	„	Bad	„
22.	St. Graviel H. S. S., Jabalpur	Civil Lines ..	4.86	„	„	„	Good	„
23.	Jabalpur Vidya Peeth	Bhantalya ..	0.22	„	„	Rented	„	„
24.	Anjuman H. S. S. Gohalpur	Gohalpur ..	0.08	„	„	Trust	„	„
25.	Panchsheel H. S. S., Jabalpur	Adhartal ..	6.07	„	„	Rented	„	„
26.	St. Alloysius H. S. S., Jabalpur	Cantonment ..	32.37	„	„	Trust	„	„
27.	R. S. Bela Singh H. S., Jabalpur	Prem Nagar ..	2.02	„	No	Trust	„	„
28.	Navyug H. S. S., Jabalpur ..	Civil Lines ..	12.14	„	Yes	Owned	Bad	„
29.	Bharat Sevek Samaj Girl's H. S. S., Jabalpur	East Ghamapur ..	0.31	„	„	„	Good	Good
30.	St. Joseph Girl's H. SS. Jabalpur ..	Canton ment ..	32.37	„	„	Trust	„	„
31.	St. Joseph Girls H. S. S., Ranjhi Jabalpur (Convent)	Ranjhi ..	4.05	No.	No.	„	„	„
32.	Christ Church Gorl's H. S. S., Jabalpur ..	Near Poly-technic ..	8.09	Yes	„	„	„	„
33.	Jonson Girl's H.S. S., Jabalpur	Howbagh Cant ..	8.09		„	„	„	„
34.	St. Norbart Girl's H. S. S., Jabalpur ..	Bhanwar Tal ..	2.32	„	„	„	„	„
35.	Girl's H. S. S., Sadar Bazar ...	Sadar ..	30.35	„	„	Owned	„	„
36.	Guru Nanak Girl'sH.S. S., Marhatal, Jabalpur	Marha Tal ..	0.14	„	No	Trust	„	„
37.	S. N. J. Girl's H. S.S., Gorakhpur	Gorakhpur ..	4.05	No.	No	„	„	„
38.	Jain Girl's H. S. S., Jawaharganj ..	Niwar Ganj ..	0.23	„	„	„	„	„
39.	Satpula Girl's H. S.S., Jabalpur	G. C. F. Estate ..	6.07	Yes	Yes	Owned	„	„
40.	B dam Bai Girl's H. S! S., Jabalpur ..	Wright Town ..	0.46	No	No	Trust	„	„
41.	M. D. Bangali Girl's H. S. S., Jabalpur ..	Marha Tal ..	0.70	Yes	No	„	„	„
42.	Arya Girl's H. S.S., Jabalpur	Napier Town ..	0.46	„	„	„	Bad	Bad
43.	Sishu Vidyapeeth Girl's H. S. S., G. C. F. ..	G.'C. F. Estate ..	4.05	„	„	P.P. Club	Good	Good
44.	Kalsa Girls H. S. S., Cantonment ..	Cantonment	6.07	„	„	Owned	„	„
45.	Guru Nanak Girl's H. S. S., Madan Mahal ..	Madan Mahal...	8.09	„	„	„	„	„

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
46.	Hitkarini Girls H. S. S. Dikshitpura.	Sarafa Ward ...	0.70	No	,,	Trust	,,	Good
47.	Husani a Girls. H. S. S. Jabalpur	Kotwali Ward ..	0.23	,,	,,	,,	,,	Bad
48.	Girls H. S. S. Ghamapur	Ghamapur ...	0.74	Yes	Yes	M.Corp Jbpu,	,,	Good
49.	Nagar Nigam Girls H. S. S. Jabalpur	Tamarhai ...	3.92	,,	,,	Do.	,,	,,
50.	Jawahar Vidya Mandir, H. S. S. G. C. F.	G. C. F. Estate ..	8.09	,,	,,	Owned	,,	,,
51.	Anwar Ganj Girls H. S. S.	Hanuman Tal ..	0.23	No	No	,,	,,	,,
52.	Pol. L. S. Jha H. S. S. Jabalpur	North Civil Lines ..	N.A.	Yes	Yes	Govt.	,,	,,
53.	Govt. H. S. S. Ghamapur	Ghamapur ..	N.A.	,,	,,	,,	,,	,,
54.	M. L. B. Girls H. S.S.	Wright Town ...	N.A.	,,	,,	,,	,,	,,
55.	Kamla Nehru Girls H. S. S.	Ganjipura ..	N.A.	,,	,,	,,	,,	,,
56.	Ranidurgawati Girls H. S.S .	Garha ..	N.A.	,,	,,	Rented	Poor	,,
57.	Govt. Girls H. S. S. Belbagh.	Beoharbagh ..	N.A.	,,	,,	Govt.	Good	,,
58.	Govt. Girls H. S. S. Karondi	Karondi ..	N.A.	,,	,,	,,	,,	,,

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