

NOIDA MASTER PLAN - 2031

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

1.1.1 The history of development of the present day Noida town can be traced back to 1972 when the Government of Uttar Pradesh, taking note of the mounting pressure of speculative land dealings in this area, closely situated to Delhi and having backward characteristics of development, declared 50 villages of the erstwhile district of Bulendshahar as the “Yamuna-Hindon-Delhi Border Regulated area” under the provisions of U.P. Regulation of Building Operations Act, 1958. There was no urban centre in this area. The Interim General Plan for Greater Delhi was prepared in 1956 and then the first Master Plan of Delhi prepared in 1962 suggested that serious considerations should be given for the planned decentralisation of large scale economic activities from Delhi and the development of towns around Delhi. This paved ways for the development of Industrial units and warehousing at various locations around Delhi, resulting in speculative land dealings and potentials for unplanned and unauthorised development activities. Therefore, a need for establishing planned urban centres in the close proximity of Delhi was felt to provide an alternative site for the planned development of small and medium size industrial units functioning in unplanned and haphazard way in and around Delhi and to stop the speculative land dealings in this area. The controlling Authority of the newly declared Regulated Area considered various aspects of development of the Regulated Area but could not do much for the establishment of a new urban centre. Finally on April 17, 1976 the Government of Uttar Pradesh notified 36 villages of “Yamuna-Hindon-Delhi Border Regulated Area” as New Okhla Industrial Development Area wide its notification No. 415.7 –Bha-U-18-(II), Lucknow, dated 17.4.1976 under the provisions of U.P. Industrial Development Act, 1976. The State Government also constituted a new statutory body, namely, the New Okhla Industrial Development Authority (NOIDA) to ensure planned development of the area for industrial and allied uses. Accordingly, the Authority prepared a master plan for the area for the year 1991. The Plan had the following objectives:

- i. Provide developed sites for about 10,000 small-scale industrial units;
- ii. Provide employment to about 41,000 industrial workers; and
- iii. Achieve a conducive living and work environment for the workers engaged in manufacturing and allied activities, and develop an integrated township for an ultimate population of 3,75,000 workers.

However, even before the implementation of the Plan could commence, the basic assumptions on which the Plan was based had to be drastically recast. The industrial experts felt that the plot sizes were too big for the kind of industrial units, which were envisaged to be located there. Likewise, the assumed workers densities were too low. On the basis of revised estimates, it was calculated that the 10,000 industrial sites would

provide employment to at least 220,000 workers and assuming a workers participation rate of 27.5 percent, and town density of 148 persons per hectare, the design population of Noida was raised to one million. This was a large population to plan in an ecologically difficult area, due to the fact that most of it was formerly part of the Yamuna river basin and had been reclaimed by constructing embankments along the river.

An Expert Committee was set-up to formulate an appropriate development strategy for the area. The Committee recommended that the township should be planned for only 4,000 small-scale industrial units, which would provide employment to about 80,000 industrial workers. Accordingly, the design population of Noida was fixed at the level of 5,00,000. The urbanisable area for the new town was calculated about 3,360 hectare. Areas were allocated for community facilities as per the planning norms. Apart from appropriate transport facilities to link the new town with Delhi and other neighbouring cities such as Ghaziabad and Faridabad, it was envisaged that the internal transport system for Noida would also be connected with the proposed Mass Rapid Transit System (MRTS) for Delhi.

1.1.2 Incorporating the recommendations of the Expert Committee, a revised master plan was prepared for Noida in 1979, which was again revised in 1982 in response to rapidly changing development scenario in the area. The Noida Authority approved the revised plan in 1983 for the perspective year of 2001 for public notification and inviting objections and suggestions from the general public. However, the Plan was not publicly notified before finally seeking approval of the Plan from the Authority since there was no such requirement in the Industrial Development Act. This plan was prepared for a projected population of 5.5 lacs in 2001 and accordingly 3800 hectares land uses. It also projected one lac Industrial workers and about two lacs total work force in Noida by 2001. About six and a half years had already passed after the Plan was first prepared and considerable changes had occurred in the land use pattern and socio-economic profile of the area. It had thus become imperative that the Draft Plan should be reviewed as per the provisions of the Act and a Revised Plan should be prepared based on the conclusions of the review. The Noida Authority approved the revised Master Plan in 1989 for the perspective year 2011 and 7650 hectare land was proposed to be urbanised under different land uses for 11.5 lacs Population.

1.1.3 In the meantime, a statutory plan for the National Capital Region of Delhi (of which Noida is a part) was finalised and enforced in 1988 for perspective year 2001. Also, a Perspective Plan for Delhi - 2001 was finalised by the Delhi Development Authority and enforced since 1990 for the perspective year 2001. Both these Plans had significant implications for the development potential of Noida. Within the framework of the NCR Plan, Noida was given the status of a Delhi Metropolitan Area (DMA) town with an assigned population of 5.50 lakhs by the year 2001. NCR Planning Board revised the Regional Plan in 2005 for the perspective year of 2021. The Regional Plan for the NCR – 2021 has assigned the population of 12 lakhs for Noida and accorded it a status of Central NCR town. Another factor, which is likely to have far reaching implications for the growth

potential of Noida is the development of Greater Noida and Yamuna Expressway Industrial area townships on a contiguous territory east of the river Hindon. This territory had become a hot bed of speculative activity in the eighties, when the development of Noida had begun to take shape. The speculators had intensified their activity in the area since they perceived that the area had a high development potential in view of its close proximity to Delhi and also Noida, Ghaziabad, Faridabad and Gurgaon. Besides, the area being situated on the periphery of a fertile hinterland of Haryana and western Uttar Pradesh was certain to benefit from the ensuing prosperity. The Government of Uttar Pradesh, with a view to curb haphazard developmental activities in this potential area, decided to acquire about 70,000 hectares of land for planned urban development. For this purpose, the State Government created the Greater Noida Industrial Development Authority (GNIDA) and later got a master plan prepared for the development of a new city, namely, Greater Noida for a population of 300,000 to be achieved by the year 2001. Greater Noida is also now planned for a population of 12 lakhs by 2021. This city is also bound to expand in size with time, and being located in close proximity to Noida, would surely influence the development of the city.

1.1.4 The state Government has notified the entire area between river Hindon and Yamuna under NOIDA, covering approximately 20316 hectare land and 81 villages. In this background, it was decided by the Authority to revise/amend the Master Plan of Noida. The task of revising the master plan was entrusted to a consultancy team of the School of Planning and Architecture, New Delhi. While the revised plan was being prepared, it was felt that since an expressway to link Noida with Greater Noida was proposed to be constructed in the immediate future, unplanned development (especially commercial uses) was likely to occur all along the length of the expressway in the absence of a plan to control such development. Since the expressway traverse the entire notified area of Noida, it was decided to get a master plan prepared for the total area under the jurisdiction of the Noida authority. Accordingly, the Master Plan of Noida for the year 2021 was prepared which was approved by the State Government in the year 2006. It was sent to the NCR Planning Board who sent their observations. The NCR Planning Board suggested to raise the town density from proposed 80 persons per hectare to 150-200 persons per hectare as per the policy of NCR Regional Plan – 2021.

1.1.5 In view of the aforementioned observation of the NCR Planning Board, and also in view of the fast changing development scenario in the region, growth of Delhi, Ghaziabad, Gurgaon, Faridabad and other cities in the region various large size projects of infrastructure and also efforts to attract and encourage the private investment for the development of the area, it was considered necessary that a comprehensive revisions should be considered in the Master Plan - 2021. The Noida Authority thus decided in its 149th meeting dated 8.04.88 that a revised plan for Noida should be prepared. Later on a decision was taken on dated 24.09.08 that the Master Plan shall be prepared with the help of NCR Planning Office in Ghaziabad. Accordingly, a new satellite image was duly procured and digitized and necessary spadework was done for the Draft Master Plan which has been prepared with the help of NCR Planning office, Ghaziabad for the

perspective year of 2031. It was placed before the 169th meeting of the Authority held on 31-8-2010. This draft plan was approved by the Authority for inviting objections/ suggestions from public. Public notice for inviting objections/ suggestions were published in newspapers on 3rd September, 2010. Objections/ suggestions were duly considered by the designated committee and finally the draft was placed before the Authority in its 170th meeting held on 26.10.2010 for its approval. The Authority approved the draft recommendations of the committee and final draft of the Master Plan. The Authority decided to send the copies of the Draft Master Plan to the State Govt. and NCR planning Board for their suggestion. Before sending the Master Plan to the Government, the authority further made few changes, mainly related to the increase in the width of few roads and increase in the area for Recreational Green. A new 75 metres wide road is proposed from Noida - Greater Noida Expressway to Faridabad through sector 150-152. This road will enhance the connectivity of Noida and Greater Noida with Haryana and other parts of Uttar Pradesh. The Authority approved these changes in its 171 Board meeting held on 25-02-2011 and accordingly public objection/suggestion were invited. There was no any objection/suggestion with regards to these changes. The Authority approved the Draft of Noida Master Plan 2031 in its 172 board meeting held on 29-03-2011 and decided to send the draft to the State Govt. and NCR Planning Board for suggestion. Further, the Authority in its 174 Board meeting held on 25.8.11 approved few changes in the plan to incorporate the suggestions of NCR Planning Board and residential area proposed for allotment of plots to the farmers.

The main features of the plan, i.e., the design concept, the proposals regarding the integrated physical development of Noida up to the year 2031, and the sub-division and zoning regulations have been described in detail in this report. The report is also illustrated with the help of maps, which are enclosed with it.

1.2 OBJECTIVES

Noida Master Plan - 2031 has been prepared with the following objectives:

- i) Within the framework of broad policies for the development of U.P. Sub- region of NCR and taking into consideration the proposed strengthening of the road and rail infrastructure and the development pressures due to the creation and development of various activities in the adjoining area, Greater Noida, Delhi, Ghaziabad etc., prepare a Master Plan for Noida 2031 for:
 - a) Achieving integrated development of Noida and its environs; and
 - b) Accommodating future growth of population up to the year 2031.
- ii) To capitalise on the area's high growth potential due to its proximity to the metropolitan city of Delhi and public investment expenditure not only in the area but also the environs.
- iii) To promote employment generating activities such as small scale industrial work opportunities, offices spaces, institutions, commercial centres, IT parks, etc., at places which are well suited for such activities and provide a conducive environment for people to work and enjoy good quality of life.

1.3 WORK DETAIL

With a view to achieve these objectives, the planning team, comprising of town planners from NOIDA Authority, GNIDA Authority, Yamuna Expressway Authority and NCR Planning Cell, Ghaziabad, evolved the following works to be incorporated in the Master Plan:-

- 1) With the help of draft Master Plan 2021 document and other secondary source data, analyse the following aspects in brief:
 - i. Regional context;
 - ii. Physiographic features and topography;
 - iii. Soil characteristics and climate
 - iv. Land utilisation pattern;
 - v. Hydrological study for surface flow, underground water table and aquifer; low lying areas and flood prone areas;
 - vi. Transport patterns; and
 - vii. Settlement pattern
- 2) Analyse the trends of development and associated problems during different periods.
- 3) Analyse the potentials and constraints of development in Noida and its environs and identify potential areas for planned future extension in the city's urbanisable limits.
- 4) Analyse the actual and potential land commitments by the Authority for various activities.
- 5) Based on the above analyses, make projections for the target year 2031 in respect of the following:
 - i. Population;
 - ii. Industrial and other economic and employment generating activities; and
 - iii. Area requirements for residential, commercial, industrial, recreational, public and semi-public, and transport related uses; facilities, and infrastructure in the city.
- 6) Incorporating the provisions of the previous Master Plan documents of Noida prepared and approved and changes made from time to time, formulate a Master Plan for the city for the year 2031 including suggestions for change in land use, redensification, urban design elements etc. relating to the area covered under the earlier Plans.
- 7) Prepare a generalised Transport Network Plan including the networks required for linking the city with Delhi and other neighbouring settlements. This includes:
 - To compile and collate all secondary data on traffic volume, speed and delay, road network and travel characteristics of NOIDA and ascertain the trends.

- To determine urban road hierarchy based on traffic volume and road network characteristics and develop typical cross sections to be implemented in a phased manner.
 - To review environment friendly transport system technologies and evolve a public transport system for Noida.
 - To evolve micro-level regional network of cycle and cycle-rickshaw tracks along identified travel corridors.
 - Based upon the system design to identify locations for grade separation, subways and access control strategies.
- 8) Prepare a Concept Plan for city level Landscape Structure
- 9) Formulate Zoning Regulations, which may be useful for the preparation of the detailed sector or local level plans.
- 10) Prepare necessary report and drawings, explaining the proposals contained in the plan.

CHAPTER 2

PHYSICAL CHARACTERISTICS OF THE PLANNING AREA

2.1 REGIONAL CONTEXT, AREA AND LOCATION

The Regional Plan -2021 of the National Capital Region (NCR) identifies Noida as one of the Central NCR (CNCR) towns along with Ghaziabad – Loni, Gurgaon, Faridabad, Bahadurgarh and Kundli. The plan stipulates that the opportunities provided by the Central NCR should be maximised to enable it to compete effectively with the NCT of Delhi, offering comparable employment, economic activities, comprehensive transport system, housing, social infrastructure and quality of life and environment. A sub-regional plan for the U.P. Sub-Region is still under preparation. However, Noida is bound to have a significant role in the context of the CNCR, Sub-Region as well as the NCR. NOIDA is a part of evolving conurbation extending from Delhi to Faridabad, Greater NOIDA, Bulandshahar, Meerut and Ghaziabad, ultimately to become a self contained town with well planned and developed industrial, business, trade and commerce, residential, recreational and institutional activities.

The New Okhla Industrial Development Area, which is analogous to the Planning Area/ Notified Area of Noida city falls entirely within the district of Gautam Buddha Nagar. It covers 81 revenue villages and a total of about 20,316 hectate of land. It is located in close proximity to the metropolitan city of Delhi and lies along the eastern and south-eastern boundaries of the National Capital Territory of Delhi. The area forms part of the U. P. Sub-region of NCR. It is bounded by the river Yamuna and the city of Delhi in the West and the South-West, National Highway 24 and the city of Ghaziabad in the North, river Hindon and Greater Noida Area in the East, and the confluence of rivers Yamuna and Hindon in the South. Noida falls under the catchment area of river Yamuna and is an old river bed of the same.

2.2 PHYSIOGRAPHY

Physiographic features of any area determine the potentials and constraints of the development and growth of a town. The town of Noida is situated in the Yamuna basin in the area between Yamuna and Hindon. The terrain of the area is generally plain with a gradual slope varying between 0.2-0.1 per cent from north-east to south-west. The maximum altitude is 204 meters above MSL near Parthala Khanjarpur village in the north-east and the minimum elevation is 195 meters above MSL near Garhi village in the south-western part of the area. Most part of Noida area is below 200 metres mean sea level. It should be noted that Noida is located at the lowest point in relation to its surrounding areas and the general level of the area is lower than the high flood level of river Yamuna. It is only due to the construction of the embankment along the rivers Yamuna and Hindon that the flooding of the area is prevented. However, the general low level of the area is a constraint for effective storm water and sewage disposal. The general sanitary and

hygienic conditions of some areas may remain poor if sufficient measures are not taken. Heavy rainfall, overflow or backflow of water or stress and any breach in the embankments in the event of unprecedented floods in the Yamuna may lead to large scale problems. Therefore, sufficient measures have to be under taken to avoid any such eventuality.

2.3 SOIL AND GROUND WATER

Generally silty soil with varying percentages of clay and sand are found in the area. Therefore, contiguous agricultural fields interspersed with the open scrub and sparsely dotted trees are characteristically seen near the rural settlements in the area. The soil in Noida is moderately fertile. The ground water in NOIDA is generally hard in nature due to presence of calcium and magnesium in excess amount.

2.4 CLIMATE

Climatologically, this area resembles the central part of India and, therefore, experiences two extreme types of climate. The summer season stretches from March to June with the maximum temperature shooting up to about 45 degrees Celsius. During the winter period, which extends from October to February, the minimum temperature falls to about 4 degree Celsius. The monsoon season starts from the first week of July and continues till the end of September. Though Noida has large tracts and well developed green area, the air quality is becoming a matter of concern because suspended particle matter (SPM) is increasing due to large scale construction activities in the developing city.

2.5 FLORA AND FAUNA

The vegetation in the area falls under the category of sub-tropical deciduous type, though at present it does not have any extent of natural forests. The important types of trees which are found to exist interspersed with vast agricultural fields are *Shishum*, Mango, *Jamun*, *Imli* and *Babul*. The ornamental trees found in the area are mostly the *Gulmohar*, *Ashok*, Eucalyptus and *Chameli*. The scrubs and bushes found in the area are *Arua*, *Hina*, *Panwar*, *Madar*, *Karanda* and *Mako*. Regarding the fauna, it is noticed that the wild animals are rare in this area. The most common animals found in the area are the monkey and pig. The birds which are generally seen in the area, particularly near the protected vegetate area are peacock, duck, partridge, and snipe. The Govt. of U.P. has notified and developed the Okhla Bird Sanctuary in the Yamuna near the Okhla barrage. This Bird sanctuary is the habitat of migratory birds during winter season.

2.6 DRAINAGE

The planning area is bounded by river Hindon in the east and Yamuna in the west, both flowing southwards. Apart from these two main rivers, the area has a number of drains, which are perennial as well as non-perennial in nature. Hence, it is natural that all the drainage channels follow the northeast to southwest slope. Both Hindon and Yamuna rivers are in mature stage. One left out channel of Hindon, non-perennial in character, is

found roughly in the central part of the area, near Sharfabad village. The storm water from Noida area drains mainly in the river Yamuna and partially in Hindon.

Apart from rivers Hindon and Yamuna, the planning area possesses a number of drains and ponds. In the north-western portion of the existing city of Noida, a major man-made drain, namely, the Hindon cut is flowing which is used by the irrigation authorities to carry the water of river Hindon into Yamuna. This cut merges with the river Yamuna near the North - western boundary of the township. Two other major drains exist in the area. One flows through the Sectors 14, 15 and 16 and falls into the river Yamuna beyond Okhala Barrage. This drain is known as Shahdra drain and it carries drain water of East Delhi and Shahdra into the Yamuna. The other drain, namely Noida Drain flows in the southern part of the area and finally falls into the river Yamuna upstream of the Yamuna Hindon confluence point near sector - 168. This drain is presently being used as an outfall channel for drains servicing the most parts of Noida city.

2.8 LAND UTILISATION

The area has two distinct types of land utilization pattern. These are:

- i. The planned integrated industrial township of Noida wherein the major industrial sectors were developed in three phases; namely, Industrial Area Phase I, Industrial Area Phase II, and Industrial Area Phase III. The residential, commercial, recreational, institutional and other urban use areas have also been developed in large parts of the township in the form of sectors. The remaining area of the township is in the process of being developed. Three well maintained green/recreational areas have been developed, one as a recreational area along the river Yamuna, located opposite Sectors 14A, 15A and 16A, another as city level green area in Sector 54, and the third as a golf ground located in Sector 38. Other than the above, two more large recreational/ green areas are to be developed in sector 38A, one opposite Sectors 28, 29, 37 and 44; and the other as sports complex in Sector 21A and in sectors 79, 101, 104 and 150.
- ii. The agricultural fields exist in an interspersed manner with rural settlements in some parts of Southern area of the town. Agriculture is well developed as the soil is fertile and irrigation facilities are well provided in the area. Plantation has also been done in some pockets. One such relatively large pocket exists at a location immediately north of the Sultanpur village and a smaller pocket exists west of the Shahdara village and located along the western bank of Noida Drain.

2.9 VISUAL APPRAISAL

Though the area appears to be almost nondescript in its visual appearance, a proper visual environment can be created in the existing township and its planned extensions with the help of the water bodies, plantations, and through well landscaped built environment.

CHAPTER 3

DEMOGRAPHIC CHARACTERISTICS

3.1 GROWTH AND DISTRIBUTION OF POPULATION

As per the 1981 Census, when Noida was in its infancy the population of Noida was 36,972. This was basically the aggregate of population of villages in Noida. In the year 1991, Noida was categorised as a Census Town (CT) and by this time 29 villages were urbanised and constituted the developed urban area of Noida, which had a population of 1,46,514 persons. The 1991 Census also revealed that in addition to the population in the developed urban limits of Noida, 34,489 persons lived in the peripheral villages. Thus the total population residing within the Notified Area of Noida was 1, 81,003 in 1991. The population increased upto 3,05,058 in 2001 and about 10 lakhs in 2010.

The population of Noida city grew by nearly 400 per cent during 1981-91 and 108 percent during 1991-2001. This is not surprising because the period represented the take-off stage of the new town, which was founded in 1976. A study completed by the School of Planning and Architecture, New Delhi (SPA), estimated that the population of Noida had increased to 2,11,534 in 1995. The study also suggested that as much as 20 per cent of the population lived in jhuggi clusters, another 48 per cent in the urban villages and only 32 per cent resided in the developed residential sectors. A detail survey conducted by the Noida Authority and district administration in 2008 indicates that there are about 11000 hutments in Noida. The Authority has taken up the resettlement plan of these hutments. Population of Noida, as reported by the Census of India, 2001 was 305058 persons. The census enumeration in 2010 indicates that the population of Noida in the year 2010 is more than 10 lakhs.

3.2 AGE COMPOSITION

A detailed account of age-sex composition of Noida's population is provided by a Socio-Economic and Transportation Study conducted by the School of Planning and Architecture, New Delhi in 1987. As per this study, children up to 15 years of age constituted 30.74 per cent of the total population, whereas the working age group of 15-60 years accounted for 65.39 per cent. Within this age group, the relatively younger set of people between the ages of 15 and 40 years constituted as much as 45.93 per cent. Only 3.87 per cent of the population consisted of old persons above the age of 60. The predominance of working age groups in the population is characteristic of a new town, which is growing rapidly due to work opportunities in various sectors of economy.

However, as revealed by another study conducted by SPA in 1995, it was found that as compared to the 1987 study, children below the age of 15 had increased from 30.74 per cent to 31.8 per cent of the population, the working age group between 15 and 60 years had shrunk to 60.66 per cent from 65.39 per cent and persons above the age of

60 had increased from 3.87 per cent to 7.4 per cent. This trend points out that age composition of Noida is getting more stabilised with time and a large number of retired persons are getting settled in Noida,

3.3 SEX RATIO

The sex ratio of the population in the notified area in 1991 was 782, which is on the low side as compared to most other cities. However, this low figure is mainly a reflection of the fact that Noida city was then in an infantile stage of growth when an overwhelming majority consisted of recently migrated population characterised by predominance of lone migrants. According to the 1995 study, it was revealed that the sex ratio had increased to 895, indicating to the fact that as the city has developed, the original lone migrants have brought their families to live with them. For this reason, percentages of children and old people in the population have also gone up. The sex ratio of Noida, as reported by the Census of India, 2001 improved from 782 to 811.

3.4 LITERACY RATE

The literacy rate as per the 1991 census works out to be 65.68 per cent, much less than the corresponding national figure for urban population, which was 73.08 per cent. It is also marginally lower than the literacy rate of Ghaziabad (U.A.), which stands at 67 per cent. One of the reasons for this low literacy rate is that Noida has attracted a large number of migrants, mostly illiterates, from surrounding villages and small towns. After the initial years of its development, Noida has experienced a remarkable improvement in its literacy rate, which was over 80 percent in 2001. Education facilities have been developed almost in all parts of Noida which has contributed to the enhancement of literacy and general education standards in Noida.

3.5 HOUSEHOLD SIZE

As per 1995 Survey, the average household size of Noida works out to 4.2. The survey further reveals that nearly 70 per cent of the households have a household size of 4 to 6 persons. Out of the remaining, about 4.25 per cent have more than 6 persons per household and more than 25 per cent have less than 3 persons per household. The average household sizes of Noida Notified Area and Noida Urban Area were 4.77 and 4.44 respectively as per 2001 Census.

3.6 ECONOMIC CHARACTERISTICS

3.6.1 Workers' Participation Rate

As per the 1991 Census, 33 per cent of the population of Noida Urban Area and 31.68 per cent of the population of Noida Notified Area were classified as worker. In the year 2001, the figure had increased to 34.90 percent for the Noida Urban area and 33.24

percent for Noida Notified Area, which is a reflection of the growing economic opportunities in the area (Table 1.1).

Table 1.1 : Workers' Participation Rate of Noida-1991 and 2001

Sl. No.	Area	Workers' Participation Rate	
		1991	2001
1	Noida		
	Notified Area	31.68	33.24
	Urban Area	33.00	34.90

Source: Census of India, 1991 and 2001.

3.6.2 Sectoral Distribution Of Workers

In 1991, a major segment of workers in the Noida Urban Area Comprised of industrial workers who constituted 29.47 percent of total workers. Another 31.01 percent were in services. 14.54 percent in trade and commerce, 9.11 percent in construction, 4.22 percent in transport and communication and 11.65 percent in primary activities. It could be observed from the data that percentage of workers in primary activities in 1991 was still quite high. This figure, however, declined to 2.64 percent in 2001. The workers in household industries increased from 1.29 percent in 1991 to 2.96 percent in 2001. Similarly workers in other non-agricultural activities such as trade and commerce, construction, transport and communication and other services increased from 88.35 percent to 94.40 percent during the decade. This is not unexpected since Noida is urbanizing at a fast rate and accumulating industrial and other enterprises.

In the Notified Area of Noida, of which the Southern part is still agricultural, only 20.34 percent of workers were engaged in primary activities in 1991, since agricultural land of the farmers was acquired for urban development. A substantial proportion i.e. 26.53 percent of the workers in even this predominantly agricultural part of the notified area were engaged in manufacturing activities in 1991, mainly in the industrial units located in the industrial sectors that were developed on the acquired land.

The 2001 Census revealed that workers engaged in primary activities in this predominantly rural part of Noida decreased to 8.95 percent, household manufacturing workers increased from 1.26 percent to 3.00 percent, and the workers in the rest of the non-agricultural activities also increased from 79.33 percent to 88.05 percent, which substantiates the impact of growing urbanisation in the area (Table 1.2).

Table 1.2 Number of Worker by Industrial Categories in Noida 1991, 2001.

Category	Noida Urban Area		Noida Notified Area	
	1991	2001	1991	2001
Cultivators	3,425(7.09)	1,679(1.57)	8,160(14.23)	8,644(6.82)
Agricultural Labourers	1,782(3.68)	1,139(1.07)	2,973(5.18)	2,696(2.13)
Sub-total Primary Activities	5,207(10.77)	2,818(2.64)	11,133(19.41)	11,340(8.95)
Household Industry	6,26(1.29)	3,149(2.96)	722(1.26)	3,792(3.00)
Other Services	42,507(87.94)	100,525(94.40)	45,491(79.33)	111,513(88.05)
Total	48,340(100.00)	1,06,492(100.00)	57,346(100.00)	126,645(100.00)

Source: Census of India, 1991 and 2001.

3.7 SETTLEMENT PATTERN

In 1991, the notified area of Noida comprised a total of 81 revenue villages of which 29 were urban villages (falling within the developed urban limits of Noida Census Town) and 10 were uninhabited. Noida Census Town is the only urban centre within the notified area. IN 2001, population of the urban villages are not given separately; instead, their population is counted as part of the population of Noida Census Town and thus the total number of villages is reduced to 52 including 9 uninhabited villages (Table 1.3).

Table 1.3 Number of Villages in Noida

S. No.	Township	Number of Villages							
		1991				2001			
1.		Urban	Rural	Uninhabited	Total	Urban	Rural	Uninhabited	Total
	Noida	29	42	10	81	--	43	9	52

Source: Census of India, 1991 and 2001

The developed urban area of Noida including Noida Phase-II area occupies the central and Northern areas of Noida. Majority part of the Southern area beyond Noida drain is predominantly rural in character where rural settlements are still found to exist in a scattered manner all over the area. However, this part of Noida's notified area is also urbanizing at a rapid rate during last few years.

3.7 SETTLEMENT SIZE

Settlement falling within the notified area of Noida have a wide range of population sizes. Some of the villages such as Haraula, Nithari, Ragunathpur, Atta, Chalera and Khora that were engulfed by urban sectors by 1991 had grown to relatively large population size (above 10,000) as per the 1991 Census. Many more large villages such as Bhangel, Hajipur, Sorkha, Sadarpur and Sharfabad were engulfed by developed sectors during 1991-2001. These urban villages have increased in population size and attracted commercial, institutional and household manufacturing activities.

The villages in the periphery of the urban sectors are of medium size ranging in population sizes between 5,000 and 10,000 persons. Relatively small size villages with population of less than 5,000, with few exceptions, spot rest of the Southern rural track. Table 1.4 gives the figures relating to number and size range of villages in 2001 in Noida.

Table 1.4 Number and Population of Settlements by Size Ranges in the Notified areas of Noida 2001

Population size range	Number of Settlements	Population	
		Persons	%
5,000-10,000	01	6655	10.71
2,000-5,000	08	25365	40.84
1,000-2,000	17	23913	38.50
Below 1,000	17	6183	9.95
Total	43	62116	100.00

Source: Census of India, 2001

It is observed that most of the rural population (79.34) resides in medium size village in the size ranges of 1000 to 5000 persons (Table 1.4)

3.7.2 Settlement Growth

In 1981, when Noida was in its infant stage, the township consisted of a population of 36,972, which was basically the aggregate population of the villages that existed within the Notified Area. In 1991, Noida achieved the status of a Census Town, and its total population sprang up to 1,81,003 which meant a population growth rate of close to 400 per cent. Census town of Noida including 29 urban villages (which constituted Noida Urban Area) accounted for a population of 1,46,514 and rest of the 34,489 persons resided in the rural tract of the Notified Area.

Table 1.5 Population Growth Rates of Noida Township, Rural Population in Notified Area and Notified Area of Noida, 1981-2001

Year	Population			Growth Rate (%)		
	Noida Urban	Noida Rural	Noida Notified	Urban	Rural	Total
1981	-	36972	36972	-		
1991	146514	34489	181003	N.A.	-7.44	388.85
2001	305058	93390	398448	108.21	172.89	120.46

Source: Census of India, 1981, 1991 and 2001

During 1991-2001, when the population of Noida Census Town increased by about 108 percent, population of the villages in the notified area increased by more than 172 percent. This is due to the fact that Indian Census did not change the boundary of the Census Town to conform to the development of urban sectors outside the 1991 boundary. The point to note is that the population of the entire notified area of Noida increased by more than 120 percent which is a fast rate of growth pointing to the population dynamics that has ushered in due to fast pace of urban development activities being undertaken in the area by the Noida Authority. However, it is also likely that a significant proportion of the population growth in the villages may be taking place due to unplanned growth of the village settlements, both in terms of population and physical sprawl. To check such activities, the Authority intends to evolve concrete action programme and a policy to integrate the village with planned urban development in the notified area of Noida. Some of the urban village that need special attention in this regard are Choura, Sadatpur, Raghunathpur, Nithari, Haraula, Nayabans, Chhalera, Banger Chora, and Atta. Similarly some rural villages such as Hajipur, Mubarikpur and Raipur Khadar have experienced phenomenal growth in population. These villages may create problems for planned development of Noida if their growth is not properly integrated with the surrounding development.

3.8 LAND USE AND DEVELOPMENT IN NOIDA TOWN

3.8.1 Land use planning for a town is a process through which attempts are made to make use of land in the best possible way for development of town. Its future size, pattern and direction of growth, form, etc., are determined through the process of land use planning, which provides a definite guideline and roadmap for the future development of the planned area. The first land use Plan of Noida Township for the perspective year of 2001 approved by the Authority in 1983 was prepared with an aim to provide the desirable environment for population. This Master Plan proposed the development of 3800 hectares of land by the year 2001. The Land uses were divided into 7 category in the following way:

Table 1.6 proposed Land use as per Noida Master Plan 2001

S. No.	Land Uses	Area in Hactares	% to total developed Area
1	Residential	1870	49.2
2	Commercial	230	6.1
3	Industrial	495	13.0
4	Public and Semi Public	265	9.6
5	Transportation	495	13.0
6	Organised open spaces	292	7.7
7	Unusable water bodies	53	1.4
	Total	3800	100

Source : Noida Master Plan – 2001.

3.8.2 This land use plan was prepared taking into consideration the major decisions of various land uses in relation to each other to enable the new township to be a self supporting, self contained and well designed new community for people to live, work and enjoy the pleasant surroundings. The Noida Authority in its board meeting held on dated 10.11.89 approved the revised draft of Noida Master Plan for the perspective year of 2011 with a view to accommodate and plan for the requirements of expanded area of Noida and newly proposed various development activities in the Regional Plan – 2001 of the NCR. There had been increase in the Industrial and Institutional areas planned in Noida. Proposals for Rail linkage, Light Rail Transport, Expressway, etc., in the NCR Plan 2001 also necessitated the revision of the Master Plan 2001. It was revised for the perspective year of 2011 and the population was estimated to be 11.5 Lacks by 2011. Accordingly 7650 hectares land was planned and proposed to be developed for different urban activities with slight increase in the proposed commercial area, a total of 7,789 hectares of land was proposed to be developed in Noida town as per the approved Master Plan for 2011. The town has been planned as an Integrated urban area with the prime focus on Institutional and industrial development. However, efforts have been made to provide other urban facilities with a view to achieve integrated development. Thus, simultaneously with industrial sectors, areas have been developed for residential, commercial, institutional, government/semi-government and recreational activities along with physical infrastructure for transportation, electricity, water supply, sewerage, drainage and garbage disposal. Master Plan also provided for development of recreational facilities and social infrastructure relating to education, health, and social and cultural needs of the people.

Other public facilities relating to telecommunication, marketing, police protection, fire safety, milk supply and petrol stations were also provided in a phased manner at various locations as per the requirements of people.

Table 1.7 Proposed Land Use Pattern for 2011

Sl. No.	Land Use Category	1997			2011	
		Area in ha	%	% of Planned Area for 2011	Area in ha	%
1.	Residential	1,654	41.4	45.0	3,672	47.2
2.	Commercial	132	3.3	30.6	431	5.5
3.	Industrial	838	21.0	85.0	985	12.7
4.	Public/Semi-public	535	13.4	43.8	1,224	15.7
5.	Recreational	175	4.4	32.6	536	6.8
6.	Transportation	658	16.5	70.0	941	12.1
Total		3,992	100.0	51.2	7,789	100.0

Source: Noida Master Plan – 2021.

3.8.3 The land use pattern indicating the status of development in 1997 and the areas developed in each land use as percent of targeted figures as per the proposed land use plan for the year 2011 are shown in Table 1.7. A Close analysis of the table reveals that whereas only 985 ha were proposed for industrial use in the report of the Noida Plan-2011, out of which about 838 ha of industrial area (85.0 percent of the proposal for the year 2011) had already been developed by 1997. Whereas, a total of 3,672 ha of residential land were proposed by 2011, it is found that only 45 percent of the allocation for residential use had been developed till 1997. Similar reduction is observed in relation to areas for commercial and public/semi-public uses. On the whole, it is found that very small proportions of areas for commercial and recreational uses have been developed, the figures being 30.6, and 32.6 per cent respectively of the allocations.

Table 1.8 Detail of Land Developed in Noida, By 2006

Sl. No.	Land Use Category	2006		% of Planned Area of 2011	
		Area in ha	%	Area in ha	%
1	Residential	3654.77	40.70	3672	99.53
2	Commercial	277.12	3.09	431	64.30
3	Industrial	1983.04	22.08	985	201.32
4	Public/Semi-public	1102.47	12.28	1224	90.07
5	Recreational	951.89	10.60	536	177.59
6	Transportation	1010.00	11.25	941	107.33
Total		8979.29	100.00	7789	

Source: Noida Master Plan 2021.

3.8.4 An Analysis of the status of land developed under various land use categories in the year 2006 (Table 1.8), however, points towards commendable progress in achieving targets. The analysis reveals continued emphasis on industrial development, obviously so since as stated above the Authority's focus was on supply of developed industrial land. This is inferred from the fact that the Authority had committed as much as 1,983.04 ha of industrial land by the year 2006, though this entire land for Industrial use was not developed. It includes about 1000 hectare land allotted for S.E.Z. . This is 201.32 percent of the original proposal for the year 2011. But what is more commendable is that as much as 99.53 percent of the original allocation for residential use had been developed till 2006. Similar progress, though relatively less significant, is observed in respect of areas for other uses. Up to 2006, as much as 64.30 percent of the targeted allocations for commercial use area have been achieved by 2006. Fast pace of development has also been achieved in recreational, public and semi-public and transportation related use areas, pointing toward successful implementation of the Master Plan of Noida for 2011.

3.8 EXISTING LAND USE DEVELOPMENT

Noida is a fast growing town. Its development during last one decade indicates that the pace of development is more than what was expected in earlier Master Plans. A detail analysis of land development based on the latest satellite images indicates that total land of approximately 9211 hectares have been developed in different land uses by January 2010 and approximately 1000 hectares land was in the process of development. It indicates that the development of Noida has been more than what was provisionally envisaged in Noida Master Plan 2011. The Noida Master Plan 2011 was revised in 2006 for the perspective year of 2021. A total of 14964 hectare land was proposed for the development of urban activities. A comparative analysis of land use development with reference to proposed land use in Noida Master Plan, 2021 reveals that about 61.61% of total proposed land has already been developed.

Table 1.9 Detail of proposed land use in Noida Master Plan – 2021 and Actual development in the year - 2010

S. No.	Land Use	Proposed Area for 2021 (%)		Actual Development by 2010 (%)		% of planned area of 2021
1	Residential	5334	35.65	3357.64	36.45	62.95
2	Commercial	564	3.77	101.89	1.11	18.06
3	Industrial	3001	20.05	1267.14	13.76	42.22
4	Institutional / Facilities	1219	8.15	813.28	8.83	66.72
5	Transportation	2211	14.78	1804.31	19.59	81.61
6	Recreational	1513	10.11	1761.98	19.13	116.45
7	Agriculture	1001	6.69	--	-	-
8	Water body	121	0.81	104.50	1.13	86.36
	Total	14964	100.00	9210.74	100.00	61.61

3.9.1 Residential Development

Out of total 9211 hectare developed area in Noida, about 3358 hectare that is 36.45 percent is under Residential use. Actual development of Residential land is more than what was expected by 2011 and it is also reflected in high growth rate of population during last decade. Most of the development for residential sectors took place in the 80s. At least 33 sectors were developed over an area of 1,559.45 hectares. Though a greater emphasis was given during this period to the residential sectors, industrial development was not neglected. The development of industrial area Phase II, NEPZ, and the hosiery complex, was undertaken during the 80s and afterwards. Co-operative societies were encouraged to undertake the development of group housing residential projects. Noida Authority also developed land and constructed housing projects for Industrial labour and other income categories of society at various locations in Noida. Development of group housing for the purpose of better utilization of available land and to accommodate more population and to provide affordable housing units has been a very important policy of Noida. Noida Authority has allotted approximately 1025.45 hectares land as developed group housing plots which would accommodate about 10 lack population. The Authority has already constructed more than 34500 residential units and developed about 30000 residential plots for different income categories. Approximately 3358 hectares land has been developed and under utilization in residential activities till 2010.

3.9.2 Industrial Development

The development of industrial sectors in Noida has proceeded in a phased manner. In the first phase, 393 hectares of industrial land extending over 12 industrial sectors was developed. This provided 4,800 developed industrial plots. In the second phase, 127 hectares of industrial land was developed which provided 260 developed industrial plots. Simultaneously, under the extension scheme of development of Noida, Phase-II, 132 hectares of industrial land was developed which provided for 462 developed industrial plots. In the third phase, sectors 57, 58, 59, and 60 were developed wherein 206 hectares of industrial land was developed which provided 922 developed industrial plots. During this phase, the export promotion zone was established in an area located close to Noida Phase-II Industrial Development Area in which about 115 hectares of industrial land was developed leading to the development of 214 plots. As a result, a total of 973 hectares of industrial land were developed leading to the provision of 6,658 plots under Phases-I, II, II (Extension), III and Export Promotion Zone Development Schemes.

Total of 3587 small-scale units and 235 medium and large units were registered in Noida in 1998.

Table 1.10 Total Number of Industrial Units and Employment in Noida in Small, Medium and Large Scale Industries, 1998

Sl. No.	Industrial Category	No. of Units	Employment
1.	Food Products	59	1193
2.	Beverages and Tobacco Products	52	1452
3.	Cotton Textiles	44	898
4.	Jute Textiles	26	568
5.	Wool and Silk Synthetics Products	37	780
6.	Hosiery and Garments	758	13,788
7.	Timber and Wood Products	92	1,973
8.	Paper and Paper Products and Printing	405	8,627
9.	Leather and Leather Products	168	2,879
10.	Rubber Plastic and Petroleum	501	8,710
11.	Chemicals and Chemical Products	82	3,397
12.	Non Ferrous Metals	39	1,397
13.	Ferrous Metals	56	1,562
14.	Metal Products	104	3,012
15.	Machinery and Machine Tools	288	8,615
16.	Electric Machinery Appliances	342	10,224
17.	Transport Equipments	149	7,414
18.	Electronic Industries	243	8,488
19.	Other Industrial Miscellaneous	377	3,674
TOTAL		3,822	88,651

The development of industrial area Phase II, Phase III, NSEZ, and the hosiery complex, was undertaken during the 80s and afterwards up to 1998. Additional industrial land of about 754 hectares has been developed close to phase – III under sector-63, 64, 65, 80, 81,85, 89, 90, 138, 139, 140 and 140A between 1998 and 2006, pointing toward fast pace of development of industrial areas in Noida.

The total industrial land already developed by the year 2010 was about 1267 hectares. Being close to Delhi, Noida has become a favourable place for entrepreneurs for industrial investment. But because of the economic liberalization policies followed by the Government of India since 1991, the industrialists have begun to prefer investment in medium and large industries as compared to small-scale industries.

Presently the following types of industrial units are being attracted to Noida:

- i. Electrical Home Appliances,
- ii. Machinery,
- iii. Ready-made Garments,
- iv. Paper Products,

- v. Electronics,
- vi. Rubber/ Plastic Products,
- vii. Dies,
- viii. Tools and Machinery,
- ix. Wooden Furniture,
- x. Leather Products, and
- xi. Beverages and Food Products.
- Xii Automobile Parts
- xiii Building and Finishing Material.
- Xiv Pharmaceuticals
- xv Fabrication

In the future, the following types of industries are likely to be attracted:

- i. Electronics,
- ii. Electrical Goods,
- iii. Ready-made Garments,
- iv. Plastic Moulds,
- v. Packing Materials,
- vi. Dies,
- vii. Tools and Machinery, and
- viii. Steel Fabrication.

3.9.3 Commercial Development

Development of Commercial area follows the development of Residential, Industrial and Institutional properties. The share of commercial development is less than the expected share. About 102 hectare land in different part of city is developed and used for commercial activities. Out of this 21.15 hectare is development for whole sale commercial. Noida Master Plan 2021 has proposed one City Centre Comprising approximately 98.59 hectare land in sector 32 and 25A and few other sub-district centres. Sector 18 is developed as major commercial area in about 35 hectares. Sector level shopping centres and local level convenient shopping centres have been developed almost in all the sectors of Noida. Flower market in Sector 88, building material market in sector 9 and 49 fruit and vegetable market in sector 12 and 27, Bamboo and Balli market along the road of sector 8, automobiles spare parts in sector 16, other household electric items market and repair shops have been developed in sector 9. Many of these shops have come up in unorganised and unauthorised ways converting small scale industrial plots into commercial establishments. Noida Authority is trying to involve the policies to regulate these markets and also to develop organised and planned commercial centres at different places. Recently, about 235000 sqmtrs. of commercial land has been allotted in various sectors for the purpose of commercial development in different parts of the city.

3.10 INFRASTRUCTURE DEVELOPMENT

3.10.1 Water Supply

The settlements within the Noida Development Area are served by tube wells, Rainey wells and Ganga water. Presently Noida is getting 48 mld of Ganga water and approval of 192 mld of Ganga water has been granted by the Government of Uttar Pradesh. There are good ground water reserves, which are proposed to be exploited to meet the present and future demands for water in Noida. Even though 330 mld Ganga water is targeted, planning for water supply in the city is based on catering to the total demand through ground water sources because Ganga water is not available for about 3 to 4 weeks in a year due to cleaning and maintenance of canals.

The Ganga water is however needed for dilution of high mineral contents of the ground water to make it potable. WAPCOS (a Government of India undertaking consultancy organization) who have prepared Master Plans of water supply and sewerage system for Noida, have concluded that the overall quality of water in Noida appears to be good as no toxic substances were found in tube well water. Further, on the basis of available chemical composition records, WAPCOS have observed that the overall quality of water from tube wells / Rainey wells is good.

Presently, there are 182 tube wells generating 146 mld water, 6 Rainey wells generating 54 mld water, and 48 mld Ganga water for which 40 overhead tanks, 39 underground reservoirs and 38 underground reservoirs for Ganga water are in place. The present demand is 167 mld and supply available is 248 mld, thus there is no shortage of water.

3.10.2 Sewerage & Waste Disposal

Noida has 2 sewage treatment plants (STP) which were commissioned in 2000-01 and one oxidation pond. STPs are located in sector 50 and 54 and two oxidation ponds are also located in sector 54 and 91 with 9 mld and 5 mld capacities respectively. The two STPs have a capacity of 61 mld and the oxidation pond has the capacity of 14 mld. There are total of 15 sewage pumping stations (SPS) and 4 main sewage pumping stations (MSPS) 12 SPS and 4 MSPS are under construction.

More than 400 tonnes of solid waste, including biomedical and industrial waste, is generated everyday in Noida. At present solid waste is disposed off in the low-density undeveloped area without any systematic and scientific way of collection, segregation, storage and processing. About 70% of waste is of bio-degradable nature which can be processed and reused for different purpose. The Noida Authority has earmarked the land at two sites for solid waste management. These sites will be developed with latest technology for the purpose of solid waste processing and disposal.

3.10.3 Institutional Facilities

Institutional Facilities for education, health, religion, offices etc., have been developed both at the sector and city level. Plots for education and medical facilities have been allotted in all the residential sectors to meet the local requirement. All villages in Noida have educational facility at the primary school level. High school facilities are available on the basis of population in urban villages. Chalera has one girls' school and Jhundpura has one training institute. A total of 190 educational institutions covering an area of 512.67 hectare (about 5.57 percent of the developed area up to 2010) have been developed . These institutions include eminent schools for higher secondary education Besides, there are scores of engineering colleges, business schools, technical institutions and other prominent institutions under both public and private sectors. Few more schools and colleges of International repute are coming up in Noida which will add to the quality and quantity of Educational infrastructure.

Till 2010 about 813.28 hectares land has been developed and used for different Institutional facilities. Noida Authority has allotted about 493 hectare land for different educational institutional and 19.67 hectare land for Research and training centres. Information technology and Information technology enabled services are very important activities, which provide employment opportunities in Noida. National and State Level Institutions corporate sector offices, Films and Television industry are playing vital role in the development of Noida. The Noida Authority has allotted about 51.20 hectare land to the satellite and National level Institutions, about 427.25 hectare land for the IT/ITES, and about 161 hectare land for corporate offices and for social / cultural and religions activities.

3.10.4 Medical Facilities

The rural tract possesses 35 community health centre, 5 villages have registered practitioners, 2 villages have maternity and child welfare centres, 2 health dispensaries and 2 are provided with family planning centres. In addition, there are 22 hospitals in the city which are supported by numerous nursing homes and dispensaries. 21.74 hectare land has been developed and used for different medical facilities in Noida. The Noida plan provides plots for hospital and medical colleges at various locations in Noida. Once these plots allotted and the development of hospital and medical colleges completed, Noida will become an important centre for medical and health facilities.

The above clearly indicates that Noida is already well established in relation to educational and health facilities. Moreover, prestigious enterprises and corporations have chosen to establish divisional / Headquarter offices in Noida. Approximately 813.28 hectares land has already been developed under institutional and other community facilities and services in Noida. It constitute about 8.83 percent of total developed land by 2010. Sector 62, 125, 126, 127, 132, 135, 136, 143, 144, 153 and 154 have been developed for institutional facilities.

3.10.5 Transportation

3.10.5.1 Inadequacies in the provision of urban infrastructure, particularly transport, have been the root cause of degradation in the quality of life in urban areas. Noida is presently experiencing rapid changes in its physical structure and if proper care is not taken to upgrade the transportation system in a conforming manner, the quality of life in the city may deteriorate at a rapid rate. This is particularly so because while Noida's linkages with the city of Delhi are being upgraded and strengthened by the development of expressways and addition and widening of bridges over the river Yamuna, the city's own internal network requires upgradation in capacity, access control and hierarchy. The mismatch between the macro and micro networks do exist in the development of the city. The weaknesses of the transportation system of Noida are becoming too apparent. These need to be recognized and obviated in the preparation of the Master Plan through a rational integration of land uses and transportation system.

3.10.5.2 Hierarchy of Roads

- (i) **Arterial Roads:** These are the external roads providing regional linkages to Noida with Delhi and towns of Uttar Pradesh. These roads also form the arterial network for Noida as they pass through the city.
- (ii) **Sub Arterial Roads:** These are the major internal roads of the township, which are planned to cater to the bulk of the intra-city movement.
- (iii) **Main Collector Road:** These are other internal roads providing access to various sectors from the work centres developed so far. These roads are generally of 45.0 metres wide right of way.
- (iv) **Secondary Collector Roads:** These are intra sectoral roads for movement within the sectors and providing approaches to various properties. These roads are generally of 24 to 30 metres wide right of way.

3.10.5.3 The notified area of Noida has neither a railway station nor an easy access to railway station. The nearest railway station is Hazrat Nizamuddin, which is situated at a distance of about 15 km. Thus the area has only road linkages with Delhi and the adjoining areas of Uttar Pradesh and Haryana states. From the eastern side (i.e., through Sikandrabad and Dadri in Western Uttar Pradesh) it is approached by Dadri-Surajpur-Chalera (DSC) road. In the north, it is linked to Ghaziabad, Delhi and in fact whole of the northern India through NH-24 which is approached through two link roads, one running along the left marginal bund of river Yamuna and meeting the Highway at the eastern end of Nizamuddin bridge and the other, popularly known as Noida by-pass, meeting near Ghazipur village. Another link to east Delhi and Ghaziabad area is through Kondli road between Sector VIII and Sector IX connecting through Patpargunj Group Housing area. Presently most of the traffic from North, West and South Delhi is using the Nizamuddin Bridge to reach Noida. There

are three other major roads in sector 62 and sector 63 which connects Noida with National Highway - 24. In the south-west side, the Okhla Barrage over the river Yamuna links Noida with Delhi, Faridabad, and other parts of Haryana and in fact the whole of southern India through NH-2 (Mathura Road). This has also become an important link for Noida to the residential, commercial and industrial districts of South Delhi areas. Master Plan Road 3 from the barrage at Kalindikunj to its Junction with Gautambudh Expressway in Greater Noida on the Hinden Bridge near sector 121 and its second link with National highway No. 24 near sector 62 provides an important regional connectivity to Noida with other areas. The width of Nizamuddin Bridge has already been increased to more than twice its original dimensions. Moreover, a wide bridge (DND Flyover) over Yamuna connecting the ring road near Ashram in Delhi has been constructed which has improved the linkage of Noida with Delhi. Besides, there are two more important transport projects, which will have far-reaching implications for the development of Noida. One is the proposed old alignment of Faridabad-Noida-Ghaziabad (FNG) expressway. Noida Authority has already developed a large portion of this road within Noida. Once constructed, and linked up with Faridabad or NH – 2, this important highway will open up Noida area for highly intensified real-estate development relating to high-rise residential and commercial uses. The Noida- Greater Noida Expressway is already operational and has linked the two towns to Delhi. Also at the planning stage is the proposed railway link for Noida, which will connect the city to Tughlaqabad in South Delhi at one end and to Dadri at the other end. Once this link is established, Noida will be connected by rail to all important towns of the NCR and rest of the Country. Proposed Mumbai – Dadri dedicated Rail freight corridor will also pass through Noida and once it is constructed it will open new avenues for Industrial and Institutional development in Noida.

3.10.5.4 Delhi Metro Rail Corporation has already started metro Rail service from Delhi to City Centre, Noida via Mayur Vihar. Noida and Greater Noida Authority are planning to develop the Metro Rail link form City Centre, Noida to Greater Noida via Sector 50, 78, 142, and then along the Noida-Greater Noida Expressway in Noida and Pari chowk and Golf Course in Greater Noida. This metro link will enhance easy mobility through the area which will help in the establishment and development of employment generating activities all along the Metro corridor. The development of Yamuna Expressway from Greater Noida to Agra is under progress and once this is completed it will boost up the connectivity as well as the development process in Noida and Greater Noida. With these important rail and road projects in the offing, there is no doubt that Noida will inevitably become part of the enveloping conurbation which will ultimately include Greater Noida, Ghaziabad, Faridabad, and South Delhi in a composite urban monolith.

3.10.5.5 **Traffic Volume Characteristics**

It is observed that 80 per cent of the traffic falls along the Noida-Delhi corridor, thus exhibiting a strong relationship between Noida and Delhi. The traffic volume studies also reveal that higher volumes of traffic enter the city in the morning hours whereas in the evening hours the traffic leaving the city increases. This is the reflection of increasing

number of workers commuting from neighbouring areas to workplaces in Noida City. The traffic surveys have also revealed that personalized motor vehicles (i.e. cars and scooters) have a significant share (40 to 50 per cent) in the traffic volume. There are about 60,000 cars registered at RTO Noida only and about 850 cars are registered every Month at RTO Noida. Annually more than 10,000 cars added to the city every year. This high use of personalized modes suggest that a more integrated inter-city public transport system may be required to reduce the burden of personalized vehicles on transport infrastructure of Noida City, Delhi and other neighbouring urban areas. At present about 350 DTC buses and 250 UPSRTC buses are operating in Noida. Metro Rail is also carrying large number of passengers. As regard the goods movements, transportation survey has revealed that there is a high inflow of building material to Noida and a high outflow of industrial goods from Noida. The analysis of the travel demand matrix by distance of travel indicates that nearly 75 per cent of the demand is concentrated for a travel distance of less than 3 km. Only about 4.6 per cent of the trips are for a distance of more than 10 km (Table 1.11). More than 91% trips are made for work, education and shopping purposes. More than 91% trips are made for work, education and shopping purposes. Personal trips are further classified by the mode of travel and it has been found that walk trips are higher which is due to high intra sectoral movement. Since commuter trips are significant, the use of bus transport and 2-wheelers find the next place in mode usage hierarchy. The cars are also having significant share in individual's movement.

Table 1.11 Distribution of Person Trips by Trip Length (Internal Movements)

Distance Class	Number of Trips	%
1. Less than 1 Km	2,90,117	60.1
2. 1-3 Km	31,436	6.5
3. 3-5 Km	75,407	15.6
4. 5-10 Km	63,385	13.1
5. Above 10 Km	22,396	4.6
Total	4,82,741	100.0

Table 1.12 Distribution of Person Trips by Mode of Travel

Mode of Travel	Number of Trips	%
Car	47,975	9.9
Two-wheeler	62,256	12.9
Hired IPT Modes	46,231	9.6
Bus Transport	60,408	12.5
Walk	2,19,232	45.4
Others	46,641	9.7
Total	4,82,743	100.0

Source : Noida master Plan 2021 (draft report)

3.10.5.6 Parking in a city becomes a crucial instrument, which determines the congestion levels on the roads, since inadequate provision of parking spaces will shift the demand on to the roads. The standing vehicles on the roads will be hindrance to moving traffic, as they will reduce the effective carriageway width. Night parking is now over spilling on to this service and internal street network of the residential sectors. This service and information technology industries are posing heavy demands on the roads, as the vehicle/employee ratios are high. As a consequence, the locations of such industries need to be re-examined and the measures for satisfying parking demands identified. In the commercial areas the turnover is high. In view of this mounting parking accumulation, there is a need of reviewing the existing parking policies for further development.

3.10.5.7 The emerging travel characteristics of the city are suggestive of the transitional changes that are occurring in the structure and functions of the city. Initially conceived as a self-contained township, the city is gradually transforming itself as an extended suburb of Delhi, on account of high accessibility enjoyed by it to the metropolis. The high incidence of commuting between Delhi and Noida are outcomes of strengthening of transport linkages through construction of expressways and bridges and widening of existing roads. This may need to be strengthened through development of effective medium capacity rapid transit system to contain the growth of personalized vehicles. There is also a need for developing a system of transport terminals to integrate the inter-city and intra-city systems. The loading on the network has shown that the major corridors of movement are already up to their capacity. Mobility levels are increasing. The modal shift is taking place towards private vehicles and there is an increase in per capita trip rates and trip lengths. All these facts need to be taken care of while evolving a future transport policy for improving the network system in Noida.

3.10.5.8 **Issues**

1. New connections over river Yamuna or widening of Okhla barrage road assuming that the trends of increasing interaction between Noida and Delhi would be allowed to persist or enlarge.
2. Appropriate rail linkages, both for passenger and goods traffic. There is no railway connection or easy access to railway station.
3. Planning strategies to reduce the flow of traffic linkage of Noida with Delhi and increase it more with adjoining areas of U.P and Haryana to make Noida a comparatively more self contained city.
4. Traffic management programmes for the city encompassing traffic segregation strategies, provision of cycle tracks/paths, parking control, pavement marking, road signage, enforcement and intersection control.

5. Need to formulate appropriate parking policy, which could incorporate strategies and programmes for on-street and off-street parking, parking norms/standards, parking pricing and parking management.
6. An environmentally friendly integrated transport system for the city.

3.11 POTENTIALS AND CONSTRAINTS OF DEVELOPMENT

The development potential in Noida area emanates not only from its proximity to Delhi but also due to the fact that it lies in the midst of a rich agricultural belt extending over western Uttar Pradesh and Haryana. Prospering cities like Ghaziabad, Sikandrabad, Bulandshahar and Khurja in Uttar Pradesh and Faridabad and Ballabgarh in Haryana surrounds it. Besides, the planned township of Greater Noida is fast coming up in Uttar Pradesh on a territory southeast of Noida and located immediately across the Hindon River. All the towns and cities surrounding Noida city are growing up with a strong industrial base. The job opportunities in these urban settlements are attracting migrants and thus the settlements are experiencing fast rate of growth of population, a trend likely to continue in the future.

Noida is attracting considerable office employment. Since the office space has become increasingly scarce in Delhi, many businessmen, even though resident in Delhi, are setting-up offices in Noida because, here, the rents are still in the affordable range. The employees in these offices are thus finding it more convenient to live in Noida. In the next stage it is expected that the businessmen themselves will shift to Noida. Policies of the Noida Authority during last few years have been conducive for the development of office spaces at various places in Noida. The NOIDA has developed sector 62, 125, 126, 127, 132, 135, 136, 142,143, 144, 153, 154, etc., where Institutional and other office facilities will house large number of offices and employment opportunities. In addition, Noida is also a convenient place to live for people who, though employed in Delhi, have bought or rented accommodation here because of relatively affordable rates. Due to the above factors, and also considering the fact that the level of facilities in Noida and transport linkages with Delhi are bound to increase in the short run, the rate of growth of population is likely to accelerate in the future.

However, in the long run, it is likely that the bridges across the river Yamuna, even though widened and increased in number, would experience heavy traffic and it may not remain easy to cross the river within reasonable time, unless the area is connected to Delhi by Mass Rapid Transit System (MRTS). Thus transportation across the river Yamuna may become a major limitation for the development of Noida in the long run, if not addressed properly.

Another limitation to the development of the area emanates from the fact that, being a low lying area, and having been reclaimed for development after constructing embankments all around, it is essentially low-lying. Hence, this area is difficult to manage from the point of view of drainage and sewerage. The underground water quality of few

pockets is not upto the mark. To overcome this problem, Noida has brought Ganga Jal to be mixed with ground water to improve the quality of water. The underground quality, amount of surface runoff and waste liquid is bound to increase with time as urbanisation takes place in the area and more and more population begins to reside here. Hence, the mosquito and fly nuisance may increase and the environmental condition of the area may need special measures for healthy living. Beside, the people will have to live always with the risk of devastating floods in extreme situations. Excessive damage to life and property may take place if embankments get breached. Hence this will be a major limitation for the future development of the area and it needs a careful technical feasible and sustainable treatment to overcome this potential limitations of flooding. Embankments all along Yamuna and Hindon have to be strengthen and a mechanism to pump out excess water from Noida drains during rainy seasons has to be developed and maintained regularly.

Lastly, the notified area of Noida has definite boundaries, being bounded by rivers Hindon and Yamuna on three sides and the National Highway no. 24 in the north. Hence the areal spread of the city is bound to stop after the entire notified area is developed, though a limited population increase will still take place through the process of densification.

CHAPTER 4

DEVELOPMENT PERSPECTIVES AND PLANNING CONCEPT

4.1 DEVELOPMENT PERSPECTIVE

NOIDA is to be developed as an independent city, no longer a satellite town to Delhi. It is envisioned that by the year 2021, the city will begin to acquire an accentuated commercial and institutional focus reflecting on its location at the centre of a large megalopolitan conurbation comprising of the surrounding cities such as Delhi, Gurgaon, Faridabad, Bulandshahar, Sikandrabad, Ghaziabad and Meerut.

The type of industries will also experience a gradual shift from the traditional small and medium scale industries to hi-tech industries like Information Technology, Bio-Technology etc. and their ancillary R&D platform. The focus will also be to develop it as an integrated town with all the amenities and the infrastructure for the resident population in place to create conducive living environment.

Ghaziabad, which has witnessed considerable industrial growth since the mid 70's and is now a Central NCR town as per Regional Plan – 2021, has reached near saturation. Noida have become a favourite choice as an alternative location for medium scale industries and this eventually would lead to growth of sizeable small-scale industrial sector for the regional population.

An Export Processing Zone has already been developed in Noida. With the liberalisation policy of the Central Government and enabling the small sector also to have a share in technology up-gradation through collaborative ventures, there is every possibility of export oriented industrial and allied support activities to get accommodated in Noida in a big way, calling for the provision of warehousing, inland container depot, helipad, etc.,

Apart from traditional manufacturing units, high tech industrial units which are likely to converge in Noida would demand provision of institutional support system to accommodate diverse institutional facilities from finance and banking to information technology. Modern rail road transshipment and goods handling facilities would also be essential along with warehousing complex and air freight handling depot.

4.2 PLANNING IMPERATIVES

Within the framework of policy for the development of the NCR and UP sub-region and taking into consideration the development pressures due to the development of Yamuna expressway from Noida to Agra and rail connections to NOIDA, the master Plan is prepared With following underlying imperatives:

- Integrated development of NOIDA to accommodate future growth of population up to the year 2031.
- Capitalize on the area's high growth potential due to its proximity to the metropolitan city of Delhi and evolving transport linkages.
- Promote a conducive environment for people to earn livelihood and enjoy good quality of life.
- Promote small-scale industrial, Institutional and other work opportunities at places which are well suited for such activities.

4.3 PLANNING AND DESIGN CONCEPT

Noida is bounded by the river Yamuna in the west, river Hindon in the east, National Highway no. 24 in the north and the southern portion is demarcated by the confluence of the rivers Yamuna and Hindon. Noida has a long triangular shape. The rivers Yamuna and Hindon forming natural barrier and the national highway constituting a man made barrier of some sorts, there emerge obvious limitations to the expansion in future. The rivers in the west and east have become major determinant not only of the urban form and its configuration, but also of the future location pattern and disposition of activities and land uses.

The existing and proposed network of regional roads skirting the Noida area provide a sufficient functional and efficient framework for both inter-urban and intra urban circulation. A predominantly road based internal circulation system appears to be most appropriate for designing the network system and the built environment of the new urban complex in the southern part of Noida.

Based on the experience of several new towns and urban expansion projects implemented in the country, and keeping in view the contemporary thought and approaches to the city planning and design a few areas of concern have been identified which have greatly influenced the conceptualisation of the form, structure and design of the new urban complex. These are outlined in the following paragraphs.

1. The rivers Yamuna and Hindon are major ecological resources, which have to be conserved. This can be made possible by utilising the riverfronts exclusively for major regional and city level recreational facilities. This would safeguard against possible environmental pollution rampant in Indian cities where riverfronts have been allowed to be indiscriminately exploited for the residential and non-residential developments. Predominantly low-intensity activity has been provided in the southern extension of the town, in the area between the expressway and the river bundh. Education and Research

Institutions and office areas have been placed along the expressway. Few residential areas and Hi-tech industries would form the major part in the proposed SEZ.

2. Open spaces in most cities, though provided according to generous standards, tend to remain fragmented and localised as environmental and visual assets of the city. The concept of inter-flowing defined green spaces advocated in Chandigarh and also in the Delhi Master Plan has been found to be very appropriate not only as a continuous lung-space, but also as a multipurpose environmental feature, which enhances the quality of the built environment.
3. The central commercial area and associated uses, if located in a defined centrally placed zone or sector, have a tendency to outgrow the confines of the sector over a period of time as the integrated complex develops and infiltrate into adjoining residential sectors creating serious environmental problems. Moreover, as all CBD functions are located in one zone it becomes unmanageable creating chaotic conditions. In Noida, beside one large commercial complex, a number of small commercial centres are proposed on the junction of major arterial roads and along the major arterial roads. Also major amount of land has been allotted for up-market commercial use along the main expressway, to reduce the pressure on the main commercial complex.
4. Residential zoning along arterial roads has a tendency to be most vulnerable for unauthorised imposition of commercial use despite all enforcement measures by local authorities. To optimise the use of more valuable land strips abutting such arterial roads, as also to impart organic character to the urban development process, the concept of 'Mixed Use Zoning' has been advocated.

It is considered advisable to incorporate mixed use zoning concept along selected major arterial, so that a variety of commercial, semi-commercial and public and semi-public uses can be located along prime frontages to serve the nearby residential sectors, and enable a graded central, sub-central, and zonal level commercial functions to be distributed throughout the length and breadth of the new urban complex. The intensity and mix of land use in such a mixed-use zoning, however, have to be specified and regulated according to zoning guidelines.

5. The major area of concern in city development is the energy consumption. Apart from several technological innovations for energy saving applicable at component levels of production and consumption, it has been viewed that a low-rise high-density development is generally more energy efficient. The urban complex to be energy efficient should be structured in a pattern, which is conducive to the establishment of an efficient public transport system. To enable this, a gridiron structure with work centres located along and directly accessible to major routes, has been found more appropriate for the new urban complex. This type of transport system already exists in Noida. A well defined network of exclusive cycle-tracks linking the residential areas to major activity centres, will further complement the public transport system, avoiding undue reliance on

automobiles. In an urban complex of the size of Noida cycling as an individual mode of transport ought to be encouraged by adequate planning for convenient cycle movement in an organised manner.

6. A dispersed pattern of major work centres is an essential requirement to resolve the journey to work centres issue. Peripheral locations of environmentally problematic work centres like industry and related activities and a more centralised location of CBD functions will enable adequate dispersal of major work centres in an urban node of the size of Noida.
7. Pace of housing provision for the low income groups need to be increased to check unauthorized residential growth and squatter settlements. Interventions like 'shramik kunj' need to be evaluated and incorporated at different places to avoid stratification of residential areas or sectors according to income brackets. Insulating one area from the other creates more social and environmental problems for the urban area than it tries to resolve within a sector's confines.

A mixed development at the residential sector level, comprising dwelling units of various types and sizes to cater to a mixed socio-economic group, and providing for both public and private sector development, shall bring about social cohesion and shall be more conducive in cross-subsidising infrastructure and development costs from the higher income groups to the lower income families. In terms of design, such a sector can be conceived with appropriate mix of group housing and plotted developments, low rise and medium rise blocks, small and big linked functional open spaces, and social facilities providing points of interaction among various clusters within the sector. The circulation network comprising of cul-de-sacs and loop street pattern shall provide adequate segregation of vehicular and pedestrian movements. The resultant environment shall be organic, vibrant, and socially as well as aesthetically satisfying. Emphasis thus has to be on mixed residential development.

8. Informal sector has become a characteristic feature of our cities, and has to be accepted as an integral part of the urban structure. To ensure that such informal developments and activities do not become unmanageable, and proliferate in later years, it is imperative to provide specific sites for informal commercial activities as adjuncts to planned commercial areas.
9. Mode of development has serious implications in design quality of the component level built-environment. Plotted development, unless it has large-sized plots, imposes considerable restriction in achieving spatial integration and design unity. Emphasis is increasingly being given in contemporary examples, on comprehensive mode of development at area and component level, rather than independent isolated developments on individual plots. While group housing and corporate form of development would be best suited in residential sectors, comprehensive area development for public and semi-public sectors, particularly the administration centre of

the integrated complex and various facilities would be conducive to efficient functioning and better design quality of the built-environment.

10. It is imperative to devise an urban land policy which while retaining the hold of the public authority on land procurement, development and use, is flexible enough to let the corporate, co-operative and private sectors to share responsibilities related to land and infrastructure development, and housing and urban development programmes within the framework of the plan.

In this connection, along with land use zoning, it is imperative to formulate 'Development Mode Zoning' which shall clearly identify areas for development by the public and non-public agencies. It needs to be emphasised that the public sector agency, viz., New Okhla Industrial Development Authority should assume sole responsibility for total development of strategic areas and particularly those related to low income groups and EWS housing programmes, wherein there is no alternative to bulk acquisition and development of land.

11. One of the perennial problems of Indian cities is the shortage of housing for lower income groups and even the new towns built in the country continue to face this problem. Obviously the public sector authority, however enterprising it may be, cannot alone mitigate this problem, which has its own social and environmental impacts. Housing policy statements point to the need of a collaborative efforts on the part of both public and private sectors to build up adequate housing stock to meet the increasing demand of lower income groups. The prospective entrepreneurs in industry and large commercial houses as well as government and semi-government organisations should be made to share the responsibility of providing housing for their employees, to reduce the burden on the public authority. Private sector has to play a very vital role for providing the housing facilities to various sections of society. Public Authority alone may not be in position to provide these facilities to all. It is therefore important to encourage the private investment in low cost housing. High density with increased Floor Area Ratio has helped in reducing the cost of housing drastically in few sectors of Noida during last few years.

12. There is a need of integrating rural settlements existing on the site with the proposed urban development, as despite all legal control and authority, efforts to have a completely 'clean slate' approach to urban development have remained impractical. Such village 'abadis' shall be delimited, and enabled to be integrated both spatially and socio-economically through an upgrading programme. This will promote rural-urban integration and accommodate service population and informal activities during initial phases of city development. To prevent haphazard growth of these villages, land uses such as institutional, group housing and planned green spaces, which are relatively inert uses.

CHAPTER 5

LAND USE PLAN

Noida has been planned on a gridiron pattern. The major roads have been planned horizontally from southwest to northeast interconnected by perpendicular roads forming a grid and dividing the area into sectors. The township is planned on the concept of self-contained integrated township. The high-density residential areas are located close to work places. The commercial centres are well distributed over space with the main commercial hub in the city centre. The sub district centres are distributed with respect to residential catchment areas. Residential sectors are to be developed at varying densities. Few sectors have been planned for high density Group Housing with provision of large size recreational / green areas. The central park and major public and semi public uses are located so as to run linearly in a north-south direction more or less centrally through Noida. A railway station complex is proposed in the south-western part of Noida.

5.1 POPULATION PROJECTIONS

Noida is one of the fastest growing urban centres in India. It has experienced unprecedented population growth since its establishment. Its growth during last two decades also indicates that population projections cannot be made by any normal mathematical method. The earlier drafts of Noida Master Plan had projected the population of Noida for the years of 2011 and 2021 by various methods and stipulated the population to be 7 lakhs to 9 lakhs by 2011. Noida Master Plan – 2021 adopted 12 lakhs population for 2021 on the basis of NCR Regional Plan 2021. However, primary census enumeration of 2010 reveals that Noida's population has already crossed over to 10 lakhs in 2010. There is no relevance in having planned population of 12 lakhs for the year of 2021 when it is already more than 10 lakhs in 2010. Noida has definite area to be developed and the entire area has already been planned and committed to various urban activities. Hence, population projection for the purpose of planning has been adopted on the basis of commitment of land for residential purposes. It is envisaged that the physical development of entire Noida may be completed by 2021 and almost the entire residential area would have been inhabited by the year 2031. The population figures based on the commitments of residential properties in the planned area and potential population growth in the rural settlements are shown in the following table :-

TABLE 1.10 ESTIMATION OF NOIDA POPULATION FOR THE YEAR 2031

S.No.	Items	Unit No./ Area	Persons per unit	No. of persons
1	No. of flats constructed by NOIDA	34507	4.5 persons per unit	155281
2	No. of plots developed by NOIDA	24587	13.5 persons per plot	331924
3	No. of plots for farmers	3500	13.5 persons per plot	47250

4	Group Housing area allotted before Dec., 08	628.68 Ha	700 PPH	440076
5	Group Housing area allotted after Dec., 08	396.77 Ha	1650 PPH	654671
6	Land transfer to YEA	500 Ha	As per approved layout plan	220500
7	SEZ Area (1000 Ha)	100 Ha	1650 PPH	165000
8	Village Abadi	1231 Ha	400 PPH	492400
Total Population				2507102

The population of Noida is estimated on the basis of above table is 25 lakhs for the year of 2031.

5.2 POPULATION DENSITY

Population of Noida is estimated to be about 25 by 2031. This may be the optimum population Noida may accommodate. In the view of city's geographical and environmental conditions it would not be feasible to have very high concentration of population in Noida. It is therefore, proposed to have population density in the already majority developed Residential sectors below 500 persons per hectare. Noida has planned few newly developing sectors exclusively for group housing with high density of population and high rise building. In these sectors, about 400 hectares land is allotted for group housing schemes with a density of population at the plot / scheme level as high as 1650 persons per hectare. This was a conscious decision of the Noida Authority to make the best possible and viable use of remaining residential land and to meet the increased demand for affordable housing in the NCR. Sectors are proposed to be divided in the following two categories of population density:

1. Above 500 persons per hectare Sector – 75, 74, 117, 118, 76, 77, 116, 115, 113, 112, 78, 107, 45, 168, 93B, 86, 143, 144, 151, 162, 158.
2. Below 500 persons per hectare All other residential sectors.

Large size green areas in the form of public parks and playgrounds have been planned almost in all of these sectors where high density is proposed. The development of infrastructure facilities and services would also be planned to accommodate the high density of population. Green buffers and supportive facilities will help in containing any adverse effect of the proposed high population density. The overall population density of the urban area is proposed to be 164 persons per hectare, which is well within the 150-200 pph category suggested for Metro cities in the NCR – Regional Plan – 2021 and is also comparable with other towns.

5.3 LAND USE DISTRIBUTION

Land is the medium on which the entire infrastructure of human settlement is created and under which a lot of infrastructure is laid. Planning for the use of available land and assigning a specific uses to the different land parcels in urban area leads to the physical and socio-economic development of the area. Land is limited, it cannot be expended or created. Its utilization for different activities have to be judicious and in the interest of development of a vibrant modern city life of a planned and newly developing town. The entire land available in Noida has to be planned and put to a specific use. The Noida Authority is in the process of acquiring the entire land for its planned development. The total land notified for Noida is about 20316 hectares, out of which quite a large part of about 25% is in the area beyond embankments of river Yamuna and Hindon. This is flood prone area and suitable to river front development only. This area is not suitable for urbanization. Hence, about 15280 hectare land situated broadly between the two river embankments is proposed for planned urban development. Land use distribution for different activities is guided by the existing development pattern, potentials of development with relation to land suitability and other large scale or Regional level infrastructure development projects and the possible optimum utilization of available land. There is no specific or absolute land use distribution system which can be made equally applicable to all urban areas. Nevertheless, a scheme of land use distribution may be planned with broad guidelines and parameters depending upon the distinct nature and functions of a particular urban settlement. Ministry of urban Development, Govt. of India, issued guidelines to all the states in 1996 for urban development plans formulation and implementation (UDPFI guidelines). This guidelines suggest land use distribution for different land use categories in different towns. Land use distribution in Metro cities is suggested to be as follows:-

S. No.	Land Use	% of Development area
1	Residential	35-40
2	Commercial	4-5
3	Industrial	12-14
4	Public and Semi-public	14-16
5	Recreational	20-25
6	Transportation and Communication	15-18
7	Agriculture & Water Bodies	Balance
	Total	100

5.3.1 Industrial Activities are dominant economic functions of Noida. Since its infancy, Noida has been envisaged predominantly an Industrial township. It has necessitated to the reservation of more land for Industrial uses. The Noida Master Plan -2021 had proposed about 20% percent land for Industrial use. With slight modification about 18.37 percent land is proposed under Industrial uses for 2031.

A comparative analysis of land use distribution in Noida Master Plan – 2021 and in proposed Master Plan-2031 has been shown in the following table.

Table 1.11 Landuse distribution as Proposed in Noida Master Plan-2021 and Noida Master Plan-2031

S. No.	Land Use Category	Proposed for 2031		As Approved for 2021	
		Area in Hac.	%	Area in Hac.	%
1	Residential	5722.14	37.45	5334.00	35.65
2	Commercial	581.33	3.80	564.00	3.77
3	Industrial	2806.52	18.37	3001.00	20.05
4	Public & Semi-public Facilities	1357.97	8.89	1219.00	8.15
5	Transportation	1942.15	12.71	2211.00	14.78
6	Recreational	2432.82	15.92	1513.00	10.12
7	Agriculture	332.47	2.18	1017.50	6.80
8	Water Body	104.50	0.68	104.50	0.69
	Total	15279.90	100.00	14964.00	100.00

5.3.2 The Proposed land use distribution for the year 2031 follows a distinct hierarchical order. The total proposed urbanisable area of about 15280 hectares has been divided into sectors and facilities have been distributed almost in all the areas of the town. It is observed that by the year 2031 when the town population is expected to reach 25 lakhs, the overall density of the town will be about 164 persons per hectare, which is well within the general density standards as envisaged in the NCR Plan-2021. The area for residential development has been increased to 5656.14 hectare, that is about 37% of the total proposed urbanizable area. There is a marginal increase in the commercial area which is 581.33 hectare and about 3.80 percent of the total proposed urbanisable area. Area under Institutional and public / semi- public facilities and services have been increased both in absolute and in percentage. About 1377.97 hectare land that is about 9.01 percent is proposed for city level Institutional, public & semi-public facilities and services. The area devoted to recreational use also has been increased substantially to about 15.92 percent of the total proposed urbanizable area. This will further be supplemented by area under agriculture use and area under water bodies leading to effective green area provision of about 20 percent. More than 5000 hectares land is in the river front development area which will be broadly open and green in nature and would be utilized for either agriculture, horticulture, floriculture or recreational activities without any permanent building structures.

5.4 Residential Area Development

- 5.4.1 The residential use area is distributed to accommodate a projected population of 25 lakh by the year 2031. An average 'sector' measures about 55 hectare and is proposed to have a mixed form of development, by type and size of dwelling units and pattern and mode of development viz. group housing or plotted, and public housing or private constructed, to cater to a socio-economic mix appropriate for each sector. The later depends on locational factors and comparative proximity to work centres. To enable this, a gross density zoning has been proposed in two categories, i.e. sectors up to 500 ppha and sectors having population density more than 500 ppha. About 5656 hectares land is proposed for residential land use spreading in various sectors.
- 5.4.2 Residential Area Development consists of mainly following three types of residential development in the town :
1. Village Abadi and Extension Area.
 2. Medium Density Residential Area.
 3. High Density Residential Area.

There exist another type of residential development in the town which though has not been a part of planned development but needs a special treatment to be either replaced by an alternative development or become an integral part of planned residential areas. This is unauthorized and unplanned hutments in the phase – I Industrial area and unauthorized construction in village abadi extension areas.

- 5.4.3 There are many existing villages within the Notified Area limits of Noida. These villages have also extended beyond their original boundaries. The concept of 'Lal Dora', prevalent in Delhi, does not apply in case of Noida. These villages and extensions thereof, had a completely different life-style for long time and are now getting merged into the urban environment and need a sensitive treatment in the planning and development process. While they require modern services and amenities, they also require to practice their traditional and cultural styles. Settlements of historic significance also require to be conserved. Development of these villages and extensions has to be an integral part of the development. Health, education and recreational facilities should be developed around these settlements. After a detailed survey of these settlements, the Noida Authority will prepare a comprehensive policy within which planning schemes for these settlements should be prepared. At present the Authority has carried out a detailed programme of internal development of all the village settlement in Noida. Basic infrastructure like paved roads, drainage, sewer, water supply, street light etc., and other social facility like schools, community centres, panchayatghars, etc., are provided in the villages. There is a need to prepare comprehensive housing strategy to address housing issues related to urban villages and unauthorised colonies surrounding these urban villages. A detail study is proposed for this purpose.

- 5.4.4 There are about 11000 hutments in the phase – I Industrial area. These unauthorised hutments are inhabited mostly by industrial labour and workers engaged in informal sectors. They have played a vital role in the early stage of industrial development. They are the integral part of socio-economic fabric of the modern town. Noida Authority with the help of district administration has carried out a detailed survey of these hutments for the purpose of their settlement in the planned residential sectors. Residential units in the form of group housing have been planned and the execution of this scheme is under progress. About 5000 units will be constructed with the provision of community facilities in the first phase in sector 121 and 122. Other group housing schemes are proposed in the areas near to phase – II industrial area.
- 5.4.5 Total proposed residential land use area is 5656 hectare out of which 1232.82 hectares is covered under village abadi and its extension. 3514.38 hectare land is proposed in the medium density residential sectors. Most of these sectors have already been developed. New Residential sectors have been planned for high density i.e. more than 500 persons per hectare. These sectors will have predominantly group housing schemes. The facilities proposed at the sector level are senior secondary, primary and nursery schools, dispensaries, community halls and libraries, local shopping centres, auto-rickshaw and taxi stands, etc. Parks and playgrounds have been provided at convenient distances from the residential pockets within the sectors. The sectors have been planned to achieve integrated socio-economic development by proposing people of different income categories such as Economically Weaker Section (EWS), Low Income Group (LIG), Middle Income Group (MIG) and High Income Group (HIG) to reside in each sector. All the residential sectors have a provision of land earmarked for sector level commercial, recreational and other physical and social infrastructure facilities and services. The Noida Authority has developed these facilities in the sectors. The following facilities have been made mandatory to be provided in all the residential sectors and group housing schemes:- Crèch and day care centre, schools, dispensary, nursing homes, convenient and sector level shopping centre, kiosks / hawker area ,community centre ,religious places, milk and vegetable booths ,electric sub –station, auto/ taxi stand ,bus shelter, parks and play grounds ,etc.

5.5 INDUSTRIAL AREA DEVELOPMENT

- 5.5.1 In an industrial township, the land requirement for industries has to be planned in relation to the characteristics of towns and cities with a prominent industrial base. Normally in an urban area, workers' participation rate is around 33 per cent. In case of Noida Notified Area, the work force participation rate was 33.24 per cent in 2001. It is further assumed that the work force participation rate will settle down to 35 per cent as the town develops.

Industrial development in Noida has been in three phases. First phase of industrial development work place at the initial stage of its development in sector 1 to 11. Second and third phases of industrial development are in the central – Eastern part and North-

Eastern part of the town. Some part of industrial land is still available for development in these areas.

- 5.5.2 A total of about 1267 hectares of industrial area had been developed till 2010 and by the year 2031 a total area of about 2806 hectare is planned to be developed as industrial area. Noida is already emerging as a major location for IT industry which will continue in the future. In addition to IT, need for providing for other industries is also felt. These industries in addition to the industrial component also have major research and development requirement. Thus some of the industrial sectors (as part of the SEZ) will also be developed as clusters of industries related to biotechnology and Information Technology etc. These industrial clusters will have independent industrial plots for entrepreneurs, multi-storeyed small units (flatted factories), research and development centers with common facilities and ancillary commerce, housing and recreational activities.
- 5.5.3 Noida Export Processing Zone (NEPZ) is developed close to the industrial area phase II. The zone is one of the six zones in the country. In the first phase about 217 hectare of land has been developed for plots and flatted factories. In the second phase it is proposed to develop another 500 hectare of land for expansion of the zone. Keeping in mind the proximity of Noida City to Delhi it is envisaged that activities related to production of T. V. and Film media programs would be attracted here. For this purpose 8.25 ha area has been provided for a Film Centre in Sector 16A, where film centre for T.V and Film media is fully developed . Almost all the important T.V channels have their establishment in sector 16A.

5.6 COMMERCIAL AREA DEVELOPMENT

- 5.6.1 The role of trade and commerce is of vital importance as a supporting activity for proper industrial growth in an industrial township. In case of Noida, due to its proximity to Delhi and Ghaziabad where the trade and commerce activity has already been established, in the initial stages the development of commercial activity is likely to be slow. Nevertheless, the demand of commercial activities will go up with the development of residential and other activities. Moreover, the vision that should guide the development of centres for trade and commerce in such a potentially dynamic area should take into account the fast changing scenario in terms of new pattern of demand, technology changes, expansion in vehicular movement and awareness about environmental quality. As such, commercial centres are not merely places of trading and transactions but for recreation and enjoyment as well. Today's commercial centres in metropolitan cities and other thriving trading towns are faced by acute problems of parking and lack of green landscaped areas. Clearly, the centres for trading and commerce require to be planned at much more liberal standards for parking and open space requirements and should leave enough cushions for accommodating relatively dramatic changes in the pattern of use of commercial areas. Keeping the above factors in mind, the total area proposed for commercial land use is about 581.33 hectares. Besides this, commercial facilities have been provided at sector, block and cluster levels as well. But

these provisions are treated as part of residential areas and hence not included in the calculations for commercial areas as part of land use analysis.

5.6.2 At present, the major commercial complex exists in sector - 18 which has been developed as sub-district commercial centre. Development of a city level commercial centre is proposed in sector 32 and 25A, where about 98.59 hectare land is reserved for the development of city centre. Other commercial centres have been proposed at major junctions of roads and along the expressway and other major arterial roads spread at different places in the city. The proposed city centre in sector 32 and 25A situated in the central part of the city is going to be an important commercial hub. It is envisaged that this city centre will create a new image of the city and in due course it will become the historic core of Noida. It shall house the leading shopping and business establishments, hotels and service apartments, offices, departmental stores, restaurant and food courts, entertainment and leisure centres, commercial and housing facilities. It may also provide enough space for different cultural activities. Other commercial centres have been proposed in sector 94,124, 78, 105, 108, 135, 144 etc.,

5.6.3 Informal sector in the form of hawkers is an integral part of the economic activity of a city. Studies have shown that this segment constitute about one to one and a half percent of the population of a city. Noida is a new planned town, where all the sectors have been provided with local level shopping facilities. Here, hawkers should be slightly less in comparison to other towns. Hawking activity shows a strong relation to the retail commerce. Planning of commercial areas should incorporate these activities in a planned manner at the layout level within commercial areas. Spaces for operation of hawking units can be allocated in plazas along pedestrian corridors in commercial areas. Options of multiple use of parking spaces after office hours can be explored for evening time hawking activity. Considering that shopping malls have emerged as a phenomenon in large cities, it is suggested that incorporation of area earmarked for use for hawking activity within malls or adjacent public plazas may be considered at the time of detail planning of commercial areas. It is likely that some of the uses like low income residential, hospital, park, government offices etc. which generate high pedestrian activity when grouped together at layout level may generate concentrated hawking activity in residential sector. It is suggested that hawking areas be earmarked taking into account the surrounding activities. Since the characteristic of weekly market is primarily one of day use, multiple use of space (eg. parking spaces, meeting grounds, parks, plazas, etc.) is more appropriate than allocating exclusive space. Currently weekly markets in Noida operate predominantly in the ROW or in few cases on vacant plots.

5.7 DEVELOPMENT OF PUBLIC AND SEMI - PUBLIC AREAS

5.7.1 Extensive zoning for major institutional uses, public semi-public areas have been proposed in different parts of the town. A university and other educational institutions are already proposed along the expressway. Provisions have been made for public and semi-public offices and institutions. Areas have also been allocated to facilities for education, health care, religious functions, cultural activities, fire fighting, police protection, cremation and

burial grounds, distributive services such as petrol pumps, LPG go-down, and host of other facilities normally needed by residents of a town. About 1378 hectare land is proposed for institutions and other public-semi public facilities at the city level. In addition to that, almost all the sectors have been planned with the provisions of land reserved for local level facilities and services, sector level facilities area has not been included in the calculation of area proposed for the city level Institutional and other facilities and services. These include Central, State and Local government offices and private sector. It also include offices of the public sector undertakings like GAIL, HUDCO, NHPC etc. Institutional areas are located along the expressway and National Highway – 24. Sector – 62, 125, 126, 127, 132, 136, 142 and 153 are exclusively planned for institutional facilities. There are other sectors also where a large part of land is proposed for different city level facilities.

5.7.2 Social Infrastructure and Facilities

Provision of social and physical infrastructure is one of the key principles of planned development. These are provided in a hierarchical manner. The lower order facilities are included as part of the residential sectors and are provided for during the sector plan preparation. Higher order facilities at the city level have been incorporated in the Master Plan.

a) Health and Education Facilities

In addition to the general health facilities for the residential population of Noida, it is also envisaged to make Noida a destination for regional, national and international health care requirements of patients. Therefore, it is proposed to provide an area for speciality hospitals along with medical college and research centers. This will be over and above the health facility requirements of 25 lakhs population. This would also constitute residential facilities for the staff, students and some provision for boarding and lodging of relatives of patients etc. along with provision for the waste treatment. Such an area can be developed in the institutional area allocated in the sectors situated along the expressway. Nursing homes and Dispensaries have been provided at the residential sector level. Additional facilities will be made available at the level of the community and at the city level. For each community of one lakh population, an intermediate hospital for general treatment facilities and an intermediate hospital including a maternity ward and speciality facilities may be provided. Additionally, provision has been made for polyclinic and nursing homes. At the city level, a general as well as a specialised hospital in sector 30 has been developed by the Noida Authority. Nursery, Primary and Higher Secondary Schools have been made available in every sector. Additional facilities have been provided at higher levels. Provision has been made for colleges and higher educational and research institutions has been made along the expressway and in other parts of the city, particularly in sector 62.

b) Socio-Cultural Facilities Centre

Space has been allocated for socio-cultural facilities centre, which should contain an auditorium for performing arts, institutional buildings for spiritual and meditation activities; and institutions related to music, art and culture. The area would also include an open-air

theatre and a central public library. This area would also accommodate housing where studios can be provided to various artists for promotion of Indian classical music, art and culture.

c) Telecommunication and postal Facilities

The township has one electronic telephone exchange of present capacity of 7,000 lines located in sector 21. Another small electronic exchange is located in the Noida Export Processing Zone. There is a proposal of another telephone exchange in sector 39. With the growth of the township the telephone facilities are being augmented in a phased manner. Postal facilities have been provided at the neighbourhood level. Presently, the post offices are located in different sectors in sector shopping centre/convenience shopping areas. There is also a proposal for a head post office in Noida.

d) Security and Fire Fighting Services

One police post for every 50,000 population and one police station for every one lakh population has been provided. Presently six police stations have been provided in five developed sectors and one in industrial area phase II. There is a provision of three fire stations in two sectors and in industrial area phase II. All these fire stations will be provided with essential residential accommodation on site.

e) Distributive Services

i) Milk and Vegetable Booths

A bulk of milk supply in the township is being met by the villagers. Mother Dairy and Parag Dairy have set up milk booths and vegetable booths in various sectors. There is a proposal to set up more milk and vegetable booths in other sectors also.

ii) LPG Godowns and Petrol Pumps/ CNG Stations

Liquid petroleum gas storage and distribution facilities will be offered through conveniently located sites in relation to industrial area and services centres. Presently, LPG supply showrooms and offices are located in various sectors in the convenient or sector shopping areas. There is proposal of more gas storage godowns in future. Provision of petrol pump/CNG station with service facilities have been provided at different places at the time of sector layout plan.

5.7.3 Public Utilities

The maintenance department of the authority have prepared detailed plans for water supply, sewerage system, electricity supply and solid waste management, these plans would further be updated keeping in the view the enhanced requirement and new technology.

a) Water Supply

The water supply system of the area has been planned at the rate of 172.5 lpcd (litres per capita per day) including 15% wastage/pilferage for residential areas as per the Central Public Health and Environmental Engineering Organisation (CPHEEO) norms, and at the rate of 45 kl per Ha/day for industrial, institutional and commercial use areas. Accordingly, total requirement of water for the entire Noida has been worked out to be 590 mld. It will be necessary to have 330 mld of Ganga water in 590 mld water. Noida will have 240 mld Ganga water by the year 2013, balance 90 mld Ganga water will be available in the third phase. Keeping in view that the Ganga water will not be available through-out the year because of cleaning and maintenance of canals, ground water sources have been planned to generate 590 mld water. Accordingly, 430 tube wells have been planned to generate 430 mld water, and 12 Ranney wells to generate 160 mld water (presuming 75% capacity), thus totaling 590 mld water. Keeping in view that one Ranney well generates 12 times more water than a tube well, precedence has been given to Ranney wells.

b) Sewerage System

Sewerage system has been designed for sewage generation at the rate of 80% of 150 lpcd. Apart from the existing provision of two sewage treatment plant and two oxidation pond, four more sewage treatment plants have been planned.

Noida has been awarded ISO-9001(2000) for their quality and ISO-14001(2004) for environmental awareness. Zero discharge is the highest effort which can bring Noida at the top in the field of environment. The concept of zero discharge cities has been conceived to achieve a sustainable sewage treatment and disposal system. This will also help in raising ground water table. The principle of "zero discharge" involves recycling of all industrial waste water i.e. using treated waste liquid in the manufacturing process. Once the concept is fully implemented, the waste water will not be released in the sewer system or let into water bodies.

The Authority has decided to adopt world class modern technique called "Sequential Batch Reactor (SBR)" in place of existing technique called "Up Flow Anaerobic Sludge Blanket (UASB)" for treatment of sewage. As a result of this change in technique, BOD content of the treated effluent would be 10 in place of 30, which would enable the treated sewage liquid to be used for irrigation as well as building construction purpose. The new technique would require lesser land hence would effect saving of about 50 hectare land.

For purposes of sewage treatment, Noida has been divided into 4 sewerage district each having one STP. 22 networks have been established for 85 sectors (total 176 sectors). For remaining 91 sectors, 17 networks are proposed to be developed in phased manner. Ultimate sewage disposal is estimated to be 288 mld. For present population of about 6-7 lacs, 16 sewage pumping stations, 6 master sewage pumping stations and

sewage treatment plant of 75 mld capacity are in place. For future demand, construction of 15 new sewage pumping stations and 6 new master sewage pumping stations are in progress.

To make the city a zero discharge city, the following steps are being planned.

- i. **Sewerage Treatment Plant** – Use treated sewage for irrigating agricultural fields and watering green areas. Execution of this proposal is under process.
- ii. **Storm Water** – Storm water being relatively clean water must be conserved in ground water aquifers. This can improve ground water in term of quantity by addition and quality by dilution. Noida has already enforced rain water harvesting by making it mandatory for residential/industrial plots of more than 300 sqm in area. Rain water harvesting has also been started in parks/Green areas by horticulture wing of Noida Authority. Civil maintenance wing of Noida Authority will construct and maintain rain water harvesting systems in all other government /authority premises.
- iii. **Drainage** – Drainage has two interrelated aspects of flood protection and storm water drainage. The main threat of flooding is from rivers Yamuna and Hindon, which are adequately protected by bunds. The bunds may be further strengthened once a large population begins to reside in Noida, as additional safety measure. The presence of irrigation drain has made it possible to provide an efficient drainage network in Noida. The irrigation drain will have to be protected by bunds. The Noida Authority has proposed to strengthen the Yamuna River embankment by way of constructing a four-lane permanent road on the embankment. A new embankment beyond the present embankment is also proposed to protect the town from any eventuality of flood in Yamuna river. Presently residential / commercial / institutional /industrial waste water excluding sewerage is being discharged into open drain or nallas'. This needs to be recycled and reused. Noida has decided to engage WAPCOS as consultants for making Detailed Project Report (DPR) of drainage system which will include provision of Effluent Treatment Plants (ETP). Treated water from ETPs may be recycled and can be supplied to industries for their industrial uses. Zero-D license should be enforced by making law for industrialist, so that it becomes necessary for them to install waste water recycling plants which will make their industry a Zero-D Industrial. Lot of work is being done in USA in the field of Zero-Discharge. There, Industrial entrepreneurs are bound by law to make provisions for Zero-Discharge and ensure that surplus reclaimed water is let into the ground to recharge ground water resources.

Reclaimed water can also be recharged artificially into the aquifer and recovered as groundwater for later use. By recharging reclaimed water in to the aquifer, long term storage credits are created. Later, the entrepreneurs can recover long term storage credits to withdraw water for use from permitted recovery wells.

c) Solid Waste Disposal

Due to narrow wedge shape of the notified area bounded by two rivers, and proximity to riverbeds, a site could not be located within the notified area of Noida. Presently, garbage is being disposed off at a site near village Bhangel with an area of about 50 ha. This needs to be abandoned and two new sites have been identified for high technology Sanitary Land Fill sites. It is proposed that efforts be made to segregate and treat waste to the extent possible at sector level so that total amount disposed at the landfill site is minimized. Special care will be required for disposal of waste from hospitals, slaughterhouses, fruits and vegetable markets, dairy farms and industrial effluents. To workout the requirements of dustbin and 'dhalaos', the norm of 0.67 kg per capita per day is recommended.

d) Power Supply

Electric power is the most essential input for an industrial development. Presently the electric load is being met through one no 220 KV s/s, 4 number 132 KV transmission line , 28 no. 33KV s/s, 5 no. 33 KVs are under construction. One 220 KV and two 132 KV s/s are also proposed to meet out the future requirement of power demand of the area. Locations has been earmarked for 440KV and 220 KV electric sub-stations. Noida, Greater Noida, Yamuna Expressway and UPPCL jointly proposed to establish a power station for power generator of 2000 Mega Watts. This power plant will help in meeting the power requirements of these towns in future

5.8 DEVELOPMENT OF TRANSPORT RELATED AREAS

5.8.1 Transportation is an important sector for achieving development objectives of an area. The role of transport in enabling and directing urban development has been long appreciated. In the planning for a transport system, a number of objectives form the base. In case of Noida, the following objectives have been identified:

- i) To enable the mobility of people and goods, and faster economic development and enhance social interactions.
- ii) To improve the accessibility of Noida particularly to and from the sub-region and there by promote the nodal functions of Noida.
- iii) To encourage inter sectoral integration and ensure intra sectoral coordination.
- iv) To conserve resources (land, material, money, energy etc.)
- v) To maximise safety.
- vi) To promote the environmental quality of the area and enhance the quality of life.

The objectives are achieved through selection and combination of a number of strategies. The important strategies adopted are:

- A multi-modal transport system providing opportunities and environment for each potential mode to operate and provide the services at its optimal efficiency, truly integrated with other modes to provide an over all optimum system.
- A hierarchical road network system.
- Identification and selection of appropriate transport technological system.
- Promoting and giving priority to public transport system.
- Segregating both by natural processes and by design of different levels, types and modes of movement.

5.8.2 The plan of transport system essentially consists of the rail and road network systems in terms of their form (pattern), hierarchy and identification of potential operating systems (public transport). It also includes location of other components of the transport system with reference to the network configuration and in relation to other activity use dispositions.

The rail system is primarily envisaged to meet the inter-regional movements both of people and goods. The road system has a more important and divergent role. Apart from catering to the needs of part of inter-regional movements, it will be the principal system to meet the needs of intra-regional and intra-city movements, both of people and goods. There is a proposal of a helipad also in this area.

5.8.3 Proposed Regional Linkages

Regional rail and road networks have been proposed keeping in view the potentially advantageous location of Noida in relation to major transport routes linking Delhi Urban Area and Ghaziabad.

- a) Proposed Regional Rail Linkages - A railway line has been proposed in the multi-modal transport system. This railway line will link the city of Noida with Dadri in the East and Tughlakabad of Delhi in the southwest. Railway station site and railway yard sites have been proposed near village Chaprauli. The railway station, including its appurtenances, should be planned and developed as a modern station, designed with care and sensitivity, to uphold the image of the city. The proposed Mumbai-Delhi dedicated Rail freight corridor will pass through Noida. A Rail corridor has been proposed for this in sector 160 and 146. A railway station and a Rail freight yard and logistic park are proposed in sector -160 to cater to the demand of freight's transit in Noida.
- b) Metro Corridor- At present, Metro Line Service is operational between Delhi and City Centre of Noida. There are Metro Stations in Sector -15, 16, 18, 38A, 38 and 32. Noida and Greater Noida Authority have proposed the extension of Metro Service from City Centre Noida to Bodaki Railway Station in Greater Noida through Pari-Chowk. This corridor will have 14 new stations in Noida. DMRC has carried out a detailed survey for this Metro Corridor and has prepared a detailed project

Report. DMRC and Noida Authority are proposing some other linkages of Metro service to be developed in the third phase. There are two such potential linkages- Botanical Garden to Sarita Vihar through Kalindi Kunj in Delhi and the other from City Centre to NH-24 and City Centre to Greater Noida through sector -121. These Metro corridors will be accessible at selected intervals through stations. The intra city transport system will be integrated with the Metro corridor through the stations and feeder bus services on intra city road network.

- c) Proposed Regional Road Linkages - The proposed road linkages will connect the city with the regional movement system to and from the city. There are two major roads that have been proposed in Noida, one is the Expressway linking Noida with Greater Noida and another road in the multi-modal corridor that will connect the city with Ghaziabad in the north and Faridabad in the south. A new road link between Noida and Faridabad is proposed connecting the N.H -2 with Noida – Greater Noida Expressway near sector 150 and 152 of Noida. This proposed road link will help in connecting the National highway No. 2 with Noida, Greater Noida, National highway No. 91 and further with National highway No. 24 near Hapur through a proposed 120 mts wide road in Greater Noida phase II.

5.8.4 Proposed Transport Facilities

Keeping in view the projected population size of Noida, a system of roads, MRTS and rail would cater to intra and inter-city movements. A number of arterial roads are suggested beside the Noida-Greater Noida and Faridabad-Noida-Ghaziabad expressways. As a consequence, Noida would have many new transport related facilities after the Master Plan-2031 is implemented. The range of facilities proposed is:

- a) Bus Terminals - In the proximity to the railway station, a large site for inter state bus terminal has been proposed which shall also accommodate all ancillary facilities and services. Location of the public transport terminal in close proximity to the railway station shall greatly facilitate trans-shipment and inter-change functions of such a central facility. Besides additional city bus terminus has been proposed in Sector 16 and Sector 34. A workshop and depot for buses is proposed near the Transport nagar in Sector 69.
- b) Railway Station and Yard - There is a proposal of railway station near the intersection of the FNG and the Noida-Greater Noida Expressway in the south central part of Noida. Beside this, there is a proposal of railway yard in close proximity to the railway station.
- c) Transport Nagar – A Transport Nagar has been provided in sector 69, which is located in the north-eastern part of the city. The Transport Nagar has been located by the side of the Bus Depot. It will provide facilities for idle parking of trucks, repair workshops, offices of booking and forwarding agencies, petrol filling

and service station and related facilities. Development of Transport Nagar is under progress.

d) Elevated roads, clover leaf and under passes:- The Authority has proposed to prepare a detail traffic and transportation plan. Meanwhile, elevated roads at few important sections of important roads, clover leaf at important road junctions and under passes / flyovers at important locations have been proposed to be constructed in the first phase. Following elevated roads are proposed:-

- On Master Plan road No. 1 – from sector 21 to sector 12, 22, 56, T-point.
- On Master Plan road No. 2 – from Vishwa Bharti school to sector 61.
- On Master Plan road No. 3 – from sector 52 to NH 24.
- ON DSC road - from sector 49 to sector 110.

Clover leaf is proposed at the junction of two major roads of sector 62 to NH 24, on Noida - Greater Noida Expressway near sector 143 & 168 and near sector 152, on DSC road near sector 101 and on Master Plan road No. 2 near sector 32. Traffic is likely to improve with the construction of proposed elevated roads, clover leaf, under passes and flyovers.

5.8.5 Proposals for improvement in the Mobility

Cars are locking up enormous resources to provide mobility to a minority bringing in their wake unacceptable social inequity and pollution. Public transport, pedestrians and cyclists are the immediate victims of this car mania. This car dependency can be reversed with the help of following proposed policies:-

- Building and expansion of public transport: Massively augment public transport and its comfort so that the road space can be used more efficiently to carry more people and at greater speed.
- Integrate all modes of transport to maximize access to public transport system and encourage its usage.
- Integrate Noida with the surrounding towns with an efficient public transport network to reduce the pressure of the incoming traffic. Already, a common agreement has been signed by the state government of the neighbouring states to develop a seamless public transport system and design a common policy regime for them.
- Introduce uniform emissions standards across the NCR to bring the entire motorized fleet in the region at par.
- Implement parking policy to provide for control over parking in the city which will discourage use of personal vehicles and provide incentives for a shift.
- Correct distorted taxes related to transport to encourage public transport.

5.8.6 Parking Policy:

While the insatiable demand for parking hurtles our cities towards a congestion nightmare, it also devours scarce urban land, aggravates pollution and leads to social tension. Parking, in fact, has sometimes become a serious law and order problem, resulting in neighborhood brawls and even enraged killings over scarce parking space. It is time to understand the underlying cause and act. It has become clear that instead of chasing to meet the endless demand for parking, parking levers must be applied to dampen car usage. A parking policy can be an effective instrument to decongest, shift commuter choice towards public transport, and discourage car use.

It is important to rethink the strategy on multilevel parking in India. Without a pricing and management plan, the capital-intensive parking structures can remain grossly under utilized and the basic objective of reducing parking congestion cannot be met. These structures should be integrated as far as possible with the interchange points of the public transport network to encourage park and ride. Civic agencies must plan to improve access to the commercial sites through improvement in public transport, and at the same time cap parking supply through actual physical restriction on further expansion of parking and also by putting a high cost on parking. This is most effective in stimulating the switch from private cars to alternative modes of transport.

Hidden subsidy to rich car owner: The cost of using up scarce and valuable urban space for parking is not recovered through proper pricing and taxes. As available surface areas are becoming increasingly clogged with cars, city governments are now planning to build extremely expensive multistoried car parks in prime areas. While this increases the cost of providing parking manifold-nearly Rs 4-6 lakh per car space as opposed to near free surface spaces- there is no plan to recover the full cost from the car park users. Instead, to keep the parking rates cheap nearly 25-30 percent of the parking structure are being allowed for other commercial activities so that profit and rent from this can further cross-subsidise parking fees. Parking fees can then remain at Rs. 10 per hour instead of the full cost rates of Rs 30-39 per hour. Even a minimal increase to Rs 10 per hour may hit roadblocks as the willingness to pay for parking is very low among car owners.

Though many cities of the world have experienced with different types of parking strategies, it is still very difficult to find a perfect one which will suite all requirement. An appropriate combination of measures will have to be customized to meet local needs and imperatives. At the same time supplementary measures are needed to improve access and connectivity through improved public transport to further reduce overall parking demand.

Proposals

Parking provision should work on the principal of parking restraint to put brakes on car growth and usage. Provide parking not to incite more demand, but manage and restrain its

provision to discourage to people from using personal vehicles. The road map for parking should hinge on this principle.

Utilise parking facilities to promote public and non-motorized travel : New parking structure should be used innovatively to improve usage and integration of public transport. Locate parking structure close to the interchange points of the public transport nodes like the Metro and bus stations, and use them for a park and ride system to reduce pressure with feeder service that include three-wheelers, cycle, rickshaws, small buses or easy pedestrian ways. The ticketing system of public transport should incorporate the park and ride component. Parking rates should favour intermediate transport including three-wheelers and taxis as also non motorized vehicles. These facilities can also be developed as an overflow parking plan and other special transportation management.

Free Parking should be minimized or eliminated : It is important to eliminate or minimize free parking. Pricing of parking should be based on the 'user pays' principle and aim at full cost pricing. Use pricing to reduce peak demand and congestion in convenient places. Studies show that parking charges gradually make road users aware that driving within the city cannot be free.

- Use variable rates more widely to reduce peak demand : Parking fees should target the peak hours and peak demand to influence commuter choice and open up option.
- Discourage payment of parking rate as a fixed annual amount. Annual payment will defeat the purpose of using parking rate as a demand management tool. This will grossly underprice parking of personal vehicles and act as a subsidy for car owners.
- Let Parking rates be lower at park and ride sites to influence commuting choices: With park-and-ride systems for the long terms parkers.
- Need Parity in rates of surface and structured parking : For the first time, Indian cities are making a transition from lowly priced or free surface parking to cost – intensive structure parking. If the cost of the investment in structured parking is recovered through higher parking fees, it will have significant impact on parking rates in the city. This upward revision is important to recover the cost of investment and also to reduce parking demand. Investment in these structures can not continue unless there are clear plans on pricing. Moreover, this will require some revision of the surface parking rates for optimal utilization of both. Higher parking rates in the structured parking lots will widen the gap with the current surface parking rates.

5.8.7 Proposals for walking facilities

It is stunning to note that even today, nearly one third of daily travel trips in Delhi, and more than half in Mumbai, are 'walk' trips. A large number of people (between 16-57

percent) are walking to work in our cities. This means people commute by walking outnumber those who use their vehicle. This sustainable practice is an opportunity to create clean and livable cities.

Unfortunately, there is very little policy understanding of the need for pedestrian infrastructure. Road engineering interventions once made cannot be changed easily but they can permanently decide the design of the network, influence travel choices of people and increase dependence on personal vehicles. Current obsession with seamless, signal-free travel for motorized vehicles through flyovers, expressway and elevated ways is disrupting direct shortest routes of the walkers and making them more dependent on vehicles. It is absolutely critical for us to think about a clear policy for pedestrianisation and ensure that people can use road safely.

Pedestrian policies are even more important today when cities are planning massive augmentation of public transport. All public transport trips end and begin with walk trips. Metro, bus rapid transit system, buses cannot work optimally if these are not supported with a good pedestrian network. Any attempt to improve the share of public transport will lead to correspondent increase in walking and roads will have to be planned with more walking space.

Reduce Vehicle use for short distance commuting : It is not just the poor people, but nearly a majority of urban commuters walks to access essential services like education, local shopping, leisure trips within neighbourhoods and job centres. Many of these journeys are usually less than a kilometer or two. A significant proportion of the car trips in the distance range of 3 km can be easily substituted by walking trips if adequate steps are taken.

5.8.7 Walking enhances urbanity and lifestyle :

In the Western world, health dynamics is playing an important role in reinforcing walking as a measure to fight obesity. Studies have found a correlation between active transportation that involves walking and obesity. Studies in China have found that Chinese man who acquired a car experienced greater weight gain and were twice as likely to become obese compared with men whose vehicle ownership status remained unchanged. These findings held even after adjusting for diet. A US study in King County show that the average resident of a pedestrian friendly neighbourhood drove less than those living in sprawling neighbourhoods, weight 7 pounds less and suffered fewer car accidents. The WHO is now linking walking with improvement in health status of the community.

Walkways link transport hubs – Case of Metro and bus station at ISBT: Walkways are important for linking the interchange points of different transport systems- bus- trains and Metro- to allow easy and comfortable dispersion. This distance should be the shortest and the most direct route walkable.

It is proposed to prepare a detail plan for traffic management which will also include local level planning for pedestrian pathways, cycle tracks, park and ride sites and short distance public transport facilities.

5.9 RECREATIONAL AREAS

Three types of Recreational areas have been proposed at the city level :

- i) Recreational Green.
- ii) Parks and Play Grounds
- iii) Green Belts

In addition to above a provision of parks, playgrounds and other open spaces is being made mandatory at the sector level. About 2433 hectare land that is about 15.92 percent of the total proposed urbanisable area has been proposed for Recreational purposes. Almost all the sectors have a provision of 10-12% land for parks, playgrounds and other open spaces.

5.9.1 Recreational Green - It has been an experience of many towns that planned green areas, if not developed, are prone to the encroachment and unauthorized constructions. Development Authority or the local body have to make capital investment for the development and maintenance of green areas. Well planned and developed green spaces are essential for any city. Local Authority are evolving different mechanism for the development and maintenance of green spaces through private participation. Noida Authority has proposed large area as recreational green, which are located at different places in the city. Sector – 95, 38, 38A, 21A, 33A, 79, 101,104, 167, 151, 152 and 150 are proposed mainly for recreational green land use. Recreational green areas have been proposed in other sectors also. Certain activities mainly related to sports and recreational shall be permitted in these areas. Projects for the development of sports city, amusement parks, leisure parks etc., would be allowed in the Recreational green areas. These activities will not be allowed in the areas reserved for public parks, play grounds, green belts and other open spaces. City level parks have been proposed in different parts of the city and green belts are proposed along the expressway and other major roads.

Generally, building construction shall not be allowed in the green belt and in the areas reserved for parks, playgrounds and open spaces at the sector level. These shall be developed and maintained as green and open public spaces. However, the Authority may allow, in exceptional circumstances, the development of public utilities on the maximum 2 percent part of the total land of a park or green belt. Rainwater harvesting or recharge systems or water bodies shall be allowed in the parks and green belts.

5.9.2 There are few facilities developed for sports and recreation in Noida. Sports complex in sector 21A, Golf Course in sector 38 and amusement park and botanical garden in sector 38A are such important facilities. The city requires more facilities for sports and recreation not only for local population but for the regional population. Noida Authority has proposed the

development of sports cities, leisure parks and other recreational facilities in the planned recreational green areas through the participation of private developers. Once these facilities are developed at different places in Noida, there shall be multiplier effects of these facilities on the local economy and the employment generating activities.

5.9.3 Sports – City

Development of a Sports-City was proposed in the Central-Eastern part of Noida along the DSC Road. The proposed site is well linked by the proposed Master Plan roads connecting Expressway, National Highway-24, Greater Noida and other parts of the city. NOIDA Sports City envisions itself to be one of its kind in the Country, with a clear and defined focus on an integrated sports theme, its form providing a strong and clearly identifiable image to NOIDA; where sports events catalyze other activities such as tourism, community meetings, exhibitions, conventions and festivals. In order that the vision remains relevant, the sports and other related recreational and institutional facilities were proposed in the Sport City. Large size project of Sports-city could not be implemented. Therefore, the Authority decided to have more than one projects of sports city of lesser sizes at different locations of the town. These Sport City projects would have about 50-100 hectares, or more land. The Sports City is basically a part of Recreational land use and therefore its development is proposed in the Recreational Green Area and a separate provision for permissible ground coverage and F.A.R. is proposed in the Building Regulations of Noida. Any project of Sports-city may have the provision of following Sports and related facilities, residential, commercial and other facilities as per the specific requirement decided by the Authority for a particular project or scheme: -

- i A golf course, golf club house and driving range, integrated with the residential and commercial areas and a cricket stadium with covered grandstand, provisions of electronic scoreboards, television video screens, competition lighting, meeting rooms, media facilities etc. A multi-purpose playing field for athletics and football with practice nets, and competition lighting, synthetic turf laid hockey field, Indoor stadia for badminton and table tennis courts, weightlifting, boxing, gymnastics, karate etc., Indoor central court tennis centre, and Indoor swimming centre with pools- competition, warm-up and diving pool and other related facilities. Indoor and outdoor Stadium and playground may be added further as per the requirements.
- ii. Sports City may include a Sports Academy serving as a 'centre of sports excellence' with world class facilities and support services for a range of sports including Cricket, Tennis, Swimming, Athletics, & Golf etc.. Practice areas could be incorporated within the sports grounds and facilities for competition and training. The academy may also include office accommodation, laboratories, lecture theatres and specialist facilities. The Sport-city may have sports medicine/health facility centre to provide cutting edge sports science and sports medicine support. These should include- clinical services, sport sciences, nutrition, athlete and career

education, applied research centre with the provisions of laboratories, offices and workshops. There shall be other facilities like Integrated Sports - hostels, dormitories and serviced apartments and other residential facilities within the walking distance to all venues. Sports club, business and leisure facilities, meeting rooms and office accommodation shall be provided within the sports venues.

- iii. A network of roads shall be planned as a functional hierarchy to service the Sports City. Other facilities could include space for transport, entry and exit gates, passenger lounges, bridges and underpasses as required. Car parking facilities shall be suitably planned throughout the city. There shall be an IT Centre /Administration/ Media block, and a major retail hub providing shopping facilities for the City. Residential and Commercial facilities should also be developed within the Sport-City area.

The Sport-city projects shall be developed as an Integrated Mini-Township with all modern and world class sports and other related facilities. Minimum 70% of the total area would be utilized for sports activities, Institutional and other facilities, open spaces and other recreational activities. Noida Authority will determine the land use pattern, permissible activities, planning norms and other regulations as required time to time for the development of the Sport-city projects.

5.10 AGRICULTURE AREA

About 378.47 hectare land is proposed in agriculture land use, mainly along the Yamuna embankment. This area is between the embankment and different sectors. It is proposed to develop this area primarily for farm houses with a provision of maximum 10 percent covered area on the ground and 90 percent area of developed farm houses will remain open and broadly green in nature. This agriculture area was left unplanned and it was prone to the unauthorised development. It is experienced in almost every city of India that agriculture land area adjoining to the urban activities attracts encroachment, unauthorised and unplanned colonization and the development of unauthorised urban extension. Urban areas are extended in the agriculture area through successive Master Plan exercise. In an area like Noida where the potential of further urban expansion is minimized or eliminated by the physical nature of river flood areas, it is imperative to plan and utilise the entire available area. It is very difficult and unviable for a local Authority to acquire, develop and maintain the entire land planned for agriculture and recreational uses. Therefore, The Noida Authority has proposed the agriculture land use for planned development and its disposal for the specific purposes so as its prime character remains open and broadly green in nature.

Water bodies exist in different parts of the town. It is proposed that all the water bodies situated in different rural areas shall be developed and maintained by the Authority. A part of green areas and green belts may also be developed as well planned and landscaped water bodies to act as ground water recharge system. Building construction shall not be allowed on a plot reserved for water body or on a plot which is recorded as a water body in the revenue records.

5.11 RIVER FRONT DEVELOPMENT AREA

Noida is bounded by the two embankments of river Yamuna and Hindon. Urbanisation is proposed broadly within the area between these two embankments. Development of urban activities has not been proposed in more than 5000 hectare land situated in the river front area of both the rivers because this is basically a flood effected area. The river Yamuna suffer from inadequate flow and quantum of water during majority time of the year. Rapid urbanization, encroachment on the river banks and over exploitation of water in Delhi has resulted in the dwindling of water flow in the river. The river is highly polluted due to discharge of untreated waste water through drains. However, the river Yamuna generates very high level of water flow during rainy seasons and some times due to discharge of rainy water from dams cause floods in the areas of Delhi and Noida. Conservation of flood prone area is essential. Therefore, urban activities have not been proposed in the river front areas of both the rivers. This entire area is proposed to be kept as green and open. However, it is proposed that the river front areas shall be developed for recreational and tourist activities with the provision of some temporary and removable structure on 1 percent area of a specific development project. A detailed plan of the development of river front areas is proposed to be prepared after a detailed study of its environmental conditions and potentials of development. It is a sensitive area and needs a detailed study to understand the cycle of flood occurrence, the ground water recharge potential and requirement, potential of reclamation and the potential of making this area physically accessible and functional.

5.12 MIXED LAND USE

The Noida Authority has introduced the policy of mixed land use in the Noida Master Plan 2021 when residential and other activities were permitted in the planned commercial land along the major roads. The retail commercial activities were allowed to be restricted on the ground floor and residential activities were allowed on the upper floors. The concept of mixed land use is becoming popular in all the cities. Residential facilities are allowed in commercial and institutional area to make the better utilization of land for varying uses and also to contain the requirement of transport facilities for work places. Noida Authority also decided to allow the mix of commercial, residential and institutional activities on the designated large size residential or institutional plots available in different sectors. The ground coverage and floor area ratio shall be in accordance of the prime land uses of the plot. The Authority may decide the architectural controls, procedure of allotment, reserve prices and other requirements as per the proposed mix of activities on a plot or scheme. Specific areas of mixed land use have not been proposed in the Master Plan. However, the Authority may identify such land or plot for mixed land use schemes at the time of detail layout plan of a particular sector or area.

5.13 INFRASTRUCTURE AND SERVICE PLAN

The Authority has initiated the preparation of detail plans for the strengthening, upgradation and development of physical infrastructure and services to accommodate the requirement of population and activities proposed in this plan.

CHAPTER 6

DISASTER MANAGEMENT PLAN

6.0 Pursuing the provisions of the Uttar Pradesh Disaster Management Act 2005, the Noida and Greater Noida Authorities decided to prepare a Disaster Management Plan (DMP) for the twin industrial townships of Noida and Greater Noida, which are likely to develop into large urban agglomerations and thus are exposed to various kinds of hazards. The Disaster Management Plan is prepared by the National Institute of Disaster Management, New Delhi. While preparing the DMP, a holistic and comprehensive approach has been adopted. The DMP of the twin township is based on detailed and comprehensive studies carried out for

(a) Hazard, Vulnerability and Risk Analysis – Separate studies were conducted on various types of hazards such as earthquake, flood, high winds, fire, chemical and industrial accidents, road accidents, etc. A vulnerability analysis of the townships in terms of physical, socio-economic and environmental aspects has been done. Based on the hazard and vulnerability analysis a broad risk perception to the township has been established due to prevailing hazards in the townships.

(b) Disaster Management Strategy – a detailed strategy encompassing entire Disaster Management cycle i.e. various stages of pre- and post- disaster management has been proposed. The strategy emphasises upon that the hazards should not convert into a disaster; to achieve this detailed preparedness and mitigation measures to reduce the impact of prevailing hazards has been proposed. In case the township face a disaster, its magnitude will not be of extraordinary nature. To meet the challenges of an impending disaster, the DMP has laid down a significant emphasis on emergency management and early recovery aspects.

6.1 The DMP consists of five chapters:

i) Chapter 1 briefly address the need and rationale for the disaster management plan of the twin townships as well as the objective, methodology and Terms of Reference of Experts dealing with various aspects of the DMP

ii) Chapter 2 describes about profiles of District Gautam Buddha Nagar and twin townships of Noida and Greater Noida. Various features like location, origin and growth, geography, soil, climate, drainage, settlement pattern, age composition of population, land use, land utilization pattern, workers' participation rate, industries, environment and transportation network details have been discussed.

iii) Chapter 3 highlights the hazard, vulnerability, capacity and risk profile of the twin townships and existing mechanism for disaster management at district level. A detailed hazard, vulnerability and risk profiling has been done for major prevailing hazards after

thorough studies for different types of hazards in the twin townships. Hazards covered in detail include flood, earthquake, fire and man-made disaster/hazards.

iv) Chapter 4 provides a detailed emergency response mechanism and strategy and standing operation procedures for various stakeholders at the level of Gautam Buddha Nagar District and Noida and Greater Noida Authority level. Operating Procedures Guidelines for departments of critical importance has been proposed for effective response and management of disaster like situations. The response strategy emphasise upon the establishment of District Emergency Operations Centre and township level Emergency Operations Centres. Formation of Quick Response Teams has been proposed for effective response. It is also proposed to start Electronic Messaging System for immediate alert to various stakeholders of the twin townships in the area of disaster management. One of the important recommendations to establish an Emergency Communication network for quick response which may be comprised of all possible means of communication including satellite phones has been made. To make effective response purchase of HAZMAT van, Mobile SOC etc. has also been proposed. For effective management of disasters, establishment of emergency support functions, rapid damage assessment teams and first information report mechanisms have also been proposed in the DMP.

v) Chapter 5 compiles all necessary details of DMP which highlights the major findings related to hazard, vulnerability, capacity and risk analysis as well as mitigation, preparedness and response mechanism.

6.2 Major hazards specific findings and mitigation measures proposed in the DMP are as follows:-

6.2.1 **Flood Hazard** NOIDA faces flood hazard due to Rivers Yamuna and Hindon. The sectors that are at high flood risk in case of breach of left afflux bund on Yamuna or water overflowing the top near Noida Toll Bridge in Noida are Sectors 16A, 95, 94, 124, 125, 126, and 127 while Sectors with low flood risk are sector 17, 18, 38A, 128, 44, 131, 133, 134, and 130.

A detailed preparedness plan has been proposed under chapter 4 of the DMP. At the same time to mitigate the impact of impending floods it has been strongly recommended that the embankment on the river Yamuna along the entire stretch of Noida should be strengthened and its height be raised to the required level to prevent devastation during an extreme flood situation. A regulator should be built on the Okhla where it confluences with river Yamuna to prevent flooding through backflow. The river may be considered to safely carry the design discharge if bunds are provided on the right side of the river as well. The NOIDA Authority has decided to strengthen the embankment all along the River Yamuna by way of construction of a four-lane all weather road on the embankment. UP Irrigation department has been entrusted to complete this work.

6.2.2 Earthquake Hazard According to the Seismic Hazard Map of India, Noida has been identified in Zone IV, which means the area is categorised as high Damage Risk Zone with potential of MSK VIII earthquake. The town shares common boundaries with vulnerable states like Delhi, Haryana and Ghaziabad District in Uttar Pradesh, all of which are in seismic Zone IV. Thus, the impact of earthquake in Noida is far reaching and poses significant threat to people's lives and safety in the town particularly since, in the event of an emergency, neighboring states may be preoccupied with their own operations and may not be counted for help. Besides, humans and their livelihood system, bovine life and rural resources are vulnerable. Amongst people, handicapped, old/aged, pregnant, sick and ailing/diseased, and children below 5 years are particularly vulnerable. Potential economic losses due to destruction of infrastructure, communication network, and buildings would have a devastating impact on the township. The impact of earthquake will have the potential of causing high loss especially in rural areas of the city where approximately 90% of the buildings are non-engineered. The commercial complexes, shopping malls, largely made of glasses, could be vulnerable at the time of shake. The buildings may withstand the energy released but the broken glasses can grievously hurt people.

Seismic vulnerability assessment of multi-storeyed buildings in NOIDA (conducted by Department of Earthquake Engineering of IIT, Roorkee) have pointed out severe configurational deficiencies in the multi-storeyed buildings in Noida. Few of these include (i) plan irregularities with excessive torsion and re-entrant corners (ii) irregular elevations with sharp variations in structural systems along height and improper connection of different parts of buildings, (iii) open ground storey for parking, (iv) irregular framing system, (v) inadequate separation between adjacent buildings or blocks of buildings, and (vi) inadequate attention to seismic safety of non-structural components such as partitions, glazing, veneers and large water tanks at roof.

In majority of the surveyed buildings, the ground storey is kept open for parking resulting in soft and weak ground storey. Performance of such buildings during past earthquakes has been particularly poor, resulting in collapse of ground storey. Provision of large water tanks at the top of multi-storeyed buildings is another cause of serious concern, as these water tanks have caused severe damages during Bhuj earthquakes. *Alternative means of water storage need to be explored, such as underground sump or distributed storage in each housing unit.*

Pre Earthquake Preparedness: Micro-zonation concept is proposed to be applied for land use planning and to be considered while preparing the sector plans and layout plans. Seismic micro-zonation for selected areas having high population growth rate with high density, high-rise buildings and dense clusters would be taken up on priority. Detailed Planning would be done on the basis of vulnerability studies and hazard identification which includes soil condition, probable intensity of earthquake, fault traces, physiographic condition, flood levels, fault traces, and other such factors.

Earthquake Risk Mitigation: Building-by-laws have been amended to incorporate the aspect of multi-hazard safety and retrofitting as per the provisions of National Building Code (NBC). Priority would be given to public buildings (such as hospitals, educational and institutional buildings, power stations, infrastructure, heritage monuments, life-line structures and those which are likely to attract large congregation) for their ability to withstand earthquake of the defined intensity. Suitable actions have to be taken for retrofitting and strengthening of structure identified as vulnerable as per earthquake manuals and national building code. A techno-legal regime has to be adopted for provision on multi hazards safety aspects. Necessary changes in the Development Control Rules and Building Bylaws are proposed be made to achieve better safety against earthquake. An expert in Earthquake Engineering should be drafted in the team that examines structural safety of buildings. Certification of structural safety of building by a structural Engineer have been made mandatory in the Building Regulations of NOIDA.

6.2.3 Fire Hazard In relation to fire hazard, high density areas with poor accessibility are major vulnerable areas where loss of life, property and means of livelihood can assume disaster proportions. In Noida major fire risk occurs due to rapid growth of localized manufacturing units and business establishments in urbanized villages. These activities have developed in a mixed manner. The general pattern is that the ground floor is being used as shops, first floor for residences and upper floors for storage often of highly inflammable materials like PVC, cushions and cardboards. Such types of occupancies provide a clear picture of vulnerability to which the city is exposed.

In villages like Raghunathpur, Atta, Chhalera, Haraula, Nithari, Khora and many others, due to narrow streets and excessive congestion, fire tenders and other emergency vehicles will not be able to reach inner areas to carry out the fire fighting and rescue operations. At many places roads are not strong enough to take the load of the rescue units and water boozers. These heavy equipments face the risk of getting bogged down during a rescue operation due to inadequate load bearing stratum.

Even in planned areas, trend toward high-rise culture with little infrastructural support, particularly of electricity and water systems is a major hazard in adopting fire safety measures. High rise buildings/multiplexes, markets and shopping complexes industrial premises, gas godowns, oil installations etc., are high risk areas from the point of view of fire. In such areas, risk can neither be subdivided nor grouped but the entire area is to be considered as one major risk area. Added to this are risks such as chemical disaster, collision of vehicles carrying LPG containers and other petroleum products, fires due to container rupture, gas leakages, and fire caused by natural disasters such as earthquakes. Traffic congestion also has become a serious fire hazard since emergency fire fighting will get unduly delayed while trying to reach the site of fire.

6.2.4 Fire hazard preparedness planning: It is possible to control/reduce risks by being prepared for emergency action by taking steps as stated below:

1. List of equipments and appliances available with supply agencies in the city and their contact details should be prepared so that in the event of emergency request can be sent to them to respond to the site and carry out fire fighting and rescue operations.
2. List of manned heavy machinery, vehicles, cranes etc. which could be called at site in time of emergency should also be kept ready.
3. Linkages with hospitals to accommodate possible high number of casualties and arrangement of ambulances to carry patients to designated hospitals should be preplanned/ prearranged.
4. Prior arrangement should be made with the transport authority for trucks and buses available under their control which could be improvised in emergency situation to be used as ambulances.
5. Details of coordinating relief activities with NGOs and other social organizations for instance provision of food, clothing, drinking water, etc., should be worked out in advance.
6. Strategy for providing shelter during an emergency (before rehabilitation) should be kept ready.
7. Arrangements should be made with electricity department for providing emergency lighting arrangements.

6.2.5 Fire Risk Mitigation: JJ Clusters form highly vulnerable built form in the twin townships from fire hazard point of view. A number of recommendations have been made to reduce the risk due to fire in such clusters.

The urbanized rural areas, namely Reghunathpur, Atta, Chhalera, Haraula, Nithari, Khora etc. having mixed occupancies with moderate hazard. The number of incidents and losses due to fire in such areas can be minimized by taking developing a water-ring-main of sufficient diameter along with fire hydrants in the hazard areas. Fire pumps /some boosting arrangements should be provided to get adequate pressure in the charged line. Local occupants and agencies should be involved in maintaining such a system.

As regards the fires due to an earthquake, the chances of big fire are less since Noida is not using gas pipe lines. However, a number of minor fires may occur. Many areas particularly urbanized villages industrial areas, and J.J. clusters are highly vulnerable to earthquake risk due to poor masonry constructions, narrow streets, and high density of population. Most of the houses/buildings are multi-storeyed, having only one opening. Disaster affects, however, may be minimized by preparedness through sensitization/awareness campaign, training and adoption of disaster management planning measures.

In addition certain remedial measures need to be taken for better safety against fire. The UP Fire Service Act-1944 may not be suitable in the present set up. Therefore, as far as possible attempt should be made to follow the guidelines as given in the Delhi FP & FS Act-1986 and norms contained in NBC as published and amended from time to time. This

would certainly ensure that the present incumbents and future generations would be able to keep up a high level of fire safety.

Three fire stations presently exist are totally inadequate for meeting fire fighting needs of Noida. Four more fire stations have been suggested.

1. Behind Atta Market, Near Vinayak Hospital, Noida.
2. Khora Colony, Side Industrial Area, Sector-62, Noida
3. ESI Hospital side, Near Village Chhora, Raghunathpur, Noida
4. Near Chhalera Banger on Express High way side, Noida.

6.2.6 High Wind Hazard Risk Mitigation The area is located in high damage risk zone ($V_b=47\text{m/s}$) due to high wind velocity as per the Wind Hazard Map of Uttar Pradesh. Disasters in the form of high wind result in loss of life and limb of humans, damage to property and injury to animals and some deaths. Communication networks, katcha and semi-katcha houses and agriculture/crops are highly vulnerable. Particularly vulnerable are handicapped, old/aged, sick and ailing/diseased, pregnant women and children aged below five years.

Detailed preparedness planning measures against high wind hazards have been proposed under SOPs in Chapter IV of Disaster Management Plan.

Mitigation: Impact of high wind can be reduced by installing adequate warning systems and putting a system in place to carry the warning to people in disaster risk areas to places of safety before the disaster strikes. Moreover, buildings that can resist damage from high winds should be identified. If need be building may be built exclusively for giving shelter to people.

6.2.7 Man Made Hazards

Proneness: The township has expressway, highways and railway tracks etc. passing through. Though, such developments are essential for growth of the townships, these are potential hazards for possible major accidents unless adequate prevention, mitigation and preparedness measures are integrated with the development process so that disaster risk is reduced. Considering that industrial areas of Noida is in fact part of a continuing industrial belt extending from Ghaziabad to Sikandrabad in UP; Faridabad and Gurgaon in Haryana and Okhla Industrial Area of Delhi, the city is prone to being impacted by industrial accidents in any of these places. The most common disaster in industrial area is fire. As regards transportation hazards, it is important to analyse them in relation to disaster management. In Gautam Buddha Nagar, the routes used for the transportation of LPG, Propane and Chlorine to the industrial areas have been described in detail in the DMP.

Mitigation: For mitigation measure for transportation and industrial accidents, District Management Centre should help implement a module of quick reach by the police and fire

personnel by developing shortest path to evacuation centres and potential disaster locations. The shortest path will be identified from the land use map to reach the emergency site from police stations and the fire stations.

The NOIDA Authority has proposed to prepare detail plans with the help of National Institute of Disaster Management for the purpose of making required mitigation provisions for different kind of disasters. Mitigation provisions related to physical structures, required machinery and equipments, human resource development, awareness etc. would be made accordingly on the basis of detail work plans.

CHAPTER 7

ZONING REGULATIONS AND DEVELOPMENT CODE

This chapter details out guidelines for enabling the preparation of detailed plans. It includes designation of use zones and use premises, subdivisions of use zones into premises, use premises to be permitted in the use zone and use activities to be permitted in use premises.

7.1 USE ZONES AND USE PREMISES DESIGNATED

7.1.1 Use Zones

Use Zone means an area for any one of the specific dominant uses of the urban functions. There shall be 17 use zones classified in 8 categories namely: Residential, Commercial, Industrial, Public and Semi Public, Transportation, Recreational, Agriculture/ water bodies, and River Front Development Zone. The 17 use zones are as under:-

1. Residential

- R1- Residential (Medium density below 500 pph)
- R2- Residential (High density above 500 pph)
- R3- Village Abadi

2 Commercial

- C1- Commercial
- C2- Wholesale Commercial including Warehousing/Mandi.

3 Industrial

- M1- Industrial
- M2- Noida Export Processing Zone (NEPZ) / EPZ
- M3- Special Economic Zone

4 Recreational

- P1- Recreational Green.
- P2- Public Parks and Playgrounds.,
- P3- Green Belt.

5 Public and Semi-public

- PS1- Institutional.
- PS2- Facilities and utilities.

6. Transportation

T1 - Transportation

T2 - Railwayline Corridor

7 Agriculture / Water Bodies

A1- Agricultural Land

A2- Water Body including Rivers, Canals and Open Drains, Ponds etc.,

8. RF - River Front Development Area

7.1.2 Use Premises

Use premises means one of the many sub-divisions of a use zone, designated at the time of preparation of layout plan, for a specific main use or activity.

7.2 ZONING REGULATIONS

7.2.1 Objectives of Zoning

Generally, Residential, Commercial, Industrial, Institutional, public and semi-public facilities, transportation, parks, open spaces and agricultural land uses are marked/identified in the Master Plan. The ancillary/incidental activities, that are not displayed separately in the landuse map, are to be permitted according to the zoning regulations. The provision of ancillary/incidental activities/utilities is required to be made by competent authority according to the zoning regulations and the specific requirement of a particular scheme so that public health, welfare and security may be ensured in the proposed planned areas.

7.2.2 Salient Features of Zoning Regulations

The development of various activities/utilities in everchanging physical, social and economical scenario of cities is an ongoing process. In the zoning regulations, the approval of various activities/utilities under main land-use areas has been laid down in order to simplify the procedures of planning and responding to the requirements of development. The salient features of the zoning regulations are as under :—

- (1) The complications in usual zoning regulations are removed in order to simplify them. The permission of various activities in the main land-use areas are made user-friendly through a matrix.
- (2) The concept of flexible and multi-utility use of land is adopted instead of regimented use of land, so that it may boost the fast development of the town.
- (3) The planning and permission of multi-utility of a piece of land will be on the basis of their ancillaries and preference measures, so that the operational and economical capability of inter-dependent multi-utility land may be enhanced and main land use also retain the basic character.

(4) The concept of floating land-use has been adopted in zoning regulations, according to which the activities that are not envisaged in the general scheme/layout plan and there Zoning Regulation may be considered in future according to their merits.

7.2.3 Categories Of Different Activities/Utilities

The different activities/utilities to be provided or planned in the proposed main land-use categories are as under :

(a) Permissible Uses

These activities/utilities which are ancillary to the main land-use and are planned and permitted.

(b) Conditional Uses

These activities which are planned and permitted under the required terms and conditions in connections with the main land-use on the basis of their specific requirements. The required terms and conditions are given with the zoning matrix.

(c) Permissible uses under the specific permission of the Authority

These activities will be planned or permitted under specific permission of the Authority keeping in view the infrastructure and its environmental impact on the surrounding area etc. i.e. on the basis of their merits and demerits.

(d) Prohibited Activities

These activities will generally not be permitted in the concerned land-use.

7.2.4 Floating Activities

After coming of the scheme in force some activities/utilities are proposed according to the changing physical, social, economical and political scenario of the city, which become essential according to the demand of time, but are not envisaged in the scheme or zoning regulations. Such activities include bus/ truck/ rail terminal, wholesale trading complex, public utilities and services, electricity sub station, treatment plants, etc. To permit such activities it becomes inevitable at times, to change the land-use. Therefore, to permit for such activities/utilities, as per demand, the concept of floating use/activity is included.

Its advantage is that there will be no centralization of non-performing activities in any single land-use zone. In addition to that, to curb any ill effect or deterioration on the dominant character of a land-use zone due to extra floating utilities and to control the pressure on the establishments in the concerned area, a provision has been laid down that if a floating utility is not permissible in a particular zone, it may be allowed by the Authority by specific permission on the ground of the merits/demerits of the case.

S.No.	Ref. No.	Definition
1	1.1 (a)	Residential House/Plot – Plotted Housing : A premise for one or more than one dwelling unit and may or may not have on it one main building block and one accessory block for garage / garages and servant quarters.
2	1.1 (b)	Residential Flat : Residential accommodation for one family (one household) which may occur as part of group housing or independently.
3	1.2	Group Housing : A premise of size not less than 2000 sq.m. comprising of residential flats with basic amenities like parking, park, convenient shops, public utilities etc. as specified or permitted in the building regulations.
4	1.3	Guard/ chaukidar residence : Residential accommodation for watch and ward staff responsible for security and/ or maintenance of principal use.
5	2.1 (a)	Retail shop/ platform : A premise for sale of commodities directly to consumers with necessary storage.
6	2.2	Repair shop ; A premise equivalent of a retail shop for carrying out repair of goods.
7	2.3	Personal service shop : A premise equivalent of a retail shop providing personal service like tailor, barber etc.
8	2.4	Vending booth : A premise in the form of booth or Kiosk for sale of commodities of daily needs either through a mechanical installation or otherwise.
9	2.5	Showroom : A premise with facilities for display, sale and storage of commodities.
10	2.6	Weekly Market : An area used in a week by a group of informal shop establishments in the form of a market. These markets may shift from one area to another on different days of the week and may be planned at designated places in all land uses.
11	2.7	Convenience shopping centre : A group of shops in a neighbourhood in residential and other areas serving mainly for daily needs and a population of about 5,000 to 10,000 persons.
12	2.8	Local/ Sector level Shopping Centre : A group of shops about 75 in number in a residential areas serving a population of about 10,000 to 25,000 persons.
13	2.9 (a)	Shopping Centre/Commercial Centre : A premise having group of shops/commercial establishments, offices.
14	2.9 (b)	Shopping Mall : A Shopping Mall is one or more buildings forming a complex of shops representing merchandisers, with interconnecting walkways enabling visitors to easily walk from unit to unit, along with a parking area – a

		modern, indoor version of the traditional marketplace with controlled environment.
15	2.10	Informal Commercial Unit / Platform : A premise meant for commercial activities for informal sector.
16	2.11	Wholesale Market/ Mandi : A premise from where goods and commodities are sold/ delivered to retailers. The premise includes storage, godown, loading and unloading facilities.
17	2.12 (a)	Bakery : A Bakery (also called baker's shop or bakehouse) is an establishment which produces or/and sells baked goods from an oven.
18	2.12 (b)	Confectionary : A premise for retail sale of confectionary items directly to consumers with necessary storage.
19	2.12 (c)	Atta Chakki : A premise where grinding of grain, spices and dried eatables is carried out.
20	2.13 (a)	Coal Market : A premise for retail sale of coal directly to consumers with necessary storage.
21	2.13 (b)	Wood Market : A premise for retail sale of fuel wood directly to consumers with necessary storage.
22	2.13 (c)	Building Material Market : A premise for retail sale of building materials like timber, stone, bricks, cement, hardware, paints etc directly to consumers with necessary storage.
23	2.14	Vegetable / Fruit Market : A premise for retail sale of fruits and vegetables in shops or platforms.
24	2.15	Cold Storage : A premise where perishable commodities are stored in covered space using mechanical and electrical devices to maintain the required temperature etc.
25	2.16	Hotel : A premise used for lodging on payment with or without meals.
26	2.17	Serviced Apartment : A serviced Apartment is a type of furnished apartment available for short term or long term stays, which provides services and amenities for daily use.
27	2.18 (a)	Restaurant : A premise used for serving food items on commercial basis including cooking facilities. It may have covered or open space or both for sitting arrangement.
28	2.18 (b)	Canteen : A premise used for serving food items to workers in an institution including cooking facilities. It may have covered or open space or both for sitting arrangement.

29	2.18 (c)	Food Court : A Food Court is an (usually) indoor plaza or common area within a facility that is contiguous with the counters of multiple food vendors and provides a common area for self-serve dining. Food Courts may be part of shopping malls etc or may be stand-alone development.
30	2.19	Drive-in-cinema : A cinema with facilities for projection of movies and stills for car audience including an audience for auditorium.
31	2.20 (a)	Exhibition Hall : A hall with facilities for exhibition and display of paintings, photographs, sculptures, murals, ceramics, handicrafts or products of specific category/ class.
32	2.20 (b)	Exhibition Centre : A premise with facilities for exhibition, display and storage of paintings, photographs, sculptures, murals, ceramics, handicrafts or products of specific category/ class with related facilities.
33	2.21	Banquet Hall/ Barat Ghar : A premise used for marriage and other social functions and run by an individual, or institution or a public agency.
34	2.22	Petrol/ Diesel/ Gas Filling Station : A premise for sale of petroleum products to consumers. It may include servicing of automobiles.
35	2.23(a)	Oil Depot : A premise for storage of petroleum products with all related facilities.
36	2.23(b)	LPG Refilling Plant : A premise for refilling facilities of LPG on bulk basis.
37	2.24	Gas Godown : A premise where cylinders of cooking gas or other gas are stored.
38	2.25	Warehouse/ Godown for Non-Hazardous items : A premise for exclusive use of storage of non-hazardous goods and commodities in a manner as per requirement of respective goods/ commodities. The premises includes loading and unloading facilities.
39	2.26	Warehouse/ Godown for Hazardous items : A premise for exclusive use of storage of hazardous goods and commodities in a manner as per requirement of respective goods/ commodities. The premises includes loading and unloading facilities.
40	2.27 (a)	Automobiles Showroom : A premise for display, sale and repair of automobiles.
41	2.27 (b)	Automobile Showroom cum Service Station : A premise for display, sale, repair and servicing of automobiles.
42	2.28 (a)	Freight Complex : A complex having premises for booking and storage of goods that a train, truck, ship or aircraft carries.
43	2.28 (b)	Logistic Park : A premise within which all activities related to transport , logistics and the distribution of goods- both of national and international transmit , are carried out by various operators on commercial basis and includes

		facilities like warehouses, distribution centres, storage areas , offices, truck services etc and relates public facilities.
44	2.29	Steel/ Cement/ Building Material Yard : A premise having storage and sale facilities for bulk building materials like cement, steel etc.
45	2.30	Weigh Bridge/ Dharam Kanta : A premise with weighing facilities for empty or loaded trucks.
46	2.31 (a)	Cinema/ Multiplex : A premise with facilities for projection of movies and stills with a covered space to seat audience.
47	3.1 (a)	Service Industry : An industry comprised of companies that primarily earn revenue through providing tangible products and services. Service industry companies are involved in retail, transport, distribution, food services, as well as other service-dominated businesses.
48	3.1 (b)	Cottage Industry : An industry where the creation of products and services is home based, rather than factory based.
49	3.2	Flatted Factories : A premise having a group of small industrial units having upto 50 workers with non-hazardous performance. These units may be located in multistoried buildings.
50	3.3	Information/ Software Technology Park : A premise where computer softwares etc are prepared for information technology and I.T. enabled services.
51	3.4	Small/ Light Industry : Small/light industries as per classification of the State Government.
52	3.5	Industrial Plot (Specific Industry type) : A premise for an unit for manufacturing of specific products like electric goods etc.
53	3.6	Medium & Large scale industry : Medium and large scale industries as per classification of the State Government.
54	3.7	Film Centre/ TV, Radio Programme Production Centre : A premise with facilities for shooting, recording, broadcasting and transmission of news and other programmes through the respective medium. It may include some hostel accommodation for guest artists, and transmission facilities like tower.
55	4.1	Govt./ Semi Govt/ Public Undertaking/ Local Body Office : A premise used for offices of the Union and State Governments, semi Government organizations, Public Sector Undertakings and Local Body Offices.
56	4.2	Office/ Corporate Office : A premise used for office of commercial establishment, profit making organization and other Institutions.

57	4.3	Professional/ Personal/ Agent Office : A premise where professional consultancy services are provided by an individual or a group of professionals like Chartered Accountant, Lawyer, Doctor, Architect, Designer, Computer Programmer, Tour & Travel Agent etc.
58	4.4	Banks : A premise for office to perform banking functions and operations.
59	4.5	Project Development/ Management/ Maintenance Office : A premise used by a Real Estate Developer for project development, management and maintenance within the project site for a specified period with previous approval of the Authority.
60	4.6	Satellite/ Wireless/ Telecommunication Centre : A premise used for installation of a tower for communication purpose.
61	5.1	Guest House/ Lodging/ Boarding House : Guest House is a premise for housing the staff of Government, Semi-Government, Public Undertaking and Private Limited Company for short duration. Boarding house is a premise in which rooms are let out on a long-term basis as compared to hotels. Lodging House is a premise used for lodging of less than 50 persons.
62	5.2	Hostel : A premise in which rooms attached to "Institutions" or otherwise, are let out on a long-term basis to students, trainees and workers.
63	5.3	Reformatory and Orphanage : Orphanage would mean a premise with facilities for boarding of children who are bereaved of parents. It may or may not have educational facilities. Reformatory would mean a premise with facilities for confinement and reform of offenders.
64	5.4	School for mentally/ Physically Challenged Persons : A premise with facilities for education, treatment, reformation and empowerment of mentally and/or physically challenged persons. It may be managed by an individual or institution on commercial or non-commercial basis.
65	5.5 (a)	Creche & Day care centre : A premise having nursery facilities for infants during daytime. The centre may be managed by an individual or institution on commercial or non-commercial basis.
66	5.5 (b)	Play & Nursery School : A premise with facilities for training and playing for children preparatory to the school.
67	5.6	Old age home : A premise with commercial or non-commercial arrangement for long or short term stay of old people/ senior citizens. It may include arrangement for recreation, general health, catering etc.
68	5.7	Primary School : A premise having educational and playing facilities for students upto 5 th standard.

69	5.8 (a)	Secondary School / Senior Secondary School A premise having educational and playing facilities for students upto X or XII standard. It shall include existing middle schools, which are upto VIII standard.
70	5.8 (b)	Integrated Residential School : A premise having educational and playing facilities upto XII standard. It shall have boarding facilities for students and may have residence for faculty.
71	5.9	Vocational Institute : A premise with training facilities for short term courses for discipline, predatory to the employment in certain profession and trade. It includes training-cum-work centre.
72	5.10	Degree/ PG/ professional (medical/Engg. etc) College : A premise with educational and playing facilities for under-graduate and post-graduate courses under a university. It includes all professional disciplines.
73	5.11	University : An institution for higher learning with teaching and research facilities as recognised by UGC. A university may exist without having any college connected with it, but have assemblage of colleges affiliated to it.
74	5.12	Post office : A premise with facilities for postal communication for use by the public.
75	5.13	Telephone Exchange : A premise having facilities for central operation of telephone system for a designated area.
76	5.14 (a)	Police Station : A premise having facilities for the offices of local police station. It may include the residence of essential staff.
77	5.14 (b)	Fire Station : A premise with facilities for fire fighting for a catchment area assigned to it. It may or shall include residence of essential staff.
78	5.15	Police Post : A premise having facilities for a local police post of a temporary nature or on small scale as compared to a police station.
79	5.16	Library : A premise having large selection of books for reading and reference for general public or specific class.
80	5.17	R & D Centre : A premise having facilities for research and development for any specialized field.
81	5.18 (a)	Health Centre/ Family Welfare Centre : A premise having facilities for treatment of indoor and outdoor patients having upto 30 beds. The health centre may be managed by a public or a charitable institution on non-commercial basis. It includes family welfare centre.
82	5.18 (b)	Dispensary : A premise having facilities for medical advice and provision of medicines

		by a public or charitable institutions.
83	5.19	Trauma Centre : A premise having medical facilities of specialized nature for providing instant treatment to patients under trauma.
84	5.20 (a)	Hospital : A premise providing medical facilities of general or specialized nature for treatment of indoor and outdoor patients.
85	5.20 (b)	Medical College : A premise where teaching, treatment, operation and research & development related to human bodies is carried out.
86	5.21	Clinic / Polyclinics: A premise with facilities for treatment of outdoor patients by a doctor. In case of a polyclinic, it shall be managed by a group of doctors.
87	5.22	Nursing Home : A premise having medical facilities for indoor and outdoor patients having upto 30 beds. It shall be managed by a doctor on commercial basis.
88	5.23	Clinical Lab / Diagnostic Centre: A premise with facilities for carrying out various tests for confirmation of symptoms of a disease.
89	5.24	Veterinary Hospital/ Dispensary : A premise offering medical and similar facilities for animals.
90	5.25	Health Club/ Gymnasium : A room or building equipped for indoor sports and gym facilities.
91	5.26	Dance/ Music/ Art Centre : A premise having facilities for imparting training and coaching for dance, music and art.
92	5.27	Yoga/ Meditation Centre : A premise having facilities for self attainment, achieving higher quality of mind and body etc.
93	5.28	Milk Booth : A premise for retail sale of milk directly to consumers by manual or other means.
94	5.29	Religious Building/ Centre : A premise dedicated to accommodations and service of God and other objects of religious nature. It may have different nomenclature in different religions like temple for all faiths, mosque, church, gurudwara, synagogue, ashram, bathing ghats, gaushala etc.
95	5.30	Community Centre : A premise having an enclosed space for various social and cultural activities of a neighbourhood or a group housing complex.
96	5.31 (a)	Convention/Conference Centre : A premise having all facilities for meeting, symposium, seminar etc. where a number of people from different organizations will be participating.

97	5.31 (b)	Auditorium : A premise having an enclosed space to seat audience and stage for various performances like concerts, play, dance, drama, music, recitals, functions etc.
98	5.32	Planatarium : A premise with necessary facilities and equipments for studying planets.
99	5.33	Socio-cultural Centre : A premise with facilities for activities of socio-cultural nature.
100	5.34	PCO : A premise with facilities to make phone calls from telephone to local, STD and international subscribers on payment basis.
101	5.35	Internet/ Information Centre : A premise used for internet system for communication purposes.
102	5.36	Social Welfare Centre : A premise with facilities for welfare and promotion of community development. It shall be run by a public or charitable institution.
103	5.37	Cremation/ Burial ground/ Crematorium : Cremation ground would mean a premise with facilities for performing last rites of dead bodies by burning. Burial ground would mean a premise with facilities for burying of dead bodies. Crematorium would mean a premise with facilities for disposing off dead bodies in an electrical/ electronic furnace.
104	6.1 (a)	Sewerage Treatment Plant : A premise with treatment facilities used for treatment of sewage.
105	6.1 (b)	Sewerage Pumping station : A premise with a pumping station used for pumping sewage on to a higher gradient.
106	6.2 (a)	Sanitary Landfill Site : A premises where solid waste is disposed off for short or specific period.
107	6.2 (b)	Solid Waste Treatment Plant : A premise where solid waste is collected, treated mechanically / electrically and processed for reuse.
108	6.3	Tube well/ Over head tank/ Under ground tank/ Renny well : <u>Tube well</u> : A system to extract water from underground sources using mechanical means. It may consist of a room for operation and maintenance. <u>Over head tank</u> : A premise having overhead tank for storage and supply of water to its neighbouring areas. It may or may not include a pump house. <u>Under ground tank</u> : A premise having underground tank for storage and supply of water to its neighbouring areas. It may or may not include a pump house. <u>Renny well</u> : A system to extract water from underground sources on the banks of a water body.
109	6.4	Electric sub-station : A premise having electrical installation and transformation for distribution of power.

110	6.5	Public Toilet : A premise having latrines and urinals for use of public.
111	6.6	Transmission tower/ Mobile tower as per NOIDA policy : A transmission tower or Cellular mobile tower which may be erected on ground or roof top of a building as per policy of NOIDA.
112	7.1	Open parking : A premise open to sky used for parking of vehicles.
113	7.2	Covered/ Multi-level parking : A covered premise of one or more levels for parking of vehicles.
114	7.3 (a)	Taxi/ Auto stand : A premise used for parking of intermediate public transport vehicles run on commercial basis.
115	7.3 (b)	Cycle Rickshaw stand : A premise used for parking rickshaws and cycles.
116	7.4	Truck Terminal/ Transport Nagar : A premise for parking of trucks on short term or long term basis. It may include agency offices, workshops, dhabas, spare part shops, godowns, petrol/ diesel filling stations, restaurants, guest houses, hotels and such other operational facilities as decided by the Authority
117	7.5	Bus Stand/ Shelter : A Bus Stand or Bus Shelter is a designated location on a road away from carriage-way to park buses for short time periods for embarkation and disembarkation of passengers.
118	7.6 (a)	Bus Depot : A premise used by a public transport agency or any other such agency for parking, maintenance and repair of buses. This may or may not include a workshop.
119	7.6 (b)	Bus Terminal : A premise used by a public or private transport agency to park the buses for short periods. It may or may not include restaurants, guest house, hotel and such other operational facilities for passengers.
120	7.7	Motor Garage/ Service Garage/ Workshop : A premise for servicing and repair of automobiles.
121	7.8	Traffic Park/ Children Traffic Park/ Training Centre : A premise in the form of park with facilities for introducing and educating public/ children about traffic and signals. The training centre shall have facilities for training of driving automobiles.
122	7.9	Loading/ Unloading facilities/ Space :
123	7.10	Transport/ Cargo booking centre :
124	7.11	Container Depot :
125	7.12	Toll Plaza : A premise/facility for collection of toll for use of toll road. It may include office building for management of toll collection process.
126	7.13	Helipad : Helipad (helicopter landing pad) is a landing area for helicopters. Usually a helipad does not have fuel and service facilities, and does not maintain a full time air traffic controller.

127	8.1 (a)	Park : A premise used for recreational leisure activities. It may have on it related landscaping, parking facilities, public toilet, fencing etc. It will include synonyms like lawn, open space, green etc.
128	8.1 (b)	Play Ground : A premise used for outdoor games. It may have on it landscaping, parking facilities, public toilet etc.
129	8.2	Multipurpose open spaces : Space / Area which is essentially open and can be used for multiple temporal functions.
130	8.3 (a)	Golf course : Area earmarked for playing golf sport which is essentially open along with minimal built space which supports the sports.
131	8.3 (b)	Race course : Area earmarked for racing with minimal built space for supporting the race.
132	8.4 (a)	Stadium : A premise for outdoor games with pavilion building and stadium structure to seat spectators including related facilities.
133	8.4 (b)	Sports training centre : A premise having facilities for training and coaching for different indoor and outdoor games including swimming. It shall also include centre for physical education.
134	8.4 (c)	Sports Complex : A premise for outdoor and indoor games with pavilion building, stadium and related facilities.
135	8.5	Picnic Spot : A premise within the tourist/ recreational centre which is used for short duration stay for recreational or holiday purpose.
136	8.6	Indoor stadium/ Games hall : A premise for indoor stadium with play area and spectator seating including related facilities.
137	8.7	Amusement/ Specialised/ Theme Park : Amusement Park and Theme Park are terms for a group of rides and other entertainment attractions assembled for the purpose of entertaining a large group of people. An Amusement Park is more elaborate than a simple park or playground, usually providing attractions meant to cater to children, teenagers and adults.
138	8.8 (a)	Recreational Club : A premise used for gathering of a group of persons for social and recreational purpose with all related facilities.
	8.8 (b)	Swimming pool : A premise with facilities for swimming and spectators seating which shall vary with standard and purpose.

139	8.9 (a)	Museum / Auditorium : Museum means a premise with facilities for storage and exhibition of objects illustrating antiques, natural history, art etc.. Auditorium means a premise having an enclosed space to seat audience and stage for various performance like concerts, play, recitals, functions etc.
140	8.9 (b)	Conference Hall : A premise having facilities for meeting, symposium, seminar etc. where a number of people will be participating.
141	8.9 (c)	Art/ Exhibition Gallery : A premise with facilities for exhibition and display of paintings, photographs, sculptures, murals, ceramics, handicrafts or products of specific class.
142	8.10	Open air theatre : A premise having facilities for audience seating and a stage for performance open to sky.
143	8.11	National Memorial : A protected area that memorializes a historic person or event of national importance. The memorial need not be located on a site directly related to the subject.
144	9.1	Orchard/ Plant Nursery/ Social Forestry : Orchard would mean a premise with a thick growth of fruit trees. It may also include garden with fruit trees. Plant nursery would mean a premise with facilities for rearing and sale of young plants. Forestry would mean a premise with thick natural flora including social forestry, which may have part natural flora and part man made flora.
145	9.2	Farm House : A dwelling house on a farm.
146	9.3	Dairy farm/ poultry farm : A premise with facilities for rearing and processing of dairy/ poultry products. It may have temporary structures for sheds of cows/ birds.
147	9.4	Agricultural equipment workshop/ service centre : A premise with facilities for servicing and repair of agricultural equipments like tractor, trolley, harvesters etc.

7.4 PERMISSIBLE SUPPORT ACTIVITIES IN USE PREMISES OR ON A PLOT

1 Residential
1.1 Single House/Plot/Flat Permissible uses- Residence Support Facilities- Professional practice by the residents
1.2 Group Housing Permissible uses- As per Building Regulations Support Facilities- As per Building Regulations
1.3 Guard/Chaukidar residence Permissible uses- Residence for Guard/ Chowkidar
2 Commercial
2.1 Retail Shop/Plat Form Permissible uses- Retail Shop, Hawkers' Platform.
2.2 Repair shop Permissible uses- Repair shop, spare parts shop.
2.3 Personal service Shop Permissible uses- Personal service shop.
2.4 Vending booth Permissible uses- Vending booth/kiosk.
2.5 Showroom Permissible uses- Showroom.
2.6 Weekly Market Permissible uses- Weekly market, informal retail trade, kiosks, (all structures will be temporary and mobile , only for one day in a week, Public conveniences temporary or permanent as per decision of the Authority)
2.7 Convenience shopping centre Permissible uses- Retail, Repair and Personal Service shop, Showroom, Restaurant, Canteen, Food Court, Clinic and Polyclinic, Clinical Laboratory, Kiosk/ Vending booth, Bakery, Confectionary, Atta Chakki , Office, Bank, Coaching Centers/ Training Institutes, Informal Commercial units / platform, Multilevel Parking. Support Facilities- Guest House, Service Apartment, Health center/ Dispensary, Nursing home, Health club/Gym, Yoga/ Meditation centre, Dance/Music/Art center, Religious center, Barat Ghar, Exhibition Hall
2.8 Local/Sector level Shopping Centre Permissible uses- Retail, Repair and Personal Service shops, Showroom, Restaurant, Cantten, Food Court, Clinic and Polyclinic, Clinical Laboratory, Kiosks, Vending booth, Bakery, Confectionary, Atta Chakki , Office, Bank, Coaching Centers/ Training Institutes, Informal commercial units / platform, Cinema/Multiplex, Multilevel Parking, Support Facilities- Guest House, Service Apartment, Banquet Hall, Exhibition Hall, Health Center/Dispensary, Nursing home, Health club/Gym, Yoga/ Meditation centre, Dance/Music/Art center, Religious center, Convention/ Conference center, Auditorium, Barat Ghar.
2.9 Shopping Centre/Commercial Centre/Shopping Mall Permissible uses- Retail shop, Showroom, Personal Service shop, Bakery, Confectionary, Food Court/ Canteen/ Restaurant, Office, Cinema/Multiplex, Drive in Cinema, Bank, Hotel, Guest House, Service Apartment, Banquet Hall/ Barat Ghar, Convention/ Conference center, Auditorium, Art Gallery, Health Club/ Gym/ Spa, Guest House/ Lodging/ Boarding

<p>House, Vending Booth/ kiosk, Milk Booth, Clinic and Polyclinic, Clinical Lab, Internet/ Information Center, Petrol / Diesel/ Gas filling Station, Coaching Centers/ Training Institutes, Fruit and Vegetable market, Informal Commercial unit/Platform, Multilevel Parking, Taxi/Auto/Rickshaw Stand, Bus Shelter, Transport /Cargo Booking Center, Residential (as per Building Regulations)</p> <p>Support Facilities-Repair Shop, Motor garage and Workshop, Automobile showroom/ Showroom cum service center, Warehousing, Exhibition Hall /Exhibition Center, Recreational Club/Swimming pool, Socio Cultural centre, Dance/ Music/ Art Center, Yoga/ Meditation Center, Museum, Indoor Stadium/ Games hall, Amusement/ Specialised /Theme Park, Open Air Theater, Library, R&D Center, Religious Center, Community Center, Social Welfare Center, Health Center/Family Welfare Center/ Dispensary, Nursing Home</p>
<p>2.10 Informal commercial unit / Platform Permissible uses- Informal commercial unit / Platform</p>
<p>2.11 Wholesale Market/Mandi Permissible uses- Wholesale shop, Repair Shop, Bank, Automobile showroom/ Showroom cum service center, Restaurant/Canteen/Food court, Coal/Wood/Building Material Market, Vegetable/ Fruit Market, Cold Storage, Warehouse/ Godown for Non Hazardous items, Loading/unloading facility, Vending Booth/kiosk, Multilevel Parking, Taxi/Auto Rickshaw/Rickshaw stand, Office, Weighbridge/ Dharamkanta, Petrol / Diesel/ Gas filling Station, Cinema/Multiplex, Informal Commercial unit/Platform.</p> <p>Support Facilities-Guest House/Lodging/Boarding House, Hotel, Showroom, Retail Shop, Personal Service Shop, Truck Parking and other logistics, Health Center/Family Welfare Center/ Dispensary, Nursing Home, Service apartment.</p>
<p>2.12 Bakery/Confectionary/Atta Chakki Permissible uses- Bakery/Confectionary/Atta Chakki.</p>
<p>2.13 Coal/Wood/Building Material Market Permissible uses- Wholesale shop, Repair Shop, Showroom, Bank, Automobile showroom/ Showroom cum service center, Restaurant/Canteen/Food court, Warehouse/ Godown for Non Hazardous items, Loading/unloading facility, Truck Parking and other logistics, Vending Booth/ Kiosk, , Multilevel Parking, Taxi/Auto Rickshaw/Rickshaw stand, Office, Weighbridge/Dharamkanta, Petrol / Diesel/ Gas filling Station, Informal Commercial unit/Platform,</p> <p>Support Facilities- Guest House/Lodging/Boarding House, Retail Shop, Personal Service Shop, Health Center/Family Welfare Center/ Dispensary, Nursing Home, Service apartment</p>
<p>2.14 Vegetable/Fruit Market Permissible uses- Wholesale shop, Retail Shop, Repair Shop, Personal Service Shop, Bank, Restaurant/Canteen/Food court, Warehouse/ Godown for Non Hazardous items, Cold Storage, Gas Godown, Loading/unloading facility, Truck Parking and other logistics, Vending Booth/ Kiosk, Multilevel Parking, Taxi/ Auto Rickshaw/ Rickshaw stand, Weighbridge/ Dharamkanta, Petrol / Diesel/ Gas filling Station, Informal Commercial unit/Platform</p> <p>Support Facilities- Guest House/Lodging/Boarding House, Showroom, Office, Health Center/Family Welfare Center/ Dispensary, Nursing Home.</p>
<p>2.15 Cold Storage Permissible uses- Cold storage, Loading/unloading facility, Truck Parking and other logistics,</p> <p>Support Facilities- Office, Canteen, Vending Booth/Kiosk,</p>
<p>2.16 Hotel Permissible uses- Lodging facility, Restaurant /Canteen/ Food court, Dining hall, Cafeteria, Tourist Information centre, Convention Center/Conference center/ Auditorium, Seminar Hall, Exhibition Hall, Banquet Hall Laundry, Recreational Club/Swimming pool,</p>

<p>Internet/Information Center, Health Club/Gym/Spa, Discotheque, Yoga/ Meditation Center, Multilevel Parking, Office,</p> <p>Support Facilities- Bank, Creche, Automobile showroom/ Showroom cum service center, Retail Shop, Personal service shops, Showroom, Service Apartment, Health centre/Dispensary.</p>
<p>2.17 Service Apartment</p> <p>Permissible uses- Guest Suite, Conference Facilities, Office,</p> <p>Support Facilities- Bank, Creche, Health Centre/Dispensary, Retail Shop, Personal Service Shop, Restaurant/Canteen/Food Court.</p>
<p>2.18 Restaurant/Canteen/Food Court</p> <p>Permissible uses- Restaurant, Canteen, Food court, Banquet Hall, Vending Booth,</p> <p>Support Facilities- Office, Bank extension counter</p>
<p>2.19 Drive-in cinema</p> <p>Permissible uses- Open air theatre, Drive in cinema, Open Air Restaurant,</p> <p>Support Facilities- Office related to cinema activity.</p>
<p>2.20 Exhibition Hall/Exhibition centre</p> <p>Permissible uses- Exhibition Hall, Exhibition centre and art gallery, Library, Store/Godown facility, Auditorium, Multilevel Parking,</p> <p>Support Facilities- Office, Showroom, Dance/ Music/ Art Center, Yoga/ Meditation Center, Museum, Restaurant/Canteen/Food court, Vending Booth/Kiosk,</p>
<p>2.21 Banquet hall/Barat Ghar</p> <p>Permissible uses- Banquet Hall, Barat Ghar, Guest suite/room, Restaurant, Food court, Vending Booth/kiosk, Multilevel Parking</p> <p>Support Facilities- Retail shop, Personal service shop, Bank, Auto-rickshaw stand, Office</p>
<p>2.22 Petrol/ Diesel/ Gas Filling Station</p> <p>Permissible uses- Petrol/Diesel Pump/Fuel Station, Gas filling station, Automobile Repair Shop, Automobile Service station,</p> <p>Support Facilities- Office, Retail shop/Departmental Store, Showroom.</p>
<p>2.23 Oil depot and LPG refilling plant</p> <p>Permissible uses- Oil and Gas Depot, LPG refilling plant, Truck Parking.</p> <p>Support Facilities- Booking Office</p>
<p>2.24 Gas Godown</p> <p>Permissible uses- Gas Godown, Truck Parking,</p> <p>Support Facilities- Booking Office,</p>
<p>2.25 Warehouse/Godown for Non-Hazardous Items</p> <p>Permissible uses- Store/Godown, Loading unloading facility, Truck Parking,</p> <p>Support Facilities- Booking Office,</p>
<p>2.26 Warehouse/Godown for Hazardous Items</p> <p>Permissible uses- Store/Godown, Loading unloading facility, Control/Inspection room, Truck Parking.</p> <p>Support Facilities- Booking Office.</p>

<p>2.27 Automobiles Showroom/ Showroom cum service centre Permissible uses- Automobile showroom, Licensed service center, Parking, Retail shop (Spare Parts), Truck Parking, Support Facilities- Office, Retail shop, Kiosk/Vending Booth.</p>
<p>2.28 Freight Complex/Logistic Park Permissible uses- Booking Office, Warehouse, Store/ Godown, Cold Storage, Space for Container Stocking, Truck Parking, Loading /Unloading facilities, Repair shop, Weighbridge, Vending Booth/Kiosk, Truck Parking. Support Facilities- Office, Petrol/Diesel/Gas filling station, Bank, Service Station, Restaurant/Canteen/ Food court.</p>
<p>2.29 Steel/Cement/Building Material Yard Permissible uses- Storage Yard, Loading Unloading Facility, Truck Parking, Weigh Bridge Support Facilities- Office, Storage Godowns.</p>
<p>2.30 Weigh Bridge/Dharmkanta Permissible uses- Weighbridge/ Dharamkanta, Vending booth/Kiosk Support Facilities- Office</p>
<p>2.31 Cinema/Multiplex Permissible uses- Cinema/ Multiplex, Retail Shop, Personal Service Shop, Showroom, Office, Restaurant, Food Court, Vending booth/ kiosk, Multilevel Parking Support Facilities- Bank, Gym/ Health club/ Spa, Taxi/Auto/Auto rickshaw stand,</p>
<p>3. Industrial</p>
<p>3.1 Service/Cottage Industry Permissible uses- Service/Cottage Industry (Non Hazardous, Non polluting) as per stipulation of Industries department, residential unit, Support Facilities- Creche/ Daycare center, Retail shop for the product manufactured, Storage</p>
<p>3.2 Flatted Factories Permissible uses- Industrial units (Non Hazardous, Non polluting) as per stipulation of Industries department, Canteen, Loading Unloading Facility, Truck parking, Multilevel Parking Support Facilities- Office, Bank, Gym, Storage, Taxi/Auto/Auto rickshaw stand, vending booth/kiosk, internet centre, Creche and Day care center.</p>
<p>3.3 Information/Software Technology Industry Permissible uses- IT plots/buildings Support facilities a) Commercial Shops, Areas for storage, display and sale of merchandise, Cinema halls, Restaurants, open eating kiosks b) Residential Residential uses, Hostel, Guest house, Staff quarters c) Institutional Facilities- Waiting and transit areas, Areas designated for public utilities, Travel services, Telephone Exchange, Electric substation, water works, Export related facilities, Canteen/Restaurant, Creche and day care centre, operation and maintenance by specialized agencies, Training centre and library, Health Club and Gym for users/residents of IT and ITES, Games/entertainment room for users/residents of IT and ITES, Banking and Financial services, Business and Financial services, Buisness</p>

<p>Centre/Conference facilities, Shops, Open eating kiosks.</p> <p>Note: The extent of support facilities under Commercial, Residential and Institutional uses for different size if plots shall be decided by the Authority in the scheme from time to time.</p>
<p>3.4 Small/Light Industry</p> <p>Permissible uses- Industrial units(Non Hazardous, Non polluting) as per stipulation of industry department, Canteen, Loading Unloading Facility, Truck parking, Vending booth/kiosk, Storage, Multilevel Parking</p> <p>Support Facilities- Office, Bank, Showroom for display/sale of industrial products manufactured in the unit, Gym/ Health club, Crèche and day care centre, Internet center, Dispensary, Taxi/Auto/Auto rickshaw stand.</p>
<p>3.5 Industrial plot (specific industry type)</p> <p>Industrial units(Non Hazardous, Non polluting) as per stipulation of industry department, Canteen, Loading Unloading Facility, Truck parking, Vending booth, kiosk, Storage, Internet center, Multilevel Parking.</p> <p>Support Facilities- Office, Bank, Showroom for display/sale of industrial products manufactured in the unit, Gym/ Health club, Crèche and day care centre, Internet center, Dispensary, Taxi/Auto/Auto rickshaw stand.</p>
<p>3.6 Medium & Large scale Industry</p> <p>Industrial units(Non Hazardous, Non polluting) as per stipulation of industry department, Showroom for display/sale of industrial products Canteen, Creche and daycare center, Loading Unloading Facility, Truck parking, Vending booth/kiosk, Storage, Internet center, Multilevel Parking</p> <p>Support Facilities- Office, Bank, Showroom for display/sale of industrial products manufactured in the unit, Gym/ Health club, Crèche and day care centre, Internet center, Dispensary, Taxi/Auto/Auto rickshaw stand.</p>
<p>3.7 Film Centre/TV, Radio Programme Production Centre</p> <p>Permissible uses- Film Centre/TV Center, Radio Programme Production Centre, Auditorium, Media Center, Canteen, Library, Vending booth/ Kiosk</p> <p>Support Facilities- Office, Bank, counter Gym/ Health club, Creche and daycare center , Taxi/Auto/Auto rickshaw stand.</p>
<p>4 Offices</p>
<p>4.1 Govt./Semi Govt. /Public Undertaking/Local Body Office</p> <p>Permissible uses- Govt./Semi Govt./Public Undertaking/Local Body Office, Multilevel parking, , Conference facilities, Seminar hall,</p> <p>Support Facilities- Auditorium, International conference centre, Cultural and information centre, Stationary shop, Book store, Chemist store, Vending booth/Kiosk, Health Club / Gym, Bank extension counter, General store, Crèche, Indoor games halls, Dispensary, Internet centre, Library, Museum, Planetarium, R&D centers, Radio and television station, Canteen, Staff Housing, Guest house, Hostel, Transit Hostel.</p>
<p>4.2 Office/Corporate office</p> <p>Permissible uses- Office/Corporate office, Conference room, Seminal Hall, Multilevel Parking</p> <p>Support Facilities- Auditorium, International conference centre, Cultural and information centre, Stationary shop, Book store, Chemist store, Vending booth/Kiosk, Health Club / Gym, Bank extension counter, General store, Crèche, Indoor games halls, Dispensary, Internet centre, Library, Museum, Planetarium, R&D centers, Radio and television station, Canteen, Staff Housing, Guest house, Hostel, Transit Hostel.</p>
<p>4.3 Professional/Personal/Agent Office</p> <p>Permissible uses- Professional/Personal/Agent Office, Conference room.</p> <p>Support Facilities- Canteen, Bank extension counter,</p>

4.4 Bank Permissible uses- Bank, Canteen
4.5 Project Development/Management/Maintenance office Permissible uses- Project Development/Management/Maintenance office, Support Facilities- Bank extension counter, Canteen,
4.6 Satellite/Wireless/Telecommunication centre Permissible uses- Satellite/Wireless/Telecommunication Centre, residential flat (for maintenance staff), Support Facilities- Research laboratory, Canteen.
5 Public / Semi-public / Institutional Facilities
5.1 Guest house/lodging/boarding house Guest room/Suite, Conference Facilities, Banquet Hall, , Support Facilities- Office, Canteen, Retail Shop, Personal Service Shop, Bank, Crèche, Health Centre/Dispensary.
5.2 Hostel Permissible uses- Rooms/suites, dining facilities, Support Facilities- Office, Canteen, Personal service shops, retail store for daily needs, Indoor/ outdoor games facilities, Bank extension counter, Creche, Health Centre/Dispensary, Care taker/ warden residence.
5.3 Reformatory and Orphanage Permissible uses- Reformatory and orphanage, Hostel, , Support Facilities- Health center/ Dispensary, Residence of Caretaker and maintenance staff, Personal service shop
5.4 School for mentally/Physical challenged Persons Permissible uses- School for mentally, physically challenged, Hostel. Support Facilities- Health center/ Dispensary, Medicine shop, Residence of Caretaker and maintenance staff, Personal service shop
5.5 Creche & Day Care Centre/Play & Nursery School Permissible uses- Creche & Day Care Centre/Play & Nursery School, Support Facilities- Residence of caretaker and maintenance staff,
5.6 Old age home Permissible uses- Rooms/suites, Dining facilities, Canteen, Support Facilities- Guest Room, Bank, Retail shop, Personal service shop, Chemist, Health Center/Dispensary, Nursing home, Health club/Gym, Yoga/ Meditation centre, Dance/Music/Art center, Religious center, Bank extension counter, Vending booth/Kiosk
5.7 Primary school Permissible uses- Primary school, Canteen, Swimming pool, Auditorium, Library, Indoor games Hall, Hostel. Support Facilities- Retail shop for books and stationary, uniform, Bank extension counter, Staff housing, Vending booth/Kiosk
5.8 Secondary School/Integrated Residential School Permissible uses- Senior secondary school, Canteen, Swimming pool, Auditorium, Library, Indoor games Hall, Hostel Support Facilities- Retail shop for Books and Stationary, Uniform, Chemist; Bank extension counter, Vending booth/Kiosk, Staff housing,

<p>5.9 Vocational Institute Permissible uses- Vocational training center, Canteen, Swimming pool, Auditorium, Library, Indoor games Hall, Hostel</p> <p>Support Facilities- Guest house, Transit hostel, Retail shops for Books and Stationary, Chemist, Fruits and vegetables, general store; Personal service shop, Repair shop, Vending booth/Kiosk , Bank extension counter, Staff housing</p>
<p>5.10 Degree/PG/professional (MBA/ Engg etc) college Permissible uses- Degree/P G/professional (MBA /Engg etc) college, Canteen, Swimming pool, Library, Auditorium, Indoor games Hall, Hostel</p> <p>Support Facilities- Guest house, Transit hostel, Retail shop for Books and Stationary, Chemist, Fruits and vegetables, general store; Personal service shop, Repair shop, vending booth/Kiosk; Bank extension counter, Staff housing</p>
<p>5.10(a) Medical College with Hospital Permissible uses- Hospital, Medical college, Swimming pool, Library</p> <p>Support Facilities- Auditorium, Indoor games Hall, Hostel, Guest house, Canteen, Retail shop for Books and Stationary, Chemist, Flowers, Fruits and vegetables, general store; Personal service shop, Repair shop, Vending booth/Kiosk, Bank extension counter, Staff housing, Cultural and information centre, International conference centre, internet café, Library, Museum, Planetarium, R&D Centre, Radio and Television station, Gym/ Health club, Guest House, Transit Hostel,</p>
<p>5.11 University Permissible uses- University, Educational Colleges, Canteen, Swimming pool, Indoor games Hall, Convention Center, Exhibition Hall,</p> <p>Support Facilities- Auditorium, Indoor games Hall, Hostel, Guest house, Canteen, Retail shop for Books and Stationary, Chemist, Flowers, Fruits and vegetables, general store; Personal service shop, Repair shop, Vending booth/Kiosk, Bank extension counter, Staff housing, Cultural and information centre, International conference centre, internet café, Library, Museum, Planetarium, R&D Centre, Radio and Television station, Gym/ Health club, Guest House, Transit Hostel,</p>
<p>5.12 Post Office Permissible uses- Post and Telegraph Office, Canteen,</p>
<p>5.13 Telephone Exchange Permissible uses- Telephone exchange/RLU/RSU,</p> <p>Support Facilities- Canteen, Bank Extension Counter , Staff Housing,</p>
<p>5.14Police Station Permissible uses- Police Station,</p> <p>Support Facilities- Canteen, Bank Extension Counter, Staff Housing,</p> <p>Fire Station Permissible uses- Fire Station, Service workshop, Hostel/dormitory.</p> <p>Support Facilities- Canteen, Bank extension counter, Staff Housing</p>
<p>5.15 Police Post Permissible uses- Police post</p> <p>Support Facilities- Canteen, Bank extension counter , Staff Housing,</p>

<p>5.16 Library Permissible uses- Library, Internet/information center, Exhibition Hall and art gallery, Support Facilities- Auditorium, Canteen, Staff housing, Bank extension counter,</p>
<p>5.17 R & D Centre Permissible uses- Research and Development Center, internet/Information Center, Hostel, Library, Support Facilities- Auditorium, Canteen, Staff housing, Guest House, Transit hostel, Bank Extension counter, Health/Gym,</p>
<p>5.18 Health Centre/Family Welfare Centre/Dispensary Permissible uses- Health center, Dispensary, Family welfare center, Support Facilities- Canteen, Chemist shop, Vending Booth/kiosk, Office,</p>
<p>5.19 Trauma Centre Permissible uses- Trauma center, hostel, Support Facilities- Canteen, Vending Booth/ Kiosk, Bank extension counter, Chemist shop, Books/Stationery Shop, General Departmental store, Personal service Shop, Office, Staff Housing, Patient attendant accommodation, Gym,</p>
<p>5.20 Hospital Permissible uses- Hospital Support Facilities- Auditorium, Bank extension counter, Cultural and Information Center, Chemist shop, Canteen, Books/Stationery /Flower Shop, Indoor Games hall, International conference center, Internet Center, Library, Museum, Planetarium, R&D center, Radio and Television Center, General Departmental store, Personal service Shop, Office, Staff Housing, Patient attendant accommodation, Health club/Gym, Guest House, Hostel, Transit Hostel, Vending booth/kiosk</p>
<p>5.21 Clinic Permissible uses- Clinic Support Facilities- Chemist shop</p>
<p>5.22 Nursing home Permissible uses- Nursing Home, Clinical lab. Support Facilities- Chemist shop, Vending booth/kiosk,</p>
<p>5.23 Clinical Lab Permissible uses- Clinic laboratory, Support Facilities- Clinic, Chemist shop, Vending Booth/kiosk,</p>
<p>5.24 Veterinary Hospital/Dispensary Permissible uses- Veterinary Hospital/Dispensary, Diagnostic Center, Support Facilities- Canteen, Chemist shop, Staff Housing</p>
<p>5.25 Health club/Gym/Spa Permissible uses- Health club/Gym, Vending booth/Kiosk</p>
<p>5.26 Dance/Music/Art centre Permissible uses- Dance/Music/Art centre, Support Facilities- Auditorium, Guest House, Canteen, Vending booth/Kiosk, hostel</p>

<p>5.27 Yoga/Meditation centre Permissible uses- Yoga/Meditation centre, Library, Conference Facilities, , Hostel</p> <p>Support Facilities- Guest House, Auditorium, Canteen, Vending booth/Kiosk,</p>
<p>5.28 Milk Booth Permissible uses- Milk Booth</p>
<p>5.29 Religious Building/Centre Permissible uses- Religious Building/Centre, Yoga and Meditation Hall, Library, Ashram, Bathing Ghat, Gaushala, Dargah,</p> <p>Support Facilities- Residence for essential staff/ priest, Retail shop for flowers/ offerings, Charitable Dispensary, Dining Hall with kitchen,</p>
<p>5.30 Community Centre Permissible uses- Community center/ Barat Ghar,</p> <p>Support Facilities- Indoor games, Library, Restaurant, Vending booth/kiosk, Guest rooms,</p>
<p>5.31 Convention centre/ Conference Centre/Auditorium Permissible uses- Convention centre/Conference Centre/Auditorium, Exhibition hall, Art Gallery, Internet/ information center, Multilevel parking,</p> <p>Support Facilities- Restaurant, Hostel, Canteen, Library, Guest room, Bank extension counter, Caretaker and Maintenance Staff Housing,</p>
<p>5.32 Planetarium Permissible uses- Planetarium, Office, Canteen,</p>
<p>5.33 Socio-cultural Centre Permissible uses- Socio-cultural Centre, Exhibition Center, Art Gallery, Dance/ Drama/Music Training center, Swimming Pool, Multilevel parking,</p> <p>Support Facilities- Auditorium, Library, Museum, Canteen, Vending Booth/kiosk, Bank extension counter,</p>
<p>5.34 PCO Permissible uses- PCO</p>
<p>5.35 Internet/Information Centre Permissible uses- Internet/Information Centre,</p> <p>Support Facilities- Bank Extension counter, Canteen, Library,</p>
<p>5.36 Social Welfare Centre Permissible uses- Social Welfare center.</p> <p>Support Facilities- Canteen, Library, Vending Booth/kiosk, Bank extension counter.</p>
<p>5.37 Cremation/Burial ground/Crematorium Permissible uses- Cremation/Burial ground/Crematorium.</p> <p>Support Facilities- Retail shop of wood, flowers and related material, Maintenance staff residence.</p>
<p>6 Public Utilities</p>
<p>6.1 Sewerage treatment plant/Pumping station Permissible uses- Sewerage treatment plant/Pumping station,</p> <p>Support Facilities- Office, Maintenance staff residence</p>

<p>6.2 Sanitary landfill site/Solid waste treatment plant Permissible uses- Sanitary landfill site/Solid waste treatment plant.</p> <p>Support Facilities- Office, Maintenance staff residence.</p>
<p>6.3 Tube well/Over head tanks/Under ground tanks/Rainy well Permissible uses- Tube well/Over head tanks/Under ground tanks/Rainy well</p> <p>Support Facilities- Office, Maintenance staff residence.</p>
<p>6.4 Electric sub-station Permissible uses- Electric sub-station.</p> <p>Support Facilities- Office, Maintenance staff residence.</p>
<p>6.5 Public Toilet Permissible uses- Public toilet.</p>
<p>6.6 Transmission tower/Mobile tower as per Noida Policy. Permissible uses- Transmission tower/Mobile tower as per Noida Policy.</p>
<p>7 Transportation</p>
<p>7.1 Open parking Permissible uses- Open Parking, Vending booth/Kiosk.</p>
<p>7.2 Multi-level parking Permissible uses- Multi-level parking.</p> <p>Support Facilities- Office, Maintenance staff residence.</p>
<p>7.3 Taxi/Auto/Rickshaw Stand Permissible uses- Taxi/Auto/Rickshaw Stand.</p> <p>Support Facilities- Vending Booth/kiosk.</p>
<p>7.4 Truck Terminal/Transport Nagar Permissible uses- Truck parking, Service Garage, Spare parts shops, Repair shop, Transport Agencies offices and other related offices, Showroom, Weighbridge/Dharamkanta, Storage Godowns, Multi-level parking.</p> <p>Support Facilities- Retail shop, showroom, Office, Restaurant, Hotel, Bank, Vending booth/kiosk.</p>
<p>7.5 Bus Stand/Shelter Permissible uses- Bus stand/ Shelter.</p>
<p>7.6 Bus Depot/Terminal Permissible uses- Bus Terminal.</p> <p>Support Facilities- Office , Canteen.</p>
<p>7.7 Motor Garage/Service Garage/Workshop Permissible uses- Motor Garage/Service Garage/Workshop, Service Station.</p> <p>Support Facilities- Automobile showroom, Spare parts shop, office, Vending Booth/kiosk.</p>
<p>7.8 Traffic Park/Children Traffic Park/Training Centre Permissible uses- Traffic Park/Children Traffic Park/Training Centre.</p> <p>Support Facilities- Restaurant, Vending Booth/kiosk.</p>

<p>7.9 Loading/Unloading Facilities/Space Permissible uses- Loading/Unloading Facilities/Space, Weighbridge.</p> <p>Support Facilities- Vending booth/kiosk.</p>
<p>7.10 Transport/Cargo booking centre Permissible uses- Transport/Cargo booking office, Warehousing/Godowns, Truck Parking.</p> <p>Support Facilities- Office, Vending booth/kiosk, Canteen.</p>
<p>7.11 Container Depot Permissible uses- Storage of Containers, Weighbridge, Truck parking, Warehousing/Storage Godowns, Office.</p> <p>Support Facilities- Vending booth/kiosk, Canteen.</p>
<p>7.12 Toll Plaza Permissible uses- Toll plaza, Maintenance office.</p> <p>Support Facilities- Office.</p>
<p>7.13 Helipad Permissible uses- Helipad, Office, Waiting Area.</p>
<p>8 Recreational</p>
<p>8.1 Park/ Play Ground Permissible uses- Park, play Ground.</p> <p>Support Facilities- Vending Booth/ Kiosk.</p>
<p>8.2 Multipurpose open space Permissible uses- Multipurpose open space</p> <p>Support Facilities- Vending Booth/ Kiosk</p>
<p>8.3 Golf course/ Race course Permissible uses- Golf Course, Race course, Swimming Pool, Indoor/ Outdoor games facilities, Multilevel Parking</p> <p>Support Facilities- Pro shop/ Sports goods shop, Bar/ Restaurants, Vending booth/ Kiosk, Conference facilities, Bank extension counter, Caretaker Residence, Guest house, Golfers' temporary accommodation</p>
<p>8.4 Stadium/ Sports Training Centre/ Sports Complex Permissible uses- Stadium/ Sports Training Centre/ Sports Complex, Indoor/ Outdoor games facilities, Hostel, Swimming pool, Multilevel parking</p> <p>Support Facilities- Staff housing, Grocery shop, Sports goods shop, Personal service shop, Canteen, Vending booth/ Kiosk, Conference facilities, Bank extension counter, Caretaker Residence, Guest house, Players' temporary accommodation</p>
<p>8.5 Picnic Spot Permissible uses- Picnic huts, Camping site, Park, play Ground, landscaped garden</p> <p>Support Facilities- Restaurant/Food court/ Canteen, Vending booth/ Kiosk, Caretaker Residence</p>
<p>8.6 Indoor Stadium/ Games hall Permissible uses- Multipurpose Indoor Stadium, Indoor Games Hall, Indoor Games facilities, Swimming pool, Outdoor sports facilities, Park, Play Ground</p> <p>Support Facilities- Hostel, Canteen, Office related to sports facilities, Vending booth/ Kiosk,</p>

<p>Conference facilities, Bank extension counter, Caretaker Residence, Guest house, Players' temporary accommodation</p>
<p>8.7 Amusement / Specialised/ Theme Park Permissible uses- Amusement/ Specialised/ Theme Park, Play Ground</p> <p>Support Facilities- Restaurant/ Food court/Canteen, Vending booth/ Kiosk, Bank extension counter, Indoor games, Retail shop, Caretaker Residence</p>
<p>8.1 Recreational Club/Swimming pool Permissible uses- Recreational Club, Swimming Pool, Indoor/Outdoor games facilities, Park, play Ground</p> <p>Support Facilities- Restaurant/ Food court/ Canteen, Vending booth/ Kiosk, Caretaker residence, Library, Bank extension counter,</p>
<p>8.9 Museum cum Auditorium/Conference hall/ Art Exhibition Gallery Permissible uses- Museum cum Auditorium/Conference hall/ Art Exhibition Gallery, Open air theatre, Multilevel Parking</p> <p>Support Facilities- Canteen, office, Vending booth/ Kiosk, Caretaker residence, Library, Bank extension counter,</p>
<p>8.10 Open Air Theatre Permissible uses- Open Air Theatre,</p> <p>Support Facilities- Canteen, Office, Vending booth/ Kiosk, Caretaker residence,</p>
<p>8.11 National Memorial Permissible uses- National Memorial,</p> <p>Support Facilities- Canteen, Office, Card/gift shop, Vending booth/ Kiosk, Caretaker residence.</p>
<p>8.12 Sports City Permissible uses- All kinds of Indoor/ Outdoor sports Facilities, Training centre, Swimming pool Complex</p> <p>Support Facilities- Hostel, Staff housing, Guest house, Office, Retail shops of grocery, sports goods, Chemist, Restaurant/ Food court/ Canteen, Vending booth/ Kiosk, Caretaker residence, Library, Bank extension counter, Players' temporary accommodation</p>
<p>9 Agriculture</p>
<p>9.1 Orchard/ Plant nursery/ Social forestry Permissible uses- Orchard/ Plant nursery/ Social forestry</p> <p>Support Facilities- Shop selling seeds, Plants , gardening equipment, Vending booth/ Kiosk, Caretaker residence (all structures shall be temporary in nature)</p>
<p>9.2 Farm House Permissible uses- Farm house</p> <p>Support Facilities- Caretaker residence</p>
<p>9.3 Dairy Farm/ Poultry Farm Permissible uses- Dairy Farm, Poultry Farm Support Facilities- Caretaker residence</p>
<p>9.4 Agriculture Equipment workshop/ service centre Permissible uses- Agriculture Equipment workshop/ service centre Support Facilities- Spare parts shop, Repair shop</p>

Note:

1. Maximum 25% of permissible FAR may be allowed to be used for support facilities.
2. Support facilities mentioned below are permissible in all use premises mentioned from 2.0 to 7.0 (unless otherwise specifically prohibited by the Authority in any premise)
 - a. *Guard/ Chowkidar residence*
 - b. *ATM*
 - c. *PCO*
 - d. *Open parking, Covered parking*
 - e. *Public conveniences*
 - f. *Helipad*
 - g. *Public facilities and utilities(Post office counter, Post office ,Post and Telegraph office, Police Post, Police Station, Fire post, Fire Station, Telephone exchange, RLU/RSU, Electric Sub-station, Sewage Treatment plant, Sewage pumping station, Water works, Underground Reservoir, Water treatment plant)*
 - h. *Satellite wireless telecommunication centre or tower,*
3. In addition to the permissible activities mentioned above, if any other uses have been permitted in earlier schemes, allotment or lease conditions prior to these regulations, the same uses shall continue to be permissible unless otherwise specially prohibited under special circumstances, if any by the Authority in any particular scheme.

7.5 SUB DIVISION OF REGULATIONS

The Sub division of land with a view to prepare a layout plan is done for a sector or area, which is designated primarily for a specific main use or activity already specified as per the Master Plan. The objective of regulations detailed herein is to guide the preparation of layout plans for use areas. These regulations include norms for provisions of circulation system, open spaces, and facilities. The service plans corresponding to these layout plans for provisions of physical infrastructure like water supply, sewerage, drainage, power, telecom, gas and solid waste management etc. shall conform to the norms framed by the Authority from time to time.

7.5.1 Residential Use Areas

The sub-division of this use areas shall be governed by the provisions stated below:

- This use areas will have plotted development or flatted development or group housing or a mix of both or all as per the scheme.
- Green and Open Spaces-
 - The minimum area required under green and open space for tot-lots, parks and playground shall be in accordance with the provisions of building regulations.
 - Area under Master Plan green areas shall not be included in the area under green and open spaces of the scheme or sector.
 - The minimum average width of the green and open space shall be 7.5m. The green and open spaces can be of varied shapes provided they fulfill the recreational need of the community.
 - The landscape plan shall be prepared and submitted in accordance with the provisions of building regulations.
- Roads-
 - i. The minimum Right Of Way of a vehicular road shall be 12 m. However in situations where the road adjoins a park or any open space with building only on one side, it may have a minimum width of 9 m.
 - ii. The roads shall have minimum width depending on the length of the road as follows-
 - a) Up to 200.0m. - 9.0m.
 - b) 201-400.0m. - 12.0m.
 - c) 401-600.0m. - 18.0m.
 - d) 601-1000.0m.- 24.0m.
 - e) Above 1000.0m.- 30.0 m.
 - (iii) The minimum width of loop street shall be 9.0 m. and maximum length 400 m.
 - (iv) Maximum length of a 9.0m. wide dead end road shall be 100.0m. The road shall be provided with a cul-de-sac of 7.5m. radius at the dead end. Roads of less than 25m. length, cul-de-sac will not be required
- The provisions for rainwater harvesting shall be in accordance with the provisions of Building Regulations or as per the policies of the State Government issued from time to time.
- Provision of Social and Physical Infrastructure –
In addition to the provisions regarding facilities in the Building regulations, the provisions of other facilities shall be made as per the following standards-

Sl. No.	Use Premises	Service Population Per Unit	Unit Area in Ha
A	Educational Facilities		
1.	Integrated school with hostel facility Class I to XII) /Inter	1lakh	2.0

	college		
2.	School for handicapped	1 lakh	1.0
3.	Technical Education Centre to include one industrial training institute and one polytechnic	10 lakh	2.0
4.	University	5 lakh	20.0
5.	Engineering/ professional college	1 lakh	2.0
6.	Medical college	10 lakh	10.0
B	Health Care Facilities		
1.	General hospital	2.5lakh(500 beds)	4.0
2.	Polyclinic with observation beds	50000	0.2
3.	child welfare and maternity centre	50000	0.1
4.	Veterinary hospital	5 lakh	0.2
C	Socio-Cultural/ recreational Facilities		
1.	Music, dance and drama centre	1lakh	0.5
2.	Meditation and spiritual centre	1lakh	0.5
3.	Socio-cultural centre	5lakh	4.0
4.	City sports centre	10 lakh	20.0
5.	Zonal sports centre	1 lakh	8.0
D	Miscellaneous		
1.	LPG Godown	40-50000	0.1
2.	Police Station	1 lakh	1.5
3.	Fire Station/	4lakh 10 km radius	1.25
4.	Sub-fire station	1 -2.5 lakh,1-3km. radius	0.5
5.	Telephone exchange	10 lakh	0.4
6.	Head Post Office	1 lakh	1.0

Note: In special circumstances the Authority may relax any of the provisions mentioned above by recording the reasons for the change. The Allottee or developer may be allowed to have higher provisions for the facilities and services in a particular scheme.

7.5.2. Non Residential Use Areas

The sub-division of these use areas shall be governed by the provisions stated below:

- These use areas will have plotted development or flatted development or both as per the scheme.
- Green and Open Spaces-
 - a) 8% to 10% of the total area of a non-residential sector/area shall be provided as green and open spaces for parks and playgrounds.
 - b) Area under Master Plan green areas shall not be included in the area under green and open spaces of the sector/area.
 - c) The landscape plan shall be prepared and submitted in accordance with the provisions of building regulations.
- Roads-
 - (i)The roads shall have minimum width depending on the length of the road as follows-
 - a) Up to 200.0m. - 12.0m.
 - b) 201-400.0m. - 18.0m.
 - c) 401-1000.0m. - 24.0m.
 - d) Above 1000.0m. - 30.0m.

(ii) The width of other roads shall be in accordance with the width specified in Master Plan.

- The provisions for rainwater harvesting shall be in accordance with the provisions of Building Regulations or as per the policies of the State Government issued from time to time.

Activities / Uses	Abadi.	Resd.	Comm.	Whole.	Ind.	PZ.	Insti.	Facility	Trans.	Rec.Gr	Park	Green	Agri
1	2	3	4	5	6	7	8	9	10	11	12	13	14
9 Agriculture													
9.1 Orchard/Plant nursery/Social Forestry													
9.2 Farm house													
9.3 Dairy farm/poultry farm													
9.4 Agricultural equipment workshop/service centre													
10 Floating uses													
10.1 Residential													
10.2 Commercial		1			1	1	1						
10.3 Public and semi public facilities													
10.4 Transportation													
10.5 Industry													
10.6 Recreational													
<p>Note 1. These Zoning regulation shall be applicable for planning of Land uses at the Master Plan/ Sector Plan Level.</p> <p>2. The Authority may decide the activities to be permitted in Special Projects.</p> <p>3. Activities in SEZ shall be permitted as per SEZ policy.</p> <p>4. Activities already permitted in the various schemes shall continue as per the terms & conditions specified in the scheme.</p> <p>5. Commercial Activities in other land uses shall be permitted on the basis of impact fee or additional reserve price as decided from time to time by the Authority.</p> <p>6. Non Residential activities in the Village abadi/abadi extension shall be permitted only on 12.0mtr. or more wide roads.</p> <p>Conditions :-</p> <p>1. In Planned Designated Commercial Plot/ Area</p> <p>2. Only for the products of Industry/factory.</p> <p>3. Only on 30Mtr. or more wide roads/Plots earmarked by Noida.</p> <p>4. Planned / Designated Plots.</p> <p>5. Planned commercial or facility or institutional Plots.</p> <p>6. The Authority may allow maximum 30 percent of permissible F.A.R. for residential activities in the commercial plots of 4 hectare and above size, but the rate applicable on the total plot shall be that of the commercial land.</p> <p>7. * The Authority shall determine landuse pattern, mix of permissible activities like residential, commercial etc., Planning norms & other required conditions in the scheme as required from time to time for the development of sports city project. However, minimum 70 percent land shall be used for sports and related facilities. Unutilized part of F.A.R. in the 70 percent area, after providing all the required sports and related facilities, shall be allowed for residential purpose.</p>													