



THE ASSAM GAZETTE

অসাধাৰণ

EXTRAORDINARY

প্ৰাপ্ত কৰ্তৃত্ব দ্বাৰা প্ৰকাশিত

PUBLISHED BY THE AUTHORITY

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No. 434 Dispur, Tuesday, 17th June, 2025, 27th Jaistha, 1947 (S. E.)

GOVERNMENT OF ASSAM

ORDERS BY THE GOVERNOR

DEPARTMENT OF HOUSING & URBAN AFFAIRS

NOTIFICATION

The 18th November, 2024

DoHUA EcF No. 393727/176.- In exercise of the powers conferred by the Sub- Section (2) and (3) of Section 10 of the Assam Town and Country Planning Act, 1959 (as amended) read with Rule 6 of the Assam Town & Country Planning (Publication of Master Plan and Zoning Regulation) Rules, 1962, the Governor of Assam is pleased to publish the following notice regarding the publication of the Final Master Plan for Sonai.

Notice for publication of the Final Master Plan for Sonai

1. It is notified that the Final Master Plan for Sonai is prepared by the Directorate of Town & Country Planning, Government of Assam and adopted by the State Government under sub section (2) and (3) of Section 10 of the Assam Town & Country Planning Act, 1959 (as amended) read with Section 6 of the Assam Town and Country Planning (Amendment) Rule, 1962 for the area described in the schedule below, is hereby published.
2. The Final Master Plan with all relevant papers and maps may be inspected free of cost during the office hours at the office of Director, Town & Country Planning, Dispur, Guwahati-6, Deputy Director, Town & Country Planning, Dist Office – Silchar, office of the Chairman, Sonai Municipal Board & Sonai Circle Office. Copies of the Final Master Plan is also available in the office of the Director, Town & Country Planning, Dispur, Guwahati-6 and Deputy Director, Town & Country Planning, Dist Office – Silchar for sale on payment.

SCHEDULE**SITUATION AND AREA :**

District	:	Cachar
Municipal Board	:	Sonai
Master Plan Area	:	30.52 Sq.Km.
Municipal Area	:	10.50 Sq.Km.

Pargana and villages included in the final Master Plan of Sonai 2041:

SL. NO.	PARGANA	NAME OF VILLAGES / MOUZAS	DAG NO.
1.	SONAPUR	TUNDURKANDI	ALL DAG NOS.
2.	SONAPUR	MAJHIRGRAM	ALL DAG NOS.
3.	SONAPUR	TULARGRAM I	ALL DAG NOS.
4.	SONAPUR	TULARGRAM II	ALL DAG NOS.
5.	BANRAJ	UTTAR MOHONPUR	ALL DAG NOS.
6.	BANRAJ	RANGIRGHAT I	ALL DAG NOS.
7.	SONAPUR	DHANIPUR	ALL DAG NOS.
8.	SONAPUR	DHANEHARI I	ALL DAG NOS.
9.	SONAPUR	DHANEHARI III	ALL DAG NOS.
10.	SONAPUR	SATKARAKANDI	ALL DAG NOS.
11.	SONAPUR	SATKARAKANDI I	ALL DAG NOS.
12.	BANRAJ	RANGIRGHAT II	ALL DAG NOS.
13.	BANRAJ	GOBINDANAGAR	ALL DAG NOS.
14.	BANRAJ	DAKSHIN MOHONPUR I	ALL DAG NOS.
15.	BANRAJ	KAJIDHAR—I	ALL DAG NOS.

DESCRIPTION OF SONAI MASTERPLAN BOUNDARIES –

North	Baghpur Pt. III, Jhanjarbali, Dungripar Pt. I, Dungripar Pt. II, Kaptanpur Pt. XVIII, Kaptanpur Pt. XVI.
South	Kajidhar Pt. II, Kajidhar Pt. III, Berabak Pt. II, Berabak Pt. III, DakhinMohonpur Pt. II, DakhinMohonpur Pt. IV.
East	Kaptanpur Pt. XVI, Rangirgaht Pt. III, Govinda Nagar Pt. I.
West	Baghpur Pt. I, Sonabarighat Pt. II, Dhanehari Pt. II.

KAVITHA PADMANABHAN,
Commissioner & Secretary to the Government of Assam,
Department of Housing & Urban Affairs.

CHAPTER – 1

INTRODUCTION TO MASTER PLAN AREA

1. LOCATION, REGIONAL SETTING, BRIEF HISTORY OF THE TOWN AND SURROUNDING:

Location:

Sonai is a town in the Cachar district which is situated in the southern part of Assam on the left bank of the Barak and Sonai River. It is located 18 km towards south from District Headquarter Silchar. The River Sonai flows through the town of Sonai joining with Barak River near Dungripar Village of Sonai. The town is well connected by Roads with other parts of the district as well as the state.

Regional Setting:

Sonai is the newest town of Cachar district, has been growing over the years both demographically as well as geographically. The town is lying in the southern part of the district and grows in its own way like most of other towns in Assam.

The boundaries of Master Plan area of Sonai are as follows –

- **North - Baghpur Pt. III, Jhanjarbali, Dungripar Pt. I, Dungripar Pt. II, Kaptanpur Pt. XVIII, Kaptanpur Pt. XVI.**
- **South - Kajidhar Pt. II, Kajidhar Pt. III, Berabak Pt. II, Berabak Pt. III, Dakhin Mohonpur Pt. II, Dakhin Mohonpur Pt. IV.**
- **East -Kaptanpur Pt. XVI, Rangirgaht Pt. III, Govinda Nagar Pt. I.**
- **West - Baghpur Pt. I, Sonabarighat Pt. II, Dhanehari Pt. II.**

Brief history of the town and surrounding:

Sonai has been declared by Government of Assam as a Municipal Area in the year 2016. As of now, there are 11 nos. of Wards in Sonai Municipal Board. The Chandragiri Park and an Archeological site, Bhuban Baba Temple of Kachari Kingdom at Shivtilla (Changutilla) near Madhab Chandra Das College (MCD College) is a famous place to visit. The Bhuban Baba Temple was probably constructed in between 12th and 13th century A.D. In the month of October during the period of lunar moon of the second day, the construction of the temple was completed and on this day the image of Siva-Parbati was placed by Maharaja Krishna Chandra in a highly pompous manner by offering worship to God Siva. This temple is older than the Siva temple of Chandragiri which is also another famous temple situated in the same revenue circle. The appearance of faces of Siva-Parbati in the Bhuban Baba temple has a similarity of the face of Mongolians. The worship before image perhaps started from 1709 A.D. In some auspicious days of every year, the special worship has been celebrated in the temple. The people coming from different places bow down their heads before the image of this renowned temple with a great dedication and devotion.

1.2 CLIMATE, TOPOGRAPHY, SOIL CONDITION:

Climate:

Climate of an area greatly affects human activities and in turn civic life & its functioning. Though the climate of Sonai town is almost similar with the Barak Valley

and Bangladesh's climate, yet some variations are noticed due to its physical features. Its main characteristics are cold winter and a moderate cold spring and fairly hot humid summer with high speed wind in between the spring and summer with lightning and thunderstorms.

Sonai has a borderline tropical monsoon climate. It presents an unpleasant climate during summer as it is hot humid. The summer season or rainy season starts from the month of April upto the month of September. During these months mean maximum temperature does not generally come below 30°C. These months can be treated as hottest month for Cachar district in each year. The high percentage moisture in the atmosphere makes the weather irritating. In the month of October, the temperature gradually comes down and night becomes quite cool and pleasant. In Cachar district the cold season start from the beginning of November when both the day and night temperature begin to fall considerably. From the last of December to January, the cold reaches the minimum degree. During this period, the daily minimum temperature generally comes below 13°C. From the end of February, the mercury level gradually goes up and in July, August and September the temperature reaches the maximum point.

The rainy season commences from the beginning of July and continues up to the last week of August but sometimes it may advance by a fortnight and extended even up to month of September. In Cachar district average monthly rainfall is found to be highest in the month of July. The floods which are so frequent in the Barak and Sonai river cause havoc in the adjoin areas and raise the riverbeds by depositing sediments carried from the upper reaches.

Topography:

The Barak and Sonai River has deposited different layers of shales and mud which have formed the hard sub-soil of the town. Apparently, it appears that the town is located on an alluvial flat plain intersected by streams. The underlying sub-soil is hard, and it forms a thick blanket of mudstone that restricts downward percolation of water. As a result, there is heavy runoff of water during the normal rainy days. The water table is very deep which affects the availability of wells here. The ponds are abundant because of less percolation of water due to hard sub-soil.

Soil Condition:

The valley in the Cachar district is under laid by semi consolidated sandstone, siltstone, shales and clay of upper tertiarate. The aquifiers are pre dominantly clays with occasional sand and fine grained soft sand stone. The water level aquifiers comprises mainly of silts and sandy clays. The soil condition is favorable for flora, which constitutes valuable timber like Cham, Sundi, Kathal, Gamari besides Bamboo cane etc. found in abundance.

1.3 CITY INFLUENCE AND ITS CHARACTERISTICS INCLUDING SETTLEMENT PATTERN:

Preparation of Sonai Master Plan is an effort to evolve scientific and rational policies which will meet functional needs of the town and to satisfy the aesthetic and

emotional aspirations of its citizens.

Since, the Sonai town is newest one, the town is not grown in full fledged like other towns of Assam. It is still in nascent stage. Moreover, Silchar, the district headquarter of Cachar is already developed and expanded which is nearly only 18 km from the Sonai master Plan area. Due to lack of employment and livelihood opportunities in Sonai town, the people are migrating to the nearest city Silchar. A portion of population is also daily commuters with Silchar for earning the livelihood. Hence, it has less scope for the town to grow until few potential infrastructure supports is provided or income generating avenues are opened.

In respect of settlement pattern in the town, it may be mentioned that initially the settlements were developed mainly in the bank of River Barak and Sonai. People belonging to Bengali Hindu, Bengali Muslim and Manipuri Muslim communities are the inhabitants of Sonai town.

Settlement pattern of Master Plan area can be divided into two categories i.e rural and urban. In urban area the settlement pattern includes isolated to group housing (R.C.C./ Assam type) in compact dense distribution and single storied to multi-storied buildings (own ownership, Apartments etc.) are found. It is noteworthy to mention that the number of RCC building is quite low and most of the houses are Assam type houses. Similarly, in case of rural area the settlement pattern is mostly Assam type / Bamboo-hut or others. Sanitary and drainage facilities are poor in large portion of habitable area.

Rural –Urban Scenario:

Sonai master plan area is slowly transforming from rural dominance to urban fabric as there is slow growth in infrastructure improvement. Economic activities in the town are sluggish and consequently it could not support or justify investment in major urban infrastructure or large scale urban project. Since, Sonai town is declared as Municipal area in 2017, the rural dominant character is still prevailing in the area. The list of town and rural areas are shown in Schedule.

History of The Physical Growth and Expansion of Town:

A clear understanding of major city functions and their impacts on the physical growth of a city is a desirable fact. Based on the previous studies, Sonai town can be inferred to hold the following major functions to decide the physical growth.

1. To function as an administrative centre holding administrative entities at Sub divisional level and below.
2. To function as a trade and commerce centre of the region.
3. To function as a transportation node being a gateway to Mizoram.

1.4 NEED FOR THE MASTER PLAN:

The main aim of preparation of Master Plan of Sonai is to develop an urban environment and to meet the future requirements for its inhabitants. This plan will help for orderly development or in a balanced manner within the jurisdiction of the planning area. Moreover, sufficient care has been taken to assess the short coming of the existing situations and has laid certain guidelines and proposals.

The need for Master Plan is to achieve balanced physical and socio-economic

development and to create healthy environment for promoting future growth. However, the Master Plan of Sonai has to be worked out with respect to the major determinants like the future space need for each major land use activities, the buildable space that is available within the developed area and within the planning area. The distributions of this future need of additional activities in relation to the present land use pattern and in relation to the regional nuts and for their proper inter-relationship as well as the desirable land use relations among the future additional activity patterns. The distribution of these activities are required to be meaningful only to the extent suitable linkage may be developed among them, which is largely governed by present regional flow of goods and people interaction with the other activity and availability of space for developed linkage network.

CHAPTER 2

DEMOGRAPHY

2.1. Total population, male/female population, population growth rate, population density, sex ratio, literacy (Total- male-female rate), working population and non-working population, SC-STpopulation etc.:

A. Population:

As per the year 2011 census report, the population of Sonai master plan area is 34975. The percentage decadal growth for 2001-2011 was 18%. The population of Sonai Master plan area may be projected at 39,733 in the year 2021, 45516 in the year 2031 and 50136 in the year 2041.

Population of Sonai municipal area in 2011 was 17686 persons. The population is projected to be 19962 persons in the year 2021, 22114 persons in the year 2031 and 24292 persons in the year 2041 within the municipal area.

B. Male/Female population, population growth rate, population density, sex ratio, literacy:

Out of total population of 17686 persons in 2011 in Sonai town, male population is 8963 and female population is 8723. The growth rate of population of Sonai town is 16%. The sex-ratio of Sonai town is around 972 compared to 958 which is average of Assam state. Similarly, the literacy rate of Sonai is 67.33% out of which 71.91% males are literate and 62.63% females are literate.

Simultaneously, out of total population of 34975 persons in Sonai master plan area in 2011, male population is 17781 and female population is 17194. Population growth rate of the Sonai master plan area is 18% per decade. Density of population is 1147 persons per Sq Km. The sex ratio are 969 female against 1000 male and literacy percentage of male and female are 53% and 46% respectively.

C. Working and non-working population, SC/ST population:

Out of total population of 146003 persons in Sonai master plan area, the number of working population is 49816 only and that of non-working population is 96187. Out of total population of 56859 in Sonai municipal area, there are working population of 20853 persons and non working population of 36006 persons. Proportion of SC and ST population in Municipal area and Master plan areas in 2011 is as below.

Areas	SC population	ST population
Municipal Area	2263	Nil
Master Plan Area	3358	Nil

2.2 Migration population:

The figure of migration is a meager one due to the existence of a greater urban area named Silchar, the district headquarters of Cachar, having more opportunity of employment and tempting the unemployed people of the rural areas of nearby areas and adjoining districts. The distance of Sonai town from Silchar town is only 18 kilometres. The growth of population and related migration in this strategically located town is comparatively restricted.

due to the following reasons:

1. Due to the existence of a greater urban area named Silchar.
2. Lack of higher degree of educational, medical and health infrastructures.

2.3 Household density and size:

Household density is mostly thin and scattered distribution could be seen over the Master Plan area. In general household size varies from 4 to 9. Average household size is 5.

2.4 Population projection up to 2041:

Population projection up to 2041 is shown in the table mentioned below:

A. Incremental Increase Method:

This method is modification of arithmetical increase method and it is suitable for an average size town under normal condition where the growth rate is found to be in increasing order. While adopting this method the increase in increment is considered for calculating future population. The incremental increase is determined for each decade from the past population and the average value is added to the present population along with the average rate of increase.

Hence, population after n^{th} decade is $P_n = P + n.X + \{n(n+1)/2\}.Y$

Where, P_n = Population after n^{th} decade

X = Average increase

Y = Incremental increase

Population Projection Table-1

(Incremental Increase Method)

Year	Sonai Town	Sonai Master Plan area
1991	12928	23740
2001	14851	28667
2011	17686	34975
2021	20977	41524
2031	23812	47652
2041	26647	53781

B. Geometric Progression Method:

The above population projection is calculated using Geometric Progression Method. In this method, the percentage increase in population from decade to decade is assumed to remain constant. Geometric mean increase is used to find out the future increment in population.

The population at the end of n^{th} decade ' P_n ' can be estimated as:

$$P_n = P(1 + IG/100)^n$$

Where, IG = Geometric mean(%)

P = Present population, n = No. of decades.

Population Projection Table-2

(Geometric Progression Method)

Year	Sonai Town	Sonai Master Plan area
1991	12928	23740
2001	14851	28667
2011	17686	34975
2021	18848	37352
2031	20086	43044
2041	21406	45248

C. Arithmetic Increase Method:

This method is suitable for large and old city with considerable development. If it is used for small, average or comparatively new cities, it will give lower population estimate than actual value. In this method, the average increase in population per decade is calculated from the past census reports. This increase is added to the present population to find out the population of the next decade. Thus, it is assumed that the population is increasing at constant rate.

$P_t = P_o + mt$ where m = population growth rate

P_t = Population at time t .

P_o = Initial Population

t = time in decades

Population Projection Table-3

(Arithmetic Increase Method)

Year	Sonai Town	Sonai Master Plan area
1991	12928	23740
2001	14851	28667
2011	17686	34975
2021	20065	40323
2031	22444	45851
2041	24823	51379

D. Projected Population Upto 2041:

The population forecasting has been done using the above three methods. It is under standable that none of the methods are empirical and they are based on probability. The average of the population forecasted based on these three methods is taken into consideration of Sonai Master plan.

Year	2021	2031	2041
Arithmetic Mean	40323	45851	51379
Incremental Mean	41524	47652	53781
Geometric Mean	37352	43044	45248
Average	39,733	45516	50136

Similarly, the projected population of Sonai Municipal Area can be derived through calculating the average of population that forecasted using three above mentioned method.

Year	2021	2031	2041
Arithmetic Mean	20065	22444	24823
Incremental Mean	20977	23812	26647
Geometric Mean	18848	20086	21406
Average	19962	22114	24292

CHAPTER -3

ECONOMIC BASE AND EMPLOYMENT

3.1 Formal Sector:

Sonai town being, a small sized urban center does not have larger proportion of employment in formal sector. Being a small town, service sector employment is dominant under formal sector. It has a population of 10306 persons as working population, of which 8381 are main workers and 1945 are marginal workers as per census 2011. Main workers are mostly in formal sector. In the Master Plan area the working population will be around 29.47%. Out of this working force, the engagement in the formal sector will be 81.32% of total workers.

3.2 Informal Sector:

The town as well as the adjoining rural areas included in the Sonai master plan area has a very poor involvement in Informal sector. The road side vending, hawkers in trains, buses are the major activities in informal sector in the urban area. In case of rural areas within the master plan area, the informal sector activity is primarily on partial employment on agriculture and allied activities.

3.3 Occupational pattern:

Major share of occupation is in tertiary sector in the planning area. The working classes in the town are mostly in service sector and a portion in trade and commerce. However, around 60% of working population in rural areas of planning area are in agriculture and allied activities. Out of total population as per 2011 census i.e. 34975, there is 10306 nos. of persons are participated in total workforce. It is 29.47% of total population. Table showing list of activities of working population in 2011 in Sonai Master Plan area is as below:

Total worker	Main worker	Marginal worker
10306	8381	1945

CHAPTER 4

HOUSING AND SHELTER

4.1 Housing scenario:

In Sonai town area, the physical condition of housing is satisfactory, about 20% are RCC building and 70% are Assam type/semi pucca/wooden structure and rest are in hut like kutcha structure in slum like environment. Physical condition of Housing structures in surrounding villages included in the master plan is in mixed pattern of RCC and semi Pucca houses with very low proportion of kutcha houses. The pattern represents scatteredly distributed low density development of houses.

Existing land use for Residential purpose is nearly 21% of planning area (5.86sqkm). The residential areas are scattered in patches all over the master plan area except municipal area of the planning area. The narrow roads, inadequate drainage, improper setback within the plot boundary form the scenario of infrastructure in most of the old residential areas.

4.2 Housing supply mechanism (self/private Builders & developers/govt. housing schemes):

There are no any government housing colony/residential quarters within master plan area. Group housing and Apartment housing are not yet a common trend. Most of the houses are in individual private ownership and rests are rented tenants. A portion within town area and surrounding are squatters and in slum like environment. Housing supply is less than the demand leading to few areas of kutcha housing within sanitary condition.

4.3 Housing condition, Type of Structure, Household facilities available, availability of kitchen, Latrine, Bathroom, Drainage:

Shelter is one of the basic human needs and its conditions greatly affect the character of human life. It is one of the burning problems of the present day's urban areas. Though in Sonai planning area shortage of housing is not the major problem but the type of house, housing condition, basic need related to housing like drinking water, sanitation, garbage disposal etc. do not conform to norms. There is total absence of neighborhood structure in the planning area.

Around 70% of total housing structures have appropriate facility of kitchen, sanitary condition and internal drainage.

4.4 Slum-squatters and informal housing share, including list of all slums and informal housing localities in MP area and marking location on map:

There are no formal and informal slum pockets in and around the urban area. There are poverty prone areas having kutcha houses in dilapidated condition in slum like physical environment.

4.5 Housing stock, shortage and need assessment:

At present, there is total 7947 (based on projected population of 2021) number of household within master plan area. Considering the existence of informal slum pockets with kutcha houses in uninhabitable physical environment, the tenants, the squatters and the congested pucca houses, the requirement of houses within master plan area including municipal area will be around 455(U)+ 2042(R) i.e. approx 2497 numbers in 2041.

In order to plan Affordable Housing project for urban poor, an area of 198 bighas has been delineated in the residential zone in village Kajidhar Part I. It is proposed to implement TDR (Transferable Development Right) policy in pooling private land from owner and private developer. The proposed widened road to be used for effecting TDR policy.

CHAPTER 5

TRANSPORTATION

5.1 Network of roads (NH, SH, District roads etc) with averageroad width:

The length of Major District Road in Sonai Master Plan area is approx 12.474 kms with average width of 24 ft. There are various categories of roads within the Master Plan area, viz MDR, Other District Roads, Town lanes and Village Roads.

The Existing and proposed network of roads in respect of Other District Roads, Village Roads, etc. with average road width are listed below as per data and physical survey done.

Sl No.	Name of Road	Existing length	width (feet)
1	DHANEHARI MARKET TO 472 NO.SATKARNADI L.P SCHOOL ROAD VIA UTTAR DHANAHARI JAME MOSQUE	2.240 km	12
2	DHANEHARI MARKET TO DHANEHARI LP SCHOOL ROAD VIA 121 NO.DHANEHARI LP SCHOOL	0.361 km	12
3	DHANEHARI MARKET TO ONGC OFFICE(SILCHAR ROAD)	0.499 km	24
4	DHANEHARI MARKET TO DHANEHARI LP SCHOOL ROAD VIA 121 NO.DHANEHARI LP SCHOOL	0.206 km	12
5	DHANEHARI MARKET TO 472 NO.SATKARNADI L.P SCHOOL ROAD VIA UTTAR DHANAHARI JAME MOSQUE	0.151 km	12
6	ONGC OFFICE TO BAROHALI MARKET (SILCHAR ROAD)	0.402 km	24
7	DHANEHARI MARKET TO DHANEHARI LP SCHOOL ROAD VIA 121 NO.DHANEHARI LP SCHOOL	1.147 km	12
8	DHANEHARI PART-III VILLAGE ROAD	0.536 km	12
9	DOKHIN MOHONPUR PART - I VILLAGE ROAD	0.519 km	12
10	DOKHIN MOHONPUR PART - I VILLAGE ROAD	1.792 km	12
11	DOKHIN MOHONPUR PART - I VILLAGE ROAD	0.084 km	10
12	SRIKALI TEMPLE TO 124 NO.GOBINDA NAGAR L.P SCHOOL ROAD	0.562 km	10
13	GOVIND NAGAR JALL JEEVAN MISSION TO GOVIND NAGAR ME SCHOOL ROAD	0.267 km	12
14	JUBATI SINGHA MONIPUR H.S TO KABUGANJ ROAD	1.200 km	24
15	BAROHALI MARKET TO SONAI MAIN MARKET(SILCHAR ROAD)	0.653 km	24
16	BAROHALI MARKET TO SONAI MAIN MARKET(SILCHAR ROAD)	0.326 km	24
17	BAROHALI MARKET TO SONAI MAIN MARKET(SILCHAR ROAD)	0.532 km	24
18	AMJUR NEW BRIDGE TO 455 NO.RANGIRGHAT LP SCHOOL ROAD VIA SONAI PETROL PUMP	1.231 km	24
19	RANGIRGHAT PART-II VILLAGE ROAD	0.286 km	12
20	455 NO-RANGIRGHAT LP SCHOOL TO MOTINAGAR ROAD VIA TANGNARPAR MARKET	1.533 km	24

21	455 NO-RANGIRGHAT LP SCHOOL TO MOTINAGAR ROAD VIA TANGNARPAR MARKET	0.186 km	24
22	DHANEHARI MARKET TO 472 NO-SATKARNADI L.P SCHOOL ROAD VIA UTTAR DHANAHARI JAME MOSQUE	0.678 km	12
23	472 NO-SATKARNADI L.P SCHOOL TO BAROHALI POINT ROAD VIA SATKARNADI HIGH SCHOOL	1.347 km	12
24	ONGC OFFICE TO BAROHALI MARKET (SILCHAR ROAD)	1.075 km	24
25	SONAI MAIN MARKET TO JUBATI SINGHA MONIPUR H.S ROAD	0.839 km	24
26	SONAI MAIN MARKET TO AMJUR NEW BRIDGE ROAD VIA MOTINAGAR AUTO STAND	0.860 km	24
27	SWAMI BIBKA NANDA SCHOOL TO TULARGRAM LP SCHOOL ROAD	0.652 km	10
28	BAROHALI MARKET TO SONAI MAIN MARKET(SILCHAR ROAD)	0.701 km	24
29	JUBATI SINGHA MONIPUR H.S TO KABUGANJ ROAD	1.886 km	24
30	SHIVTILA GOVT. LP SCHOOL TO CHANDRAGIRI VANA UDYAN ROAD	0.244 km	12
31	472 NO-SATKARNADI L.P SCHOOL TO BAROHALI POINT ROAD VIA SATKARNADI HIGH SCHOOL	1.451 km	12
32	BAROHALI MARKET TO SONAI MAIN MARKET(SILCHAR ROAD)	0.551 km	24
33	AMJUR NEW BRIDGE TO RANGIRGHAT PURANA MOSQUE ROAD VIA RANGIRGHAT ME SCHOOL	0.935 km	12

5.2 ROAD OVERVIEW OF SONAI MASTER PLAN AREA (VILLAGE AREA PWD ROADS)

There are 3 nos. of roads which are main entry way of Sonai from different locations of the district. These 3 roads have to be upgraded to double lane in near future to manage the traffic congestion. These connecting roads in the master plan area have been proposed in Circulation plan as follows:

1. Sonai Sonabarighat – Length – 8KM
2. Sonai Kabuganj – Length – 7KM
3. Sonai Motinagar – Length - 7KM

5.3 Bus/Transport Terminals: Bus Terminus, Bus parking bays, major bus stops, on-street parking areas and infrastructure:

There is 1 nos. of bus terminus at Sonai Chowk near Sonai Police station. There are 5 nos. of stand for auto-rickshaw and other light vehicles in different location within Sonai town. These locations are shown in the circulation map. Besides, bus/truck terminus, stand for light vehicles have been proposed near the major roads.

Other infrastructures like street lights, petrol/diesel stations, etc. were proposed all along major roads within Master Plan area. A parking bay has been proposed at Majhirgram near SBI bank. All these proposals are shown in the circulation map.

5.4 Freight zones and Logistics: Truck terminal, load/unloading areas, warehousing, feeder transport services:

There is no truck terminal in town area. Since, the town is small in area and its growth at nascent stage, there is less opportunity for trade and commerce. So there is no truck terminus still exist. But in near future, the town will require a truck terminus to manage the traffic as well as for unloading the goods.

5.5 Footpaths (minimum 2 metre wide) and Bicycle tracks:

There are existing footpaths of 1/1.5 widths within the master plan area and mostly within the urban area. The bicycle track is yet to be provided in the roads of Sonai urban area.

5.6 Parking:

Existing on-street and proposed for major commercial, institutional areas and transit areas like train & bus stations and ferrystops:

Few on street parking areas have been proposed in government institutional areas which also cover few commercial areas. All major commercial establishments like wholesale trading, go-down etc will have their own parking areas.

5.7 Areas with major traffic congestion and parking issues, accident prone area:

The major traffic congestion area is at Rotary point, Silchar-Sonai Road in town area. Accident prone area is Silchar Road where unauthorized on street parking is the main cause. Parking areas are provided in transit area like Market area, private bus stand etc.

5.8 Improvement of Rotary and Junctions:

Four number of Road junctions within town area have been identified and physical features have been surveyed. One such important junction is at Kabuganj-Sonai Road, where Silchar-Sonai road and Sonai Bazar Road adjoined. The following junctions have been proposed and shown in plan at the proposed Circulation map.

1. Dhanehari Market Junction.
2. Sonai Town Junction.
3. Choudhury Junction (Near Amjur Bridge).
4. Kajidhar Market Junction.

5.9 Street lighting and proposed improvement plan:

There are very few street lights installed in Sonai town. The Sonai Municipal Board has proposed 3000 nos. of street light in the town as well as in the master plan area.

5.10 Signage, availability and requirement:

There are signages in few locations all along the State Road crossing through the Master Plan area. More signage in all the important roads are to be installed.

5.11 Major proposals:

A site for Bus Terminus has been proposed within the master plan area in mouza Dhanehari Part – I near ONGC gas station (Silchar-Sonai Road) which is shown in the circulation map. Similarly, a site for truck bay has been proposed nearby the Bus Terminus in Satkarakandi Part II which is also shown in the Circulation map. 1.5 meter width footpath along three major roads have been proposed i.e Sonai Silchar Road, Sonai Kabuganj Road and Sonai Motinagar Road. Sumo bays and bus stoppages at different locations along these three major Roads have been proposed and shown in Circulation map. A new foot bridge has been proposed at Uttar Mohon Pur Part I was asked by the general public in the Public Representative meeting.

Connections to missing road linkages, upgradation of existing town roads and few new roads have been proposed and shown in dotted line in Circulation map all over the Master plan area. A new bridge over river Amjur has been proposed in mouza Gobinda nagar Part – II of Master Plan area.

Following are the proposed width of various categories of roads within master plan area:

Sonai- Silchar Road-----15 metres
Sonai Kabuganj – 15 metres

Sonai Motinagar – 15 metre
 All other Major Roads-----8 metres
 All remaining Town and Village roads-----3.6 metres.

Apart from proposed green belt area along river bank, plantation along edge three major roads through Social Forest division has been proposed. The peripheral road land to be used for these three roads---

1. Sonai Sonabarighat – Length – 8KM
2. Sonai Kabuganj – Length – 7KM
3. Sonai Motinagar – Length - 7KM

Apart from all the above proposed roads, following village roads has been proposed which are shown in the Circulation maps.

Sl. No.	Name of the Road	Length	Remarks
<i>Proposed for Widening:</i>			
1.	Uttar Mohonpur Village Road	0.607 KM	Widened to 8 mts
2.	Dhanehari Part – III Village Road	0.763 KM	Do
3.	Kajidhar Part – I Village Road (3 parts of Roads)	1.103 KM	Do
4.	Lp School To Dhanehari Part-Iii Village Road	0.763 KM	Do
5.	Dhanehari Part-I	0.231 KM	Do
6.	Tundurkandi Village Road	0.213 KM	Do
7.	Dhonipur	0.570 KM	Do
8.	Tulagram Part-Ii Village Road	0.421 KM	Do
9.	Rangirghat Part-I	0.178 KM	Do
<i>Proposed connecting Roads at different Mouzas:</i>			
1.	Tundurkandi Village Road	0.405 KM	8 mts width
2.	GovindNagar Part II Village Road	1.841 KM	Do
3.	DakhinMohonpur Part – I Village Road	1.706 KM	Do
4.	Kajidhar Part – I Village Road (5 parts of Roads)	4.504 KM	Do
5.	Dhonipur Village Road	0.908 KM	Do
6.	Dhanehari Part-I	1.218 KM	Do
7.	Majirgram	0.792 KM	Do
8.	Tulagram Part-II Village Road	0.722 KM	Do

CHAPTER 6

INFRASTRUCTURE, PUBLIC UTILITIES & SERVICES

6.1 Physical infrastructure: overview of each sub-sector current status, issues and proposals in consultation with the Executive Engineer of D&S Division:

i. Water supply system:

Sonai town has water supply scheme for urban area and rural area which are being run by state Public Health Engineering Department (PHE). As per data given by PHE department there are seven (7) nos. of water supply scheme within the town and the proposed master plan area. There are approx. 3510 nos. of house coverage of water supply within the town and the master plan area and total water consumption of water is 1.37 MLD. Daily water supply is being covered in town area and surrounding few rural areas by PHE.

There are total seven(7) nos of water supply scheme in existence within the town and the proposed master plan area-

Sl No.	Name of Water Supply Schemes
1	Satkarakandi Pt-II WSS
2	Dhanipur WSS
3	Tulargram (Swajaldara) WSS
4	Tulargram Gangpar Pt-IIWSS
5	Sonai WSS
6	Rangirghat WSS
7	Tulargram Pt-IIWSS

Considering the projected population of 2041 and for providing water supply to all the households within the master plan area the demand for water will be-
 $32586 \text{ (persons)} \times 135 = 4.39 \text{ MLD}$

ii. Drainage system:

Sonai town has no proper drainage network which needs proper improvement in near future because of the population growth and changes in the physical environment. The implementation of a Storm Water Drainage project is of urgent need which can take care of proper drainage system in major part of the town.

The existing drainage network of Sonai town is as follows-

Sl No	Width (Ft.)	Name	Drain_Type	Condition	Slab_Status	Length
1	2	MARKET AREA	MAJOR ROAD	DAMAGE	COVERED	0.083 km

2	3	MARKET AREA	MAJOR ROAD	DAMAGE	COVERED	0.091 km
3	3	ONGC FRONT SIDE DRAIN	PRINCIPAL ROAD	WORKING	UNCOVERED	0.174 km
4	4	SONAI TOWN TO KABUGANJ	PRINCIPAL ROAD	WORKING	COVERED	0.232 km
5	4	SONAI TOWN TO MOTINAGAR AUTO STAND	PRINCIPAL ROAD	WORKING	COVERED	0.345 km
6	4	SONAI TOWN TO MOTINAGAR AUTO STAND	PRINCIPAL ROAD	WORKING	COVERED	0.378 km
7	4	SILCHAR TO SONAI TOWN	PRINCIPAL ROAD	WORKING	COVERED	0.863 km
8	4	SILCHAR TO SONAI TOWN	PRINCIPAL ROAD	WORKING	COVERED	0.870 km
9	2	MARKET AREA	MAJOR ROAD	WORKING	COVERED	0.115 km
10	4	SONAI TOWN TO KABUGANJ	PRINCIPAL ROAD	WORKING	COVERED	0.210 km
11	4	NGHS PLAY GROUND FRONT	PRINCIPAL ROAD	DAMAGE	COVERED	0.061 km
					TOTAL LENGTH	3.422

However, considering the storm water drainage facility for total master plan area, a fresh drainage project has been proposed in utility map (storm water drainage) of this master plan. A DPR under new physical project/ mission like AMRUT/CIDF/Savings Fund of other project may be prepared and submitted to the government by the implementing agency. The proposed drainage location has been shown in proposed master plan map (Infrastructure/ drainage).

SL NO	WIDTH	ROAD NAME	ROAD TYPE	DRAIN LENGTH
1	0.4 M	AMJUR NEW BRIDGE TO RANGIRGHAT 1 NO ZAMA MOSQUE VIA RANGIRGHAT PURANA MOSQUE	MAJOR ROAD	1.691 km
2	0.4 M	AMJUR NEW BRIDGE TO UTTAR MOHANPUR ZAMA MOSQUE ROAD VIA OLD GP OFFICE	MAJOR ROAD	0.839 km
3	0.4 M	DOKHIN MOHONPUR PART - I VILLAGE ROAD	MAJOR ROAD	2.732 km
4	0.4 M	DHANEHARI MARKET TO BAROHALI POINT VIA SATKARNADI HIGH SCHOOL	MAJOR ROAD	5.827 km
5	0.4 M	SATKARAKANDI HIGH SCHOOL TO SONAI TOWN VIA RIVER SIDE RING ROAD	MAJOR ROAD	3.113 km
6	0.4 M	SADBHAWAN MANDAP TO SHYAMAKALI TEMPLE VIA ABDUL KALAM LP SCHOOL	MAJOR ROAD	0.750 km

7	0.4 M	DHANEHARI MARKET TO TOWARDS DHANEHARI LP SCHOOL ROAD VIA 121 NO DHANEHARI LP SCHOOL	MAJOR ROAD	2.251 km
8	0.4 M	KAJIDAHAR MARKET TO KAJIDAHAR ME SCHOOL ROAD	MAJOR ROAD	1.693 km
9	0.4 M	SILCHAR MAIN ROAD TO MEDICAL ROAD VIA BHAIRAB TEMPLE(TULARGRAM PT-II)	MAJOR ROAD	1.437 km
10	0.4 M	455 NO RANGIRGHAT LP SCHOOL TO 122 NO RANGIRGHAT LP SCHOOL VIA GOBINDNAGAR VILLAGE	MAJOR ROAD	2.990 km
11	0.4 M	TULARGRAM PART-I VILLAGE WARD-II ROAD	MAJOR ROAD	0.250 km
12	0.4 M	TULARGRAM PART-I VILLAGE WARD-II ROAD	MAJOR ROAD	0.262 km
13	0.4 M	BAROHALI MARKET TO DHONIPUR LP SCHOOL ROAD	MAJOR ROAD	1.252 km
14	0.4 M	MAJIRGRAM MARKET TO DHONIPUR MOSQUE ROAD	MAJOR ROAD	0.866 km
15	0.4 M	KAJIDAHAR MARKET TO SWAMI BIBEKA NANDA SCHOOL TULARGRAM LP SCHOOL	MAJOR ROAD	4.352 km
16	0.4 M	NOOR ACADEMY TO SBI POINT VIA BAROHALI MARKET (SILCHAR ROAD)	MAJOR ROAD	0.000 km
17	0.4 M	SONAI MAIN MARKET TO SONAI MULTI PURPOSE HALL	MAJOR ROAD	0.107 km
18	0.4 M	SONAI MARKET SQUARE	MAJOR ROAD	0.066 km
19	1 M	MOTINAGAR ROAD AUTO STAND TO 455 NO RANGIRGHAT LP SCHOOL ROAD VIA SONAI PETROL PUMP	PRINCIPAL ROAD	3.460 km
20	1 M	SONAI JUNIOR COLLEGE TO KABUGANJ (MEDICAL ROAD)	PRINCIPAL ROAD	3.580 km
21	1 M	NOOR ACADEMY TO SBI POINT VIA BAROHALI MARKET (SILCHAR ROAD)	PRINCIPAL ROAD	3.882 km
			TOTAL LENGTH	41.4 KM

iii. Sanitation:

All aspects related to sanitation in urban areas are now being taken care of under Swachh Bharat Mission. Both ULB and PHE department have been engaged in day to day activities and programme under Swachh Bharat Mission. As per data given by PHE there are two sanitary facilities within the town and the proposed master plan area-

- a. Sonai town area
- b. Kazidhar Pt-I

Total nos. of IHHL constructed within the proposed master plan area is 870.

iv. Sewerage network:

The town does not have any sewerage system. Households and private individuals and groups have their own septic tank.

v. Solid waste management: current site assessment, land ownership, proposed site:

Due to scarcity of appropriate site, the dumping is being done by Sonai Municipal Board is not scientific. There are few number of dustbin found at different locations in the town. Aproject report on solid waste management of the town needs to be prepared by the Municipal Board to care of all categories of waste, their disposal and decomposition. One alternative site has been identified and demarcated in the proposed utilities map of this new Master Plan. The site is at village Tundurkandi Pt-III is under Government ownership. The area of the site is approx. 33445 Sq.M.

vi. Electric sub-station and major transformers:

- There is one 33/11KV Sub Station (Sonai Sub Station) within the Sonai Master Plan area.
- There are total 67 nos. of Transformer within the Master Plan area as per record of APDCL.
- Total consumption of power in Domestic- 0.09 MU Commercial- 0.054MU Industrial- 0.005MU
- Power requirement in the peak hour is 5.1 MW.
- Total power supply within the town and the proposed master plan area is 2MW.
- Currently there is no proposal from APDCL to enhance the power supply within the proposed master plan area.

vii. Fire Hydrant:

A fire hydrant is a crucial part of a city's water infrastructure, used to provide firefighters with easy access to water in the event of a fire. It has been connected to the main water line of the municipal water supply system and serves as an emergency water source.

6.2 Social infrastructure: schools, colleges, universities, hierarchyof hospitals and healthcentresetc:

Educational Infrastructure:

- Sonai master plan has one degree level colleges within the Master Plan Area.
- Three (3) nos. of Government/Provincialized Higher Secondary Schools within the Master Plan Area.
- Twelve (12) nos. of High schools within the Master Plan Area.
- Seventeen (17) nos. of Primary with Upper Primary School within the Master Plan Area.
- Forty one (41) nos. of Primary School within the Master Plan Area.

All together these educational institutions are sufficient for the present population of Sonai. It is important to restrain mushrooming growth of private educational institutes and instead to put effort on quality education through Government institutes for benefit of larger section of people.

Health Infrastructures:

One PHC is in existence within the proposed master plan area and one subsidiary health centre at a close proximity to Master plan boundary in Sonabarighat area. Sonai is situated at close proximity to Silchar city where all health related facilities are available from medical college to civil hospital, private nursing homes to private health centres and laboratories.

Other infrastructures:

Communication network in the master plan area is covered by BSNL and private companies like Reliance, Vodafone, Airtel, etc. Being situated at close proximity to Silchar city the signal strength is satisfactory.

The banking services being covered by number of scheduled banks and commercial banks which is satisfactory and at par with the requirement of the current population and for trade and commerce centre.

Major Proposals:

1. To cope up with the population in 2041 in the master plan, it is required to upgrade the Block level public health Centre in to a 100 seat special hospital.
2. A sub-treasury at Sonai.
3. To preserve the food grains and vegetables, a cold storage has been proposed in the master plan area.
4. Two Footbridge – i) over river Sonai to Cutoff the distance between Ward No. 7,8 & the market in ward 1&2. ii) over SK PWD road for connecting the two campus of NGHS School.
5. Public toilets for the town area. (Shown in the map)
6. One Central School within the master plan area.
7. 500 seat modern town hall at Ward no. 7.
8. RCC bridge over river Amjur connecting women residential college with Ward no 8.
9. One Indoor stadium at ward no. 7.
10. 20 High Mast lights have been proposed at different important rotaries/locations within the master plan area. (Locations are shown in the Circulation map).

CHAPTER 7

ENVIRONMENT AND CITY BEAUTIFICATION PLAN

7.1 Description of eco-friendly areas like water bodies, beel, forests and also heritage areas:

There are few eco friendly water bodies within Sonai town area; they are mostly pond and natural water channel carrying storm water of urban area to the river Sonai. In rural area within master plan boundary, there are water bodies, natural low lying depression area (beels). These water bodies are the natural storage basin for catchment areas within master plan boundary.

The Sonai River flows through the town which is of great utility for carrying storm water of large areas of town to River Barak. There are other several important khals (channel) in the Master Plan area namely Garjarikhal carrying storm water discharge of the town to the Boaljurkhal outside the Master plan boundary, Araiya khal, Amjurkhal, Ghagrarkhal, Buwaljurkhal, Thengnar Khal etc. All these khals (channels) are carrying storm water either to the Barak or Sonai River. The beels, khals are shown in the proposed Land use map of Sonai master plan.

Though there are number of low lying water bodies within Master Plan area, considering the extent in size, importance, location etc four water bodies and their surroundings have been proposed as Eco Zone in this Master Plan. These eco zones have been proposed in the location of the water bodies are as follows -

- a. Dhanehari Part – I
- b. Satkarakandi Part II
- c. DakhinMohonpur Part – I
- d. Uttar Mohonpur.

All these Eco zones are shown in the Proposed zoning map and Proposed Land use map.

7.2 Plan/measures for protection and conservation of environment-friendly zones:

All developmental activities in Eco zones, in the low lying area have been proposed to be freezed. Restrictive measures on development control have been proposed through imposition of green belt zone. Moreover “**No Development Zone (including earth filling and earth cutting)**” has been proclaiming in all areas within 15 meters from any water body, rivers etc in urban area and 50 meters in rural area. In addition existing land uses in the form cultivation has been encouraged, agriculture/ paddy zone has been marked in urban and semi urban areas in this master plan.

7.3 City Beautification Plan/Proposals:

1. Roadside plantation:

The road side plantation along edge of the footpath at State road and other district roads (ODR) in town area has been proposed. Apart from proposed green belt area along river bank, plantation along edge three major roads through Social Forest division has been proposed. The peripheral road land to be used for these three roads---

1. Sonai Sonabarighat – Length – 8KM

2. Sonai Kabuganj – Length – 7KM
3. Sonai Motinagar – Length – 7KM

ii. Urban agriculture and urban forestry:

Urban agriculture is already in existence and shown in proposed land use map. Urban agriculture has been shown in Agriculture and Paddy zone in Land use map. Urban forestry is not proposed in the municipal area, however as restrictive measures, green belt area has been proposed in the municipal area especially along stretches in the flood prone river bank. Similarly, urban forestry will be available at proposed Eco zone in Land use map.

iii. Public Rain Water Harvesting Scheme:

In all public building, provision to be checked before according approval to the project. In all group housing project and multistoried building, rain water harvesting system to be installed. This provision is being applied while issuing permission of multistoried building and group housing project.

iv. Development of parks and recreational spaces:

Though there is non availability of suitable developed and level ground, even than recreational centers and organized open spaces have been proposed in the land use map. There are three number of organized recreational locations (parks, playground etc.) have already exist in the master plan area. These locations are as follows –

- a. Tulargram Part – I (NG High School)
- b. Uttar MohonPur
- c. Tulargram Part –II

Apart from these recreational centres, an another recreational centre have been proposed in the mouza Satkarakandi Part – I. All these locations are shown in the Proposed Utility maps.

v. Identification and demarcation of multi-purpose open spaces for sports, cultural functions, fairs, circus etc:

Few organized vacant spaces have been marked in the proposed land use and zoning map for future development purpose. Those areas will also serve the purpose of organizing Fairs and Circus.

vi. Beautification of major transit zones (major junctions, bus depot, railway station, market zones etc):

The improvement of roads with side drains have been proposed in this area. All other proposed areas for Bus/Truck Terminus, Truck parking etc to be developed with adequate open space, plantation and solid waste disposal system.

vii. Road signage and street furniture:

Road signage to be provided along national highway at every 500 mts by PWD(NH) division. In other district roads of state PWD, informatory and cautions signage to be erected at appropriate locations. The adequately raised footpath (1 mt width at ODR), the street lights and properly laid out road junction with rotary and divider form the important components of street furniture. Four number of rotaries at important road junctions in master plan area have been proposed showing appropriate lay out and dimension. The layouts are shown in proposed circulation map of the Master plan.

viii. Zero Point:

Existing Road Level (Altitude) in meters for 20 nos. of major roads of Master Plan area are as follows:-

SL.NO.	ROAD NAME	LOW ELEVATION (in meter)	HIGH ELEVATION (in meter)	Zero Point
1	Amjur New Bridge To Rangirghat 1 No-Zama Mosque Via Rangirghat Purana Mosque	22.31	32.80	So, zero level is at 22.31, now road level for future is fixed at $(22.31+0.3) = 22.61$ meter.
2	Amjur New Bridge To Uttar Mohanpur Zama Mosque Road Via Old Gp Office	28.58	30.51	So, zero level is at 28.58, now road level for future is fixed at $(28.58+0.3) = 28.88$ meter.
3	DokhinMohonpur Part - I Village Road	26.08	32.74	So, zero level is at 26.08, now road level for future is fixed at $(26.08+0.3) = 26.38$ meter.
4	Dhanehari Market To Barohali Point Via Satkarnadi High School	27.13	31.34	So, zero level is at 27.13, now road level for future is fixed at $(27.13+0.3) = 27.43$ meter.
5	Satkarakandi High School To Sonai Town Via River Side Ring Road	26.60	30.16	So, zero level is at 26.60, now road level for future is fixed at $(26.60+0.3) = 26.90$ meter.
6	Sadbhawan Mandap To Shyamakali Temple Via Abdul Kalam Lp School	26.15	31.54	So, zero level is at 26.15, now road level for future is fixed at $(26.15+0.3) = 26.45$ meter.
7	Dhanehari Market To Towards Dhanehari Lp School Road Via 121 No Dhanehari Lp School	23.28	28.70	So, zero level is at 23.28, now road level for future is fixed at $(23.28+0.3) = 23.58$ meter.
8	Kajidahar Market To Kajidahar Me School Road	26.72	31.001	So, zero level is at 26.72, now road level for future is fixed at $(26.72+0.3) = 27.02$ meter.
9	Silchar Main Road To Medical Road Via Bhairab Temple(Tulargram Pt-Ii)	25.90	30.61	So, zero level is at 25.90, now road level for future is fixed at $(25.90+0.3) = 26.20$ meter.
10	455 No RangirghatLp School To 122 No.RangirghatLp School Via Gobindnagar Village	28.22	30.31	So, zero level is at 28.22, now road level for future is fixed at $(28.22+0.3) = 28.52$ meter.
11	Tulargram Part-I Village Ward-II Road	26.60	31.25	So, zero level is at 26.60, now road level for future is fixed at $(26.60+0.3) = 26.90$ meter.
12	Tulargram Part-I Village Ward-II Road	27.74	29.94	So, zero level is at 27.74, now road level for future is fixed at $(27.74+0.3) = 28.04$ meter.
13	Barohali Market To DhonipurLp School Road	26.04	29.70	So, zero level is at 26.04, now road level for future is fixed at

				(26.04+0.3) = 26.34 meter.
14	Majirgram Market To Dhonipur Mosque Road	25.28	28.44	So, zero level is at 25.28, now road level for future is fixed at (25.28+0.3) = 25.58 meter.
15	Kajidahar Market To Swami Bibeka Nanda School TulargramLp School	26.80	31.39	So, zero level is at 26.8, now road level for future is fixed at (26.8+0.3) = 27.10 meter.
16	Noor Academy To Sonai Market Squire Via Barohali Market (Silchar Road)	23.99	31.25	So, zero level is at 23.99, now road level for future is fixed at (23.99+0.3) = 24.29 meter.
18	Motinagar Road Auto Stand To 455 No RangirghatLp School Road Via Sonai Petrol Pump	30.69	32.80	So, zero level is at 30.69, now road level for future is fixed at (30.69+0.3) = 30.99 meter.
19	Sonai Junior College To Kabuganj (Medical Road)	26.39	31.41	So, zero level is at 26.39, now road level for future is fixed at (26.69+0.3) = 22.61 meter.

CHAPTER 8

LAND USE PLAN

8.1 Developable and non-developable area of the Master Plan:

Few areas near river bank prone to flood and soil erosion and low lying areas serving as drainage storage basin within Master Plan area can be categorized as non-developable area. These areas are to be of restrictive use from the environmental and ecological point of view **“No Development zone including earth filling and earth cutting”** has been proclaiming in all areas within 15 meters from any water body, rivers etc in urban area and 50 meters in rural area.

All other areas fall under category of Developable area. Total additional developable area for Sonai Master Plan area in future has been estimated as 8.57sqkms. The possibility of expansion of the town is towards western direction in first phase and towards eastern direction in the subsequent phase.

8.2 Existing and Proposed land-use:

The future population and trend of infrastructure development determine the nature of land uses and their proportion in future land use. It has been assumed that there will not be any abrupt changes in any aspect affecting the future population figure in an unprecedented manner. Rather there will be moderate increase in present growth and it will continue for some years in future. The projected population of in 2041 is 53,480. The Master plan or Outline Development plan is prepared to evolve a scientific and rational policy for urban development. The plan guides the future course of development for providing better environment of the people living in a geographical area. The plan period of this Master plan is considered up to 2041. In normal course it should be revised after 2041 and if necessary it may be revised even earlier.

Studies in respect of land use pattern, transportation network, circulation pattern, housing and other activities indicate lack of urban amenities and infrastructure hindering the growth in the other sector. However, opportunities in its location in regional set up vis a vis scope for promotion of trade and commerce are to be explored and exploited in positive manner.

The proposed plan-

- a. **Residential:** A total area of 7.7sq.kms has been proposed for residential use. This total area includes an area of 1.43sqkm.(15% of residential use area) meant for Affordable Housing as per recent government's notification. These areas are earmarked tentatively in the Mouzas of Kajidhar part – I, Dhanehari part III, Dakshin Mohonpur part I, Govinda nagar. The residential areas are distributed all over the Master plan area to have smooth home and place of work relationship. The concentration of population in different areas would vary and accordingly there would be distribution like low, medium and high density zone as shown in proposed zoning map.
- b. **Commercial :** A total area of 0.50sq km has been proposed for commercial use. The dispensing of commercial activities in different nodal centres of the town and as well as along the major road is proposed in this plan.
- c. **Manufacturing/Industrial:** A total area of 1.35 sq km has been proposed for industrial use. Encouragement for establishment of small industrial units like bamboo

made product, earthen product etc. and based on agricultural products and other small scale industries may be given priority.

- d. **Public & Semi-public:** A total area of 0.78sqkms has been proposed for public and semi publicuse.This category consists of multiple uses like Government and semi Government offices, various education and health facilities, socio-cultural and institutions, places of public uses etc. Other transportation related infrastructures are categorized into Public and Semi-public use except railway tracks and roadnetwork.
- e. **Green belt :**A total area of 1.11 sq km has been proposed for green belt. Mostly this area is for restriction of development along vulnerable river bank, low lying areas etc for increasing green space, urban foresty etc.
- f. **Open spaces/ Recreational Space:** In proposed master plan, in addition to green belt zone and eco zone, above mentioned organized open space has been proposed. In addition there is proposal for normal vacant land kept for future development at an area of 1.25 sqkms.
- g. **Transport and Road :**Economic and socio cultural life of a geographical area is immensely influenced by regional transport linkage and inner traffic management system The growing demand for transportation facilities calls for assessment of the existing problems of traffic movement , circulation pattern, road geometrics. The assessment helps to evolve remedies in terms of short term and long term measure. Sonai is connected with other part of the district andMizoram state via road directly. The nearest airport is at Kumbhirgram (at Silchar) is approx 45kilometres away from Sonai town.A total area of 1.23 sq km has been proposed for transport and road connectivity.
- h. **Agriculture:** In proposed master plan, an area of 14.54 sq.kms has been earmarked as Agriculture and Plantation(paddy) area. Major importance has been given to primary sector and maintenance of greenfield.
- i. **Special areas (Heritage, Pilgrimage, Notified Archaeological sites(if any):**
There is no such feasible site or zone need to be used under this special area.
- j. **Eco-zones:**A total area of 0.27sqkms has been proposed for use as eco- friendly zone. The eco-friendly water bodies are earmarked in the proposed land use and Zoning map of Sonai MasterPlan.
- k. **Water bodies:** The river Sonai and Barak are flowing throughthe master plan area of Soani. Apart from this, few prominent natural drainage channel (locally called Khal) and natural water reservoir (locally called Beel) are scattered within the master plan area. All these waterbodies are shown in proposed Infrastructure map (Drainage map) of Sonai MasterPlan.
The total area of water bodies is estimated as 1.64sqkms.

Existing Land uses in tabular form as in 2022

Sl No.	Land Use Category	Area (sq km)	Percentage of Total Area
1	Residential	5.869	20.554
2	Commercial	0.071	0.233
3	Industrial	0.097	0.318
4	Public and Semi-Public	0.193	0.633
5	Recreational centre/ Playground	0.029	0.095
6	Transport	0.526	0.413
Total Developed Area		6.785	
7	Vacant Space	1.807	5.925
8	Agriculture	20.284	66.505
9	Water body	1.647	5.40
Total Non-developed Area		23.738	
Total Area		30.52	100

Proposed Land uses for master plan area for 2041:

Land Use Category	Area in Sq Km	% of Developed Area	% of Planning Area
Residential	7.70	55.28	25.23
Commercial	0.50	3.59	1.64
Industrial	1.35	9.70	4.42
Public - Semi Public	0.78	5.60	2.56
Open Space/ Recreational Space	1.25	8.97	4.09
Transport	1.23	8.83	4.03
Mix Use	0.01	0.10	0.03
Green Belt	1.11	7.97	3.43
Total Developed Area	13.93	100	-
Agriculture	14.54	-	47.64
Water body	1.64	-	5.37
Eco-Zone	0.27	-	0.88
Embankment	0.14	-	0.46
Total Non- Developed Area	16.59		
Total Master Plan Area	30.52		100

8.3 Composite zones or Mixed use zones:

Residential zones and Commercial zones are allowed for mixed use zones, however only general commercial and retail commercial will be in combination with residential use. The restriction/relaxation in different parameters will be as elaborated in sec 74.2 of Assam Notified Urban Areas (other than Guwahati) Building Rules'2014.

8.4 Zoning Regulations:

Uniform Zoning Regulations 2000 for all towns of Assam in combination with the Building Rules 2014 will take care of all aspects of zoning regulations, development control and according land sale and building construction permission by the enforcing authority of this master plan. The Proposed Zoning map of this Master Plan will have to be read and referred while enforcing the zoning regulations.

The proposed zoning map shows the three category of demarcated residential zone viz, Low density, Medium density and High density.

- a. Similarly, wholesale commercial zone may be demarcated by the Local Authority in zoning map as per guidelines and locations suggested in para2.
- b. In this chapter... It is proposed to relocate wholesale and go-downs in the commercial areas in Tundurkandi, Satkarakandi pt II and in ward no. 3 and ward no.4 of town area. All sites are along Major District Road.

8.5 Town Planning Scheme (TPS) & Local Area Planning (LAP):

Town Planning Scheme is a development scheme where the irregular lands are taken from owners and the land is developed with regular plots, well connecting roads, parks and open spaces. Developed plots are redistributed to the land owners in proportion to their share of land contributed for development. The plots which the owners get will be less in area than they had contributed as the land will be used for roads and open spaces also. Here no compensation is given to the owner; instead, they will be given developed land which will be having high value than the previous undeveloped land.

For the said purpose, there are two TPS has been proposed in the Master Plan in the village of Dhanehari pt.1 and Rangirghat part II. The total area of the two TPS is 683 bigha.

A local area plan (LAP) sets out a strategy for the proper planning and sustainable development of a specific area within a local authority and for a timescale as specified by the authority. The total LAP area is 159bigha which has been proposed in the Sonai Master plan area.

8.6 Transferable Development Rights (TDR):

Transferable Development Rights (TDR) is a zoning and land-use strategy that allows property owners to shift the development potential from one location (the "sending area") to another (the "receiving area"). This system helps preserve land in areas where development is restricted, while allowing more concentrated growth in areas better suited for it.

Main Elements:

- **Sending Area:** In this zone, development is limited or prohibited, and property owners can sell their rights to develop the land to others.
- **Receiving Area:** In this zone, developers can purchase those rights to build at higher densities or with greater intensity than standard zoning would typically permit.

Benefits of TDR:

1. **Preserves Open Space:** TDR programs are often used to conserve farmland, forests,

wetlands, or historically significant areas by restricting development in the sending zones.

2. **Promotes Efficient Growth:** Development is steered towards areas with existing infrastructure, leading to more efficient use of resources and land.
3. **Offers Flexibility to Landowners:** Landowners in restricted areas can sell their development rights, gaining financial benefits without needing to develop their property.
4. **Balances Development with Conservation:** TDR provides a market-based approach to harmonize the need for development with the goal of preserving open land.
5. **Reduces Urban Sprawl:** By focusing development in specific areas, TDR helps to prevent spread-out, inefficient land use and encourages more compact, walkable communities.
6. **Protects the Environment:** Sensitive ecosystems and natural landscapes can be preserved, preventing environmental damage and maintaining biodiversity.
7. **Economic Incentives for Developers:** Developers in receiving areas benefit by gaining the right to build larger projects or more units than zoning regulations would normally allow.

In summary, TDR helps to meet both development and conservation goals through market-driven incentives, guiding growth towards areas where it can be more sustainable.

8.7 Vending Zone:

A **vending zone** is a designated area within a city or public space where street vendors and mobile businesses are permitted to operate. These zones are typically established by local authorities to regulate street vending activities, ensuring they comply with legal, safety, and health standards. Vending zones help organize the placement of vendors to prevent congestion, maintain public order, and create a balanced environment between vendors, pedestrians, and other businesses.

Key Features:

- **Regulated Spaces:** Vending zones are governed by local laws that outline specific rules, such as hours of operation, permitted goods, and location boundaries.
- **Safety and Hygiene:** Vendors operating in vending zones are often required to meet health and safety standards, especially if selling food.
- **Encouraging Economic Activity:** These zones provide opportunities for small-scale entrepreneurs and street vendors to conduct business in a legal and structured environment.
- **Reducing Conflicts:** By designating specific areas for vending, cities can reduce conflicts between vendors and brick-and-mortar businesses, and minimize disruptions to pedestrian traffic.

Vending zones serve as a way to regulate and support street vending while ensuring urban spaces remain functional and safe for all. A vending zone has been proposed in Rangirghat Pt. 1 which has an area of 7.47 bigha.

CHAPTER 9

PROPOSED PROJECTS BRIEF AND TENTATIVE FUNDING

SOURCE

9.1 Based on existing conditions and projected requirements of the planning area, identify priority sectors and projects:

Based on the analysis of the existing scenario of infrastructures in project area, following are the identified priority sectors-----

1. Solid waste Management project
2. Water supply project
3. Storm water drainage project

9.2 Fund requirement for each sector/project identified under the sectors:

1. Probable cost of Integrated Solid Waste Management for Sonai Municipal Board:

Integrated Solid Waste Management (ISWM) is a system which defines a hierarchy while managing solid waste. According to the ISWM, solid waste must be managed in the following hierarchy with the first strategy being most desirable and the succeeding strategies to be followed depending on the quantity and category of waste. The site of SWM has been proposed in this master plan at village Kajirdhar part - I. The earmarked area is approx 33445 m² (approx).

- **Reduction at source and reuse:** The most logical and preferred option is minimizing the waste production. This can be done by using better technologies, efficient packaging, reusing the waste produced at each level in some other process or activity.
- **Recycling:** Recovery of material from the waste and reusing it again in manufacturing of some other product is recycling. Although recycling helps in recovering the material waste, energy is used in the process.
- **Waste to Compost:** Decomposition of organic municipal waste to produce manure.
- **Waste-to-Energy:** Production of heat, electricity or fuel from the waste using bi-methanation, waste incineration or Refuse Derived Fuel (RDF).
- **Waste Disposal:** Inert waste or the residual waste produced in the other waste management process must be disposed in engineered landfills.

Another aspect of ISWM is the integration of informal sector, to include rag pickers and private door-to-door waste collectors. The informal waste sector plays an important role in waste collection and segregation and this is done at a minimal cost.

Considering all options for a modern Solid Waste Management project like vermicomposting, digestion, incineration, gas and electricity product, residual land fill provision etc, the cost per person is derived from similar DPR of different town (Panaji, NOIDA) etc). It is per person capital expenditure is calculated Rs. 708.25/Persons. Taking into consideration the projected population up to 2041 probable cost for managing solid waste is calculated as below.

Therefore, for population of 50,136 (projected upto 2041) = Rs. 708.25 x 50,136 = Rs. 3,55,08,822/- (Rupees Three crore Fifty five lakhs eight thousand eight hundred twenty two only)

The per capita annual operation and maintenance cost is Rs. 155/-

Therefore for population of 50,136 (projected upto 2041) = Rs. 155 x 50,136

= Rs. 77,71,080/- (Rupees Seventy seven lakhs seventy one thousand eighty) only.

2. Probable cost of Water Supply schemes for Sonai Municipal Board:

The following brief project proposal may be prepared on the basis PHE Assam guidelines.

Considering estimate population of master plan area in 2031 is 45516 and the cost of commissioning the water supply project by 2024-25 is rupees Rs. 9737.88 per person. Then after 10 years, the projected population in 2041 is 50,136. Then the cost of improvement of that project is Rs. 8322.92 per person. The different components of the project are as follows-

1. Raw water intake system.
2. Raw Water Pumping Machinery and other accessories
3. Raw Water Converging Main
4. Water Treatment Plant
5. Clear Water Pumping System
6. Clear Water converging main
7. Elevated service reservoir.
8. Distribution System
9. Water Meter with 5 year maintenance contact.
10. Auto Control System.

Accordingly total project of water supply augmentation within Sonai Master Plan Area will be:

$$=(45516 \times \text{Rs. } 9737.88) + (50136 \times 8322.92) = \text{Rs. } 860,5,07263/-$$

(In Words Rupees Eighty Six Crores five Lakhs seven thousand two hundred sixty only.)

3. Probable cost of Storm water drainage schemes for Sonai Municipal Board:

Taking into consideration the present prevailing market rate of the construction materials and labour and ongoing drainage scheme as per PWD (Rural) Road Schedule 2020-21), the approximate amount required to cover a length of 41.4 km with drainage facility is calculated as follows.

Total cost for per metre length of the drain = Rs.13,900/

Total approximate cost required to complete drain for a length of 41.4km is = Rs.13900 x 41400 m = Rs.575460000 /only (Rupees Fifty Seven crores & forty six lakhs) only.

Taking into consideration the present prevailing market rate of the construction materials and labour and ongoing similar drainage scheme being executed in the nearby towns, the approximate amount required to cover a length of 41.4 kms with drainage facility is calculated as follows.

The details requirement of the proposed length has been described in chapter 6 at para 6(ii) which comes out as 41.4 kms (both principal and major road)

Total cost for per metre length of the drain for principal road is Rs 15712.00

So, for length of 10.9 km, cost of both side drain would be= Rs. 15712 x 10900 x 2
= Rs. 17126800 x 2

= Rs. 34,25,21,600.00/

Total cost for per metre length of the drain for major road is Rs 7026.00

So, for length of 30.5 km, cost of both side drain would be = Rs. 7026x 30500 x2

= Rs. 214293000 x2

= Rs. 42,85,86,000.00/

Total approximate cost required to complete drain for a length of 41.4 km is = Rs.77,11,07,600 /only(Rupees seventy seven crores eleven lakhs seven thousand and six hundred) only.

Following table shows as brief of the future top priority projects of Sonai and future requirement of tentative fund.

Table: Future Top Projects of Sonai and Tentative Funding Source

Sl No.	Top Priority Projects	Probable estimated cost (in Cr)	Annual operation and maintainace cost (Rs in Cr)	Total Cost require (Rs in Cr)	Funding Source
1	Solid Waste Management Project	3.5	0.77	4.27	(10%, NLCPR, AMRUT, Infrastructure Dev. Fund, Entry Tax etc), Assam Finance Commission funds, CM's Special Package, Public Private Participation, Loan from externally aided project (JICA, World Bank, ADB etc).
2	Water Supply Project	86	-	85	
3	Storm Water Drainage Project	57	-	57	

9.3 Identify Land site for proposals: in case of Governmentland, inventory of Municipal Land, State Government/ Government agency owned landetc and plan for acquiring/leasing thesame.

There are very few vacant/ partially vacant plots of Government land within Master Plan area as per data collected from the Sonai Circle office. These are proposed to be used for future development and extension of Infrastructure services within Sonai Master Plan area. The total governmentkhas land in Sonai Master Area is **3.075177 sqkm.**

The details are as follows:

<i>Sl. No</i>	<i>Name of Mouza</i>	<i>Bigha (14400 sqft)</i>	<i>Katha (720 sqft)</i>	<i>Chatak (45 sqft)</i>	<i>Total Area in Sqft</i>
1.	Tundurkandi	193	17	0	2791440
2.	Majhirgram	167	13	14	2414790
3.	Tulargram – I	134	11	12	1938060
4.	Tulargram-II	95	17	15	1380915
5.	Uttar Mohorpur	174	7	9	2511045
6.	Rangirghat-I	37	1	1	533565
7.	Dhanipur	42	8	5	610785
8.	Dhanehari – I	492	5	2	7088490
9.	Dhanehari – III	71	18	12	1035900
10.	Satkarakanadi -I	205	6	9	2956725
11.	Satkarakanadi – II	23			331200
12.	Rangirghat – II	90	15	6	1307070
13.	Gobindanagar	181	16	5	2618145
14.	Dakshin Mohorpur – I	291	11	14	4198950
15.	Kajidhar-I	95	5	5	1371825
Total		2290	150	109	33088905

However, as reported by the Circle Office, Sonai, there are no vacant or available free government lands for making proposal for future in this master plan. So, all the proposals for infrastructures development in this Master Plan have been given on private lands which are to be acquired as and when implemented by the Concerned Department. However, the proposal for site of Solid Waste Management as given in the mouza Kazidhar Part – I falls in govt. khas land of approx 33445 sqmts.

9.4 Indicative sources of Fund: specific Central Scheme funds(10% NLCPR, AMRUT, Infrastructure Dev. Fund, Entry Tax etc), Assam Finance Commission funds, CM's special package,Public Private Participation, Loan from externally aided project (JICA- World Bank-ADB etc):

At present following schemes are applicable for small/ Medium town like Sonai – Assam Finance Commission,Central Finance Commission, North East Special Infrastructure Development Schemes (NESIDS), PMAY (U)- Housing for All, UIDF and few Loan oriented project from externally aided project etc. So above mentioned three projects can be funded from such centrally or state sponsored scheme.

CHAPTER 10

DISASTER MANAGEMENT PLAN

10.1 Flood/Urban Flood:

District Disaster Management Plan for Cachar district has already been prepared and it takes care of urban water logging and flood for Sonai town and surrounding areas.

10.2 Earthquake:

Details Plan has been indicated in District Disaster Management plan.

10.3 Others:

Details Plan has been indicated in District Disaster Management plan.

Disaster Management Plan pronounces in the clearest terms that the process of adaptation & change to manage disasters has to have several dimensions like Prevention, Mitigation, Response, Relief, Recovery and Rehabilitation.

It recognizes that disaster management has to be a collective & multi-sectoral effort.

It makes it clear that the process of adaptation & change can no longer be an optional one and every agency of Government must account for what it did or failed to do.

Each of these phases involve different aims & objectives, they may overlap depending on the nature of the disaster. However, the overall objectives are the same. The aim of any disaster management programme is to reduce the impact of a disaster on human life and property. The aim of plan is to ensure that all components of disaster management are addressed to facilitate planning, preparedness, operational, co-ordination and community participation.

The objectives of this departmental disaster management plan are:

- To assess vulnerability of the departmental assets / works created with the help of ULBs of the district to different disaster.
- To generate preparedness plan for fighting against different disaster.
- To train up departmental personnel for providing emergency response services during disaster.
- To keep co-ordination with DDMA & other authorities.
- Sensitization for community participation.

Seasonal Hazard Analysis: - Generally in this region the probability of major hazard is due to flood / urban flood, earthquake, landslide & river erosion. The periodic duration of the causes of hazards are as below.

Type of Hazards	Jan	Feb	Mar	April	May	June	July	August	Sep	Oct	Nov	Dec
Flood				←					→			
Earth Quake	←											→
Landslide				←					→			
Storm			←						→			
Fire Accident	←											→
River Erosion				←					→			
Industrial Hazard	←											→
Bomb Blast	←											→
Road Accident	←											→

Disaster Probability: - The probable period of occurrence & damages from major causes of hazard in this region.

Sl. No.	Type of Hazards / Disaster	Time of Occurrence	Potential Impact / Probable Damage	Vulnerable Areas
1.	Flood	April – September	Damage of Roads & Drains, lives & properties.	Within Master Plan area of the town
2.	Earthquake	January – December	Loss of life, infrastructure, constructed structure, public & private building.	Within Master Plan area of the town
3.	River Erosion	April to September	Loss of Public/Private Property.	Within Master Plan area of the town
4.	Storm	April to September	Loss of Public/Private Property.	Within Master Plan area of the town

Risk Assessment: - Two major hazards may be considered for risk assessment in this region.

Type of Hazard	Potential Impact	Vulnerability	Vulnerable Area
Flood/Urban flood	Damage of Roads & Drains.	i) Siltation of drainage channel	Town and surrounding Master Plan area in the district.
		ii) Temporary Water logging of	Infront of Sonai Circle Office, Motinagar road, dak bungalow road, Municipality

		reclaimed area	Office and in front of Dungripar road.
Earth Quake	Loss of lives & properties	i) Infrastructure which are not earthquake resistant (Assessment may be needed)	Damage of public & private building in town and their surroundings. Mostly old & dilapidated buildings are likely to be affected.

10.4 **Standard Operational Process (SOP) on Disaster:**

Pre-disaster, During and Post disaster: SOP under district Town and Country Planning office has been prepared which is also applicable for Sonai Master Plan area.

Departmental Standard Operating Procedures (SOPs): SOPs describe the regularly recurring work processes that are to be conducted or followed within an organization.

Standard Operating Procedure (SOP) of Town and Country Planning Office, Silchar: The Nodal officer is the first person to initiate action & put the SOP of the Department into ground reality.

The Nodal Officer will co-ordinate with DDMC and DDMA in the event of any disaster. It is the responsibility of the Nodal officer & his team to coordinate & keep liasoning with subordinate agencies & higher level agencies.

All other activities in field level are co-ordinated by the officers in charge of Rescue team and First Aid/Medical Team. All actions are duly endorsed by the Head of Office (Deputy Director). The various components of SOPs have been incorporated & integrated in the different chapters of this plan in appropriate paras & points.

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